THE LEGAL STRUCTURE OF A CONFINED MICROSOCIETY

(A Report on the Cases of
Penthouse II and III)

by

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PREFACE

Law is an existential condition in which men are carriers of rights and duties, privileges and immunities. No formal structure supporting the system of law need be visible. Those accustomed to seeing law only in its formal institutions, in terms of statutes, decisions, judges, legislators and administrators miss the point. Law can be found any place and any time that a group gathers together to pursue an objective. The rules, open or covert, by which they govern themselves, and the methods and techniques by which these rules are enforced is the law of the group. Judged by this broad standard, most law-making is too ephemeral to be even noticed. But when conflict within the group ensues, and it is forced to decide between conflicting claims, law arises in an overt and relatively conspicuous fashion. The challenge forces decision, and decisions make law.

This Report is a study in small group decision-making. Its subject matter is the rules by which a confined microsociety with a single, highly directed purpose governs itself. In mid-February of the present year, the two authors were invited to associate themselves with an already existing series of studies on optimal levels of protein intake in the human being. Series one of these studies (Penthouse I, 8 December 1964 to 6 February 1965) had already been completed and series two (Penthouse II, 2 March to 28 May, 1965) was to commence in a few days. The subjects (Ss) of the experiment had already been chosen, the staff assembled and instructed, and the site prepared.

The site of these experiments is notable. It is the Penthouse of the building occupied by the Department of Nutritional Science at the University of California, Berkeley. The indoor living space of the

Penthouse is approximately 2600 square feet, and it is surrounded by a terrace of about 9800 square feet. The series of studies on nutrition is under the direction of Dr. Sheldon Margen, Professor of Nutrition as principal investigator, and Dr. Doris Calloway, Professor of Nutrition as co-principal investigator. The Ss were confined in the area of the Penthouse for periods of 58, 88, and 43 days.

The authors of this Report are Dr. Thomas A. Cowan, Professor of Law, Rutgers University, and Dr. Donald A. Strickland, now Assistant Professor of Political Science, Purdue University. At the time of the experiments described here, both authors were members of the Space Sciences Laboratory of the University of California (Berkeley), under the auspices of Dr. C. West Churchman, Associate Director for Social Sciences. The nutritional aspects of the study were supported by National Aeronautics and Space Administration grant No. 05-003-068. The Space Sciences Laboratory aspects of the study were supported under NASA grant NsG 243-62 . In addition to the authors, Dr. John Bosley, Mr. Martin Stow, and Mrs. Suellen Lanstein were members of the Space Sciences staff or consultants on this Report.

Purpose of Study

The purpose of the nutritionists' invitation to us to join the experiments was two-fold: 1) to extend the physiological studies to include psychological, sociological, and legal studies, thus ranging along a wide front of human behavior and 2) to keep the Ss reasonably occupied over the long stretch of the experiments, thus more nearly achieving a normally active environment. In accepting the invitation, we were anxious to see what authoritative forms the group would evolve for its own self-governance.

Realizing that nutrition on one end of the scale and law on the other left a very substantial gap, both the nutritionists and the lawyers set about to fill it. Dr. John Bosley had, before our advent on the scene, set up a series of psycho-physical studies of the Ss. Bosley was eager to extend these tests to include social psychological studies of the Ss.

We decided to treat our participation in the already existing studies as, in effect, the emergency investigation of a one-shot sociological phenomenon, much like the studies of the reactions of people at an earthquake, a national election, the entry into war, or whatnot. We had only a week to prepare for what we are going to refer to as Penthouse II.

Techniques

For us, the study was to be mainly anthropological. That is, we came upon a society already in existence, with a definite life task to perform that was not of our making. Compared with the nutritional investigation, our efforts were small, both in time devoted to the project, in the numbers of investigators and staff working on it, and in the outlay for equipment and other costs. Furthermore, the human group that we would essay to study was socially and ecologically bounded and confined in clear-cut ways such as social scientists are not apt to find in statu naturae. The society, so far as we were concerned, was real. Our study was to be observational in the main, with minimal interference in the already existing physiological regimen of the Ss' lives. The sheer duration of the experiments, not to speak of the Ss' acceptance of the medical tradition of testing and experimenting, meant that the set-up was regarded by all parties as a relatively normal human activity. This society therefore was profoundly different from one that we ourselves might have created expressly for the

purpose of studying its socio-legal behaviors.

It was of the utmost importance to us that our Ss were volunteers. In other words, the factor of physical confinement and dietary deprivation was heightened by the fact that the Ss had chosen to live under such a regimen (for a consideration) and any adaptations they made to that extraordinary environment, over and above the rules of the house, in our eyes constituted 'legislation'.

Since the Ss of Penthouse II had already been chosen by the time our study was agreed upon, it was something of a shock to them to discover that in addition to the nutritional tests they were to undergo social-psychological and legal-political tests. This was in no way an imposition on the Ss since the area of investigation had not been specified in advance. It was understood that the Ss were to be available during the waking hours, or at least a reasonable part of them, and the Ss were very well paid indeed. Nevertheless, we ran into immediate opposition in our investigations, as the detailed account of our work abundantly shows.

Rapport with Subjects

We do not believe that our interference with the life-course of Penthouse II affected adversely the performance of the Ss' nutritional tests obligations. In fact, we are of the opinion that, if anything, the effect was to the contrary. In any event, despite our difficulties in obtaining cooperation from the Ss of Penthouse II, we believe that they adhered to what they conceived to be their primary obligation, that is, the success of the nutritional tests. Our concentration on the pathological aspects of their social life--especially our catalogues of rule-breaking--will give the reader a distorted view of the total experiment.

It is more accurate to characterize their behavior as systematic "nibbling" at the rules, for they exhibited (by their own lights) considerable respect for what they took to be the scientifically essential rules.

We participated in the selection of the Ss in Penthouse III, and since part of the selection process consisted in our attempting to find "congenial" Ss, we regard Penthouse III as quite a different undertaking from Penthouse II. So far as we were concerned, Penthouse III no longer possessed the "emergency social science study" status of Penthouse II. In addition, it lost the character of an anthropological study and became more of an experimental artifact. Still, so strange was the nature of our studies that, despite the obvious good will and cooperative nature of the Ss in Penthouse III, the study itself almost achieved the character of a study of a state of natural human behavior, at least for our second-order approach to this social system.

The Ss of Penthouse II treated us as intruders, as scientific snoops, or at best as welcome breakers-up of the dull routine of a hard stretch of duty in the interest of science--not ours, but the nutritionists'. Penthouse III treated us good-naturedly and decently. But it is hard to believe that they regarded our activities as serious scientific work. We are not sure that we did not get richer results from the continued opposition of the Ss of Penthouse II than from the compliant, diligent, student-like acquiescence of the Penthouse III Ss.

Our concentration on the rule-creating and rule-violating behaviors of the subjects of these experiments is apt to be misleading. Our concern with deviant behavior does not in any way detract from the extraordinarily careful, scientific way in which the nutritional-physiological experiments were conducted. Quite the contrary. The very fact that the physiological experiments were so rigorous gave us the opportunity to observe human beings under rather severe constraint. Confinement itself was in the interest of scientific control; and so was the rest of the regime of Penthouse living rules. Together these constituted the experimental groups as "confined societies" and allowed us to set up a system of anticipated behavior and to observe conformance to and deviation from our expectations.

Behavioral abnormalities in a system of physiological investigation must be defined for such systems, and conduct falling inside or outside tolerated limits must be evaluated according to physiological standards. Nonetheless, the possibility remains open that by incorporating insights derived from psychological and legal investigations, related physiological experimentation may become more sophisticated.

Our observations on "deviant" behavior were highly magnified purposely, and such deviations were well within the limits of "closure" of physiological systems. When conduct fell, or threatened to fall, outside these limits, we took the precaution to inform the physiological investigators of the fact.

Phenomenological Emphasis

We are constrained to report in great detail the day-by-day reactions of Penthouse II members since we are convinced that they show in starkest outline a general attitude toward social psychological and

legal-scientific investigations . In brief, this feeling can be summed up in a sentiment that such investigations do more harm than good, that Ss know more than investigators, and real life situations have virtually nothing in common with the investigators' uncouth social scientific artifacts. Unfortunately, we are inclined to agree with this harsh judgment. The state of our art is distressingly primitive. But of course this is precisely the spur that drives us on.

We learned abundantly from the Ss of Penthouse II, and in our more chastened moments have forced upon ourselves the moral obligation to acknwoledge gratitude to them. Penthouse III, while more to our liking, did not teach us so much, nor so pointedly. Therefore, we have felt it wise to set out as much as possible of the daily course of life of Penthouse II, hoping that others will also learn from it. The cruel lesson is that man does not want to know how he governs himself. When he sets out upon an adventure, what forethought he possesses will be expended on physical gear, natural lore, and perhaps physical health. That he may need to know how to govern himself in new groups and new circumstances hardly enters his head. That question is taken care of, he feels, if he has exercised the opportunity of freely selecting congenial and competent companions. Since this is the attitude not only of the ordinary person but also of the astronautical authorities who at present are talking confidently of sending men on extended space voyages, we feel it our duty to let this study stand as a warning of the present state of our ignorance as to whether or not informal social psychological and the legal life-support systems would stand anything like the strain of a sustained voyage under conditions of severe confinement.

Structure of Report

We open our study with a chapter on Methodological Considerations. This takes account of the fact that our entrance upon the Penthouse II experiment was in the nature of an emergency social science study. We suggest that those desirous of preparing for such a study improve upon what we call our Observational Model. Briefly, we suggest that all methodological presuppositions be set down, that assumptions (which are not expected to change during the observation, though they may) be separated from proto-hypotheses (which almost surely will change), that the objective of the study be defined as clearly as possible, and that all methodology conform to this objective. That a Log be kept of everything done, seen, and experienced by the investigators and that this Log be faithfully kept until its utility disappears. That at the start, the broadest possible receptivity of impressions be cultivated, but that these impressions should nevertheless be channeled in directions that conform to the objective of the study and its methodology. That active intervention be postponed as long as possible in case of doubt; but on the other hand that it be introduced as soon as its consonance with the general objective of the study is perceived. That Findings be reported as broadly as is feasible, or that rich veins of parallel studies be opened up so that hypotheses be brought to light which might otherwise be undetected.

Finally, we believe that broad-gauged Recommendations should be ventured. One emerges from such studies as this with much knowledge of an undigested intuitive sort. It is better to allow others to judge the soundness of recommendations than to exercise undue self-restraint in what is likely to be a vain attempt to cull out nuggets from a rich

conglomerate of experience.

After the Methodological Considerations of Chapter I, we present a Narrative of the passive observations gathered chiefly by Strickland from his presence in the Penthouse and from the reports of the staff. This is a condensation of life as it was lived there. Following this is a circumstantial account of our Active Intervention in the lives of Penthouse II and III. This intervention issued in data of a harder sort than resulted from the passive observation. We used various decision theory techniques and invented or rather adapted legal decisional ones to our own purposes.

Lines of Inquiry

Penthouse II was subjected to certain social psychological investigations. Dr. John Bosley, who had charge of psychophysical investigations not here detailed, also laid out the plan for the social psychological inquiry and administered certain personality inventories. His plans for extended social psychological study were carried out in Penthouse III, in his absence, by Mr. Martin Stow and Miss Adrienne Ross. Mr. Stow, a counselling psychologist, became a subject in Penthouse III. In his dual capacity as S and investigator, he made an extensive social psychological study of the group. His results appear as Chapter VI. As a result of the inclusion of these studies, Penthouse III presents a continuum from the physiological through the psycho-physical, the social psychological, down to the legal aspects of the behavior of the confined microsociety.

The present authors had, prior to their collaboration in Penthouse II, been working independently on the socio-legal aspects of space

exploration. Cowan's work had tended toward the legal rules that apply to space travel and the future legal structures of colonists and space explorers.* Strickland's work tended toward the natural history of closed societies, especially the fate of the authority system under the vicissitudes of confinement, uncertainty, starvation, harsh natural environments, and so on.** At the beginning of Penthouse II, both authors devised politico-legal questionnaires for the Ss. Strickland's leaned more to socio-political facets of behavior. Cowan's more toward politico-legal. Cowan's questionnaire was submitted not only to the Penthouse groups but also to a group of law students from the University of Florida and to a random assortment of associates and their wives as sporadic control groups. Cowan's questionnaire was then subjected to a factor analysis by Mrs. Suellen Lanstein, a psychology student at Berkeley, studying under Prof. Robert Tryon. Her analysis of the Questionnaire (referred to as ILPA II) appears here as Chapter VII.

We conclude with our Findings and Recommendations as Chapter VIII. This Report does not attempt to correlate its Findings with the results of the nutritional tests which will require much time for evaluation. It is hoped that these comparisons can be made later.

Appendix A is Strickland's Log of Penthouse II. We decided on outside recommendation to include it virtually in the state in which it appeared from his hand. It has been edited to dis-identify the Ss and the staff personnel. Although as much contemporary flavor as possible is

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*Thomas A. Cowan, "Brief Report on the Legal Aspects of Space," Working Paper No. 23, Space Sciences Laboratory, University of California, Berkeley, January, 1965.

**Donald A. Strickland, "Preliminary Thoughts on the Politics of Closed Environments," Internal Working Paper No. 16, Space Sciences Laboratory, University of California, Berkeley, August, 1964; and "A Note on Proto-Political Behaviors," Internal Working Paper No. 24, February, 1965.

retained, it is valuable, in our opinion, not as an accurate portrayal of life as actually lived in the Penthouse, but as an invaluable accounting tool for the investigators who otherwise would be swamped by a deluge of informal notes, had they tried to evade the discipline of log-keeping in the interest of more lively ad hoc accounts. We truly believe that the Log is a necessity for all social psychological experimental "adventures." We have not carried editing to an excess in the Log in attempting to guarantee complete dis-identification.

The Protocol, or transcript of our taped recordings, is in the permanent custody of Dr. Sheldon Margen. Qualified persons who desire to examine it are asked to contact him at the Department of Nutritional Science, University of California, Berkeley.

Acknowledgements

Our thanks go primarily to our subjects, whose unwilling students we found ourselves rapidly becoming. Now, recollecting in tranquillity, we are grateful to them. We are also aware of the added strain we put upon the staff of the Penthouse and of our great debt of gratitude to them. We do not need to thank Drs. Margen, Calloway, and Bosley: They initiated the idea of these combined physio-psycho-legal studies; but we are grateful to them nonetheless for the opportunity to work with them on this job.

We hope that the social psychological and the legal aspects of confined societies will go forward. It certainly should be a part of all studies on the life support systems of such groups. For if the system of social psychological interactions and of legal constraints breaks down, there may not be any life to support in such societies after the first big emergency arises.

CHAPTER I

METHODOLOGICAL CONSIDERATIONS

Two subjects from Penthouse I carried over into Penthouse II. This gave the group in Penthouse II a certain continuity of tradition and meant also that our intrusion into Penthouse II not only met an experimental situation not of our own devising but also forced us to mesh in with a large nutritional staff already well acquainted with their own procedures and having a common experience with at least two of the subjects of Penthouse II.

We were aware that much ad hoc adjustments would be necessary. We considered that the existence of the Penthouse nutritional experiments presented us with an opportunity for a psychological and social science study of an on-going behavioral complex that would never be repeated in the same form. We determined that the form of the investigation would have to be that of an emergency program improvised to yield maximal observational results with a minimum of formal constraints to be imposed upon our subjects and their microsociety. We determined, in brief, to develop an observational as distinct from an experimental model to guide our work.

Our first methodological resolve was to reverse the usual scientific procedure of a relatively complex overt or latent formal model with sufficient constraints to assure the processing of data according to statistical or other formal controls. Our model was to be phenomenological. That is to say, instead of attempting to control the data, we decided to allow the data to control us. The reductio ad absurdum of this method would be to make no formal efforts whatever to process the phenomena. The result would have been a complete swamping out of the investigators' receptivity.

leaving us nothing to report. This reduction to the absurd contrasts with the opposite "absurdity" of so loading the model with formal constraints as to achieve nothing but tautology or artifact. Our own method lies, we feel, somewhere between these extremes, though much nearer the phenomenological than the rationalistic pole.

We began with a relatively brief, relatively passive submergence in the stream of life of Penthouse II. Shortly thereafter we decided to formulate as best we could the loose philosophical pre-suppositions which were to guide us in our work. We also then formulated a program of exercises for the subjects which were to constitute our specific attempts to influence the course of life in Penthouse II. The first effort we call our Passive Observation. It will be the main topic of the Narrative. The second we call Active Intervention, as discussed in The Course of Decision.

PHILOSOPHICAL BACKGROUND

The notion that one can investigate social phenomena without interfering with it substantially is not one that is shared by the present investigators. We believe that all attempts at such investigation involve a confrontation and a dialogue among the human beings involved. There is no such thing, for example, as creating a brand new social entity for the purposes of studying it. Every social investigation is an intrusion into an already existing complex set of social relationships. Hence we experienced no particular difficulty in intruding upon the on-going process of the Penthouse Experiments. Moreover, we came to these experiments with a rather large set of predispositions, convictions, philosophical prejudices, as well as personal biases. We shall make no attempt to assay the element of personal bias or idiosyncrasy. But the philosophical background assumptions are not personal to us. They are general formulations, shared by many investigators, and subject to general criticism and comment. They are the

very general aspects of the loose formal or pre-suppositional model which we took with us to our investigation. It may be helpful to point out that these matters referred to are not hypotheses to be confirmed or disconfirmed by constraint data. They were truly assumptions. They therefore can be neither proved nor disproved. Moreover they had, and still have, the capacity of self-validation, a feature they share with all fundamental a priori assumptions. To make them is already a long step on the way to making them valid.

A PRIORI ASSUMPTIONS AND PROTO-HYPOTHESES

The following set of assumptions were explicitly made about the nature of our particular inquiry.

1. We assume that law means the assemblage of all behavioral rules that constrain those subject to them to obedience under sanctions either of a positive character in the nature of reward or of a negative character in the nature of punishment.

We do not by this assumption mean that we accept all the implications of a positivistic jurisprudence which regards all law as rules and nothing but rules. We adopt this methodological device as an ordering principle to give direction to and to limit our investigation. The principle is operational and explicitly makes no assumption that law originates only in rules and that beyond the rules there is no law. Rather, it means that the observer or investigator looks for rules or regularities or patterns of sanctioned behavior in the conduct of the group observed.

2. We assume that all special societies develop special legal structures over time.

It is hardly necessary, perhaps, to state an even more fundamental assumption, namely, that all societies whatever develop a legal structure over time. To law-oriented investigators such as ourselves, this assumption

scarcely needs formulation. It is true, however, that not all social investigators would make such an assumption. Indeed, many might reject it.

However, since the work of Malinowski and Hogbin, Hoebel and Llewellyn, it is perhaps unnecessary to waste effort on this matter so far as most anthropologists are concerned. And if the general proposition that, in effect, a society cannot be conceived to exist without some legal structure to support it is once admitted, then we feel confident that every special society, investigated for a sufficiently long time by interested and competent observers, would likewise disclose the existence in it of a legal structure.

3. We assume that a society tends to establish legal structures in accordance with the avowed or latent purpose of the society. This is an assumption following as an inference from a general teleological philosophical bias. It states in brief that purpose determines structure. It does not follow of course that avowed purpose determines structure, even legal structure. In the Penthouse Experiments we assumed that the purpose which would create the legal structure to be observed was scientific investigation, specifically that of a nutritional, psychological and legal sort. This assumption is of course not philosophical but factual. It therefore remained to be seen whether or not such purpose could be adequately ascribed to the subjects of the experiments.

In our section under Anti-Law (8) it will be seen that great resistance to the formation of an overt or avowed legal structure to govern the society was manifested by the subjects.

4. We assume that the members of a society exhibit both overt and concealed opposition to the general legal structure of the society at any moment.

Society exacts sacrifice from its individual members. The purposes of the members of a group are not identical with those of the group. The act of associating alone is costly in terms of individual interests. Our assumption is based on the conviction that while associating or grouping is not only functionally efficient but also perhaps inevitable, nevertheless, the act of associating exacts a penalty which members of the group never give up trying to escape. This does not mean that the ideal of a "perfect society" is without validity or meaning. Indeed, such an ideal is itself a necessity if any meaning is to be ascribed to present existing societies and if any attempt is to be made to measure the heavy cost of associating and hence to try to lighten it. As indicated above, we called all attempts to oppose the exactions of the legal structure of the microsociety Anti-Law. More will be said of this phenomenon later.

5. We assume that despite an ever-present disposition to oppose the legal structure, there also exists in the membership of the microsociety a contrary disposition to use the legal structure to advance personal interests.

The members of a confined society tend to cooperate with one another to avoid or evade legal exactions. But within the group there is also both subtle and brash competition among the members for the special privileges which the legal structure can confer. An exaggerated reliance upon rules, an aggravated respect for law and order, a reverence for legal form and even a delight in legal detail often manifest themselves in the behavior of a society's members toward their legal structure. If the legal structure can be assumed ideally to expect a reasonable good-faith compliance from the

normal ordinary citizen and if the various and sundry attempts to escape this reasonable measure of compliance can be called Anti-Law, then we suppose it is possible to designate a concern markedly above the ordinary as "Law-Plus." These reflections lead to and are summarized in our next assumption.

6. We assume that opposition to or exaggerated support of the legal structure may result from a desire of the members to enhance individual or coalitional goals, or conversely it may result from the members' desire to further the society's major purpose.

We mean to say that the society's legal structure is felt or sensed as an actually existing thing. Compliance with it may further one's goals or it may retard them. Opposition may have the same effect. There is no evidence that the society believes that the legal structure is the sum or aggregate of its individual decisions, so that the notion that the "law" could deviate from social purpose is unthinkable since it is merely a resultant of such purpose put into action. On the contrary, explicit law certainly and implicit law dimly are felt to exert their own pressures, so that the idea of compliance, over-compliance or evasion has real meaning and constitutes acceptable as distinct from neurotically unrealistic behavior.

7. We assume that the conscious aims of a society are compensated by or in conflict with its unconscious aims.

We assume that it is meaningful to ascribe unconscious mind to a group. We are not here concerned with differentiating individual unconscious from a group unconscious mind. The existence of unconscious group mind is a correlate to our assumption of the existence of group mind. We are well aware that a legal structure consciously created and put into effect is quite a different thing from a legal structure unconsciously operating in a

society. We are not here distinguishing between conscious knowledge of a legal structure as distinct from ignorance of its existence or its provisions. We speak of the total congeries of behaviors that may be formulated by the observer as a legal structure. We assume, to repeat, that the totality of the aims of a society can be found to be formed of aims consciously chosen by its members, together with unconscious aims that either complement or oppose the conscious aims. This dialectical assumption enables the investigator to classify as "legal" for example, much behavior that would not be so termed by the members of the group.

8. We assume that unacknowledged conscious and unconscious aims result in an actually existing legal structure that is quite different from any acknowledged conscious legal structure.

This dialectical situation results in the emergence of what we have called Anti-Law. We view this situation as a true dialectical state of tension between Law and Anti-Law. The emergence of and the adherence to aspects of Anti-Law often form the basis for either a dual system of law or even for the supplanting of Law by rules derived from Anti-Law. Anti-Law thus often becomes Law. If we were concerned to observe the degradation of a conscious system of law, we could watch the process by which conscious Law becomes Anti-Law. In fact, however, we are concerned in this study only with the reverse phenomenon.

It is quite possible that Anti-Law may serve a general compensatory function, as where by exception, it relieves from the harshness or severity of the operation of explicit rules of law. This is the traditional function of Equity, explicitly formulated for Western culture by Aristotle and preserved in the remnants of the dual systems of legal control in the Anglo-American Common Law known as "Law and Equity."

9. We assumed that a small, confined society places a relatively high premium upon unacknowledged or unconscious Anti-Law.

This assumption is more nearly factual than methodological. Nevertheless it does follow from a broad assumption that the size of a society may be a rough measure of the amount of law it generates. This assumption may be risky. But if it is accepted, it follows that a small society needs relatively less conscious law, or, put more cautiously, can tolerate relatively more Anti-Law attitudes. The notion that a confined society also tends to tolerate more Anti-Law internally among its members is really a hypothesis whose validity is tested to a certain degree, at least observationally, in this study.

10. We assume that in a confined society a sharp differentiation between inside and outside legal authority will develop and that consciously contrived Anti-Law attitudes are more likely to be directed against outside than inside legal structures.

We include in "outside legal authority" primarily the authority of the directors of the Penthouse experiments, the experimenters and investigators, together with all supporting service and custodial personnel. We take little specific account in this study of Federal or state law, military law, church law and the other segments of legally organized society in general. We examine, therefore, in the light of this assumption what is essentially a hypothesis that the fact of confinement creates a tension between constraint and freedom and that the legal structures of the inside and outside groups reflect this fact in significant measure. By definition, behavior directed in opposition to outside authority is "Anti-Law." Dialectically, of course, as was mentioned above, it may become inside law.

11. We assume that the members of a confined society develop a special individual sense of Psychic Space, intrusion upon which is "illegal" within the group.

In the main, this methodological assumption is self-fulfilling. One who looks for a special Psychic Space is apt to find it. Nevertheless the phenomenon is a striking one. It seems to rest on a common substratum of biological behavior. As living space shrinks, life energy must be allocated to the defense of the space finally allotted. An extended range of animal life exhibits the familiar pattern. In this study, the concept of Psychic Space in a confined society receives extended explication. We consider it one of the salient aspects of the behavior of a confined microsociety.

12. We assume that the members of a confined society instinctively or unconsciously tend to avoid codification of rules to preserve psychic space.

While this assumption is methodological to the extent that it tends to give direction to the investigation, it is perhaps more nearly a hypothesis than a mere general assumption. On the other hand, we do not mean to imply that inferences can be drawn from our study, which is observational rather than experimental in nature, to support or invalidate the statement as a hypothesis. In particular, we offer no evidence whatever that tends to disprove the hypothesis. What we have here is a proto-hypothesis, i.e., one that needs formulation and subsequent testing. What evidence we do have tends to suggest that the hypothesis is one that is well worth testing.

13. We assume that despite the tendency on the part of members of the group to avoid codification of rules designed to preserve Psychic Space, nevertheless observation discloses the existence and the nature of such rules.

14. We assume that the rules governing Psychic Space in a confined society are analogous to the rules of law by which men protect themselves from trespass and other invasions of interests in personality and property.

This assumption arises out of the professional training of the present investigators in law. While we do not offer any evidence whatever in support of the assumption, we are struck with its relevance to our study and feel constrained therefore to disclose it as an important element in the conceptual thought of ourselves as investigators.

15. We assume that other objectives of a special confined society are more nearly amenable to conscious choice and decided rule than are intrusions on psychic space.

This assumption is frankly material for a testable hypothesis. In a sense, however, it is methodological, for it shows one facet of the process by which Psychic Space is itself defined. By this we mean that Psychic Space is more nearly attached to the subject's own individual or ego interests; that there is a special effort made to keep the contours of the space safe from the intrusion of group discussion and a feeling that even a ruling designed to preserve Psychic Space is something of an intrusion upon it. Psychic Space, while absolutely necessary to the well-being and the health of the individual, seems to be ruled by individuated feeling and intuition rather than thought or sensation. It by no means excludes touching, and bodily contact may be tolerated. But the feeling tone must be correct, and general rules governing intrusions appear, as mentioned above, to be resented as intrusions.

16. We assume that the legal structure of a confined microsociety cannot collapse or suffer serious degradation without injury to secondary systems of interpersonal control such as morale, good-fellowship, patriotism, scientific or military loyalties, charisma or religious devotion.

We assume here that the politico-legal structure is the first line of defense against interpersonal conflict and the tensions engendered by the group objectives.

We further assume a hierarchy of systems that support group objectives. These may be briefly listed as the physical system, the life support system, the socio-psychological support system and the legal support system. Our position is that if the legal support system collapses an intolerable strain will be set up in the other support systems in the reverse order listed.

17. We assume, despite the critical importance of the legal support system, that it is the first sub-system to suffer serious degradation under environmental stress.

This assumption rests, in our opinion, on the subject's need to control his own fate through a sense of self-control, mastery, and personal significance in the face of disaster, partly also because of the group ignorance or ineptitude in self-government. It may stem also in part from the instinct for individual self-preservation, dispositions to embarrass the authorities, and from a general ignorance of the utility of legal orders.

18. Finally, as a general apology for our whole enterprise, we assume that the degree and kind of psychic sacrifice which legal structures exact from the members of a society can be most easily studied in special microsocieties; and that a knowledge of the nature of more nearly optimal legal structures may emerge from such investigation.

THE OPERATIONAL MODEL

The foregoing methodological assumptions formed the first part of the general model or plan of our study. It might be said to be the formal or a priori part. Part II we call the Operational Model. It has two distinct parts. The first is Passive Observation; the second Active Intervention. At the beginning Passive Observation occupied the major part of our work. Here the "phenomenological" method of suspending judgment and allowing the experiential flood to all but inundate us was followed. A detailed account of this experience is given in the Narrative. Gradually, as we became familiar with our subjects and the peculiar conditions of their life in the Penthouse, we introduced exercises for the subjects to do. We call this Active Intervention. It comprised our plan of intrusion upon the on-going life of the Penthouse and consisted of all those efforts we ourselves made to alter the lifestream of the Penthouse in the interests of wresting from it data more nearly to our liking than those which might be expected to emerge from merely passive observation of the scene.

We shall describe in the chapter on the Course of Decisions the detailed account of our manipulations on the subjects of Penthouse II and III. Here we try to give a general description of our aims and intentions in undertaking these proto-experiments. Our over-all plan was to impose upon our investigations a very simple "legal" model. We intended to place the subjects in situations in which they would be induced to accept alterna-

tive roles of advocate, defender and judge. More generally we hoped to have them espouse and argue out the positions of pro, con, and decision maker. We hoped thus to accelerate the emergence of "law." From a motivational point of view we expected our results to give some indication of the extent of the subjects' persuadibility. The study from this point of view would throw light on the extent to which a confined microsociety might be able to persuade itself to adopt corporative or even cooperative views and plans.

We therefore designed two long politico-legal questionnaires; we submitted to the subjects a series of prisoner's dilemma games; and we had them argue out hypothetical legal cases.

The questionnaires gave us the first inkling that our task lay not in the study of law but primarily in Anti-Law. The questionnaires raised violent negative reactions in the subjects. We then submitted them to a random collection of our colleagues with a surprising degree of hostility resulting. One of the questionnaires was then submitted to a group of fifty law students in another part of the country. Half refused to take the test. Other symptoms of distress at such probing were manifest.

The prisoner's dilemma games resulted not in setting up antagonistic or pro-con situations among the subjects, but rather gave rise to a situation in which the subjects immediately consolidated their own group sentiment and converted the games from an antagonist-cooperative non-zero set-up to a zero-sum game with the investigators as antagonists. Full description of this situation will be given in the Course of the Decisions. The hypothetical law cases were reacted to more conventionally. Their description likewise follows later.

To fill out the phenomenological situation, we add that the subjects were given various psychological tests of interest to us. The nutritional

staff made routine reports at our instance. One of our investigators (D. Strickland) made numerous personal contacts with the subjects and the staff. His observations are reported at length.

Lurking over-all and made explicit at the end of Penthouse III was what might be called an aura of simulation of an extended space flight conducted by combined military and scientific personnel. The fact that the Gemini diet was being tested in Penthouse III heightened the atmosphere of space flight.

CHAPTER II

THE NARRATIVE
(The Penthouse II)

INTRODUCTION

This is the natural history of a confined microsociety, narrated by the day and week. It is the story of the six subjects' (Ss) dealings with about a dozen staff, and with one another, in the Penthouse premises. The Ss formed a peer group that was artificial in that it was neither a kinship group nor a spontaneous friendship group. It was, however, a work group, much like a construction gang or a submarine crew; and we do not regard it as "artificial" in the sense of a group merely brought together for a few hours to engage in a simulation. This group shared an arduous, well-defined, long-term task, part of which (paradoxically) consisted of waiting and enduring.

The Ss are here given pseudonyms to prevent identification. The Staff are referred to by their titles. Two of the Ss had participated in a similar but shorter experiment earlier in the year, as had most of the Penthouse II staff - a fact which introduced the complication of lore and tradition into the experiment. Two groups of two Ss were initially paired in friendship. Five of the Ss knew one or more of the others before the experiment began. The sixth was a foreigner travelling on an immigrant visa and was new to the city.

In the following account excerpts from the contemporaneous Log will be set out in indented form. The Log itself is set out in full as an Appendix for the benefit of those who would like to study more fully our logistics. The Narrative and the Log complement each other with some

inescapable redundancy. Other parts of this Narrative are taken from staff reports, protocols of discussions, and other means of passive observation.

It will be helpful to the reader if the personnel involved in our investigations of the Penthouse Project are set out in the form of dramatis personae.

1. The Staff

Dr. Sheldon Margen, nutritionist, Director of the Penthouse Project

Dr. Dorris Calloway, nutritionist, Co-Principal Investigator of the Penthouse Project

Dr. Thomas A. Cowan)
Dr. Donald A. Strickland) Legal Investigators

Dr. John Bosley, Consulting Psychologist)
Mr. Martin Stow, Consulting Psychologist) Space Sciences Laboratory

Head Nurse, Assistant Nurse, Dietitians, Attendants, medical and scientific personnel

2. The Subjects

Penthouse I (here only briefly relevant)

Penthouse II

Al

Bob

Chet

Dave

Ed

Frank

Penthouse III

Gabe	Ken	Otis
Hal	Lee	Pat
Ike	M - Martin Stow, psychologist	Ray
Jack	Ned	Sam

First Week

Mar. The experiment opened on March 1st, 1965, with a "last supper" with the Ss and the staff. Chet and Bob, having the fewer close ties with other Ss, were most friendly toward the staff and conversed with the staff more. Al and Ed kept to themselves and to one another. So did Dave and Frank (the other set of close friends). Frank, during the Director's welcoming speech, was eager to interject amusing remarks. Betimes he played with a yo-yo, left from the Penthouse I experiment to which he had also belonged. He appeared to us to be constantly asking for attention by "stealing the show" and perhaps to be establishing himself in the eyes of the others as the delinquent leader (his swagger on this occasion reminded one of Marlon Brando playing Zapata).

> . . . . . Frank made something of a commotion when the Director said the group would have to decide by tomorrow morning whether they wanted five or six cups of coffee per day. Frank: "Well, why not six, it gives you something to do." The others later asked him, and secondarily Ed, whether six was reasonable; he said it was, and they seem to accept his lead . . . . .

This form of consultation and deference evidently hardened into a decision, for the next day it was assumed by everyone that the quota would be six cups a day.

> . . . . .Frank, Al and Dave give evidence (in their jokes, for example) already that they are prepared to be taken care of passively. Chet is stolid, is not convinced that confinement and close control are necessary to this kind of experiment . . . . .

2 Mar. The next day an effort was made by Bob to discover the political beliefs of one of the authors. This was, we infer, a vehicle for revealing his association with the Free Speech Movement, for testing our tolerance of the FSM, and for expressing the injustice of being arrested for something that he said he did not wholeheartedly agree with (i.e., the injustice of the Outside). Later encounters with Bob confirmed his distrust of the Outside, especially of the police (a view often expressed by Frank too).

3 Mar. On the third day the authors spent an hour with the Ss, discussing the future sessions on socio-legal problems.

> . . . . . they did not respond readily to the idea that the present situation is similar to a space flight. Frank especially wanted to point out that whatever simulation we do will have virtually nothing to do with the real thing . . . . . Chet is silently cooperative, suggesting at one point that astronauts might want to take a dog along. The subject of cannibalism was broached and joked about [following jokes about eating the dog] . . . . . Al was attentive and cooperative, perhaps a bit suspicious. Dave was the most latently troublesome, saying at the end that it will be a question of who breaks whom first. I said that if the sessions got to be a pain in the neck we could reduce them or call them off.

He smiled distrustfully.

The topic of space crews - how they would get along together on long voyages - was raised:

. . . . . Al said he wouldn't be able to stand it because he likes to be alone, can't stand people yaking at him, needs privacy. Frank said this is a psychological problem. We discussed crew selection and group living briefly.

4 Mar. The Ss are rarely observed socializing, except in groups of two. They watch television in silence, seldom venturing a remark about what they see. There is brief, fractured, cautious interaction around the kitchen stove, where each subject must heat water for his coffee.

Ed, who has found the initial adjustment painful, comes into the living room often but returns at once to his bedroom, after looking at the others and looking at TV for a minute or two. He and two others

5 Mar. have to be asked to complete a forced-choice questionnaire. During the questionnaire administration Frank remarks that the questions are "absurd." He says at the end of the test that it will show he is an anarchist: "When you don't like something, just blow it up!" Two or three of the Ss endeavor to discuss the questions and make jokes about them (i.e., to establish some standard expectations and solidarity vis à vis the authors); they are hushed.

6 Mar. On the sixth day, Al jokes that he just might not want to cooperate with the authors. He and another S complain that it is hard to answer the questionnaire because the questions are open to so many interpretations (it is implied and later stated that the questions are meaningless and don't test what they are supposed to test). The Ss are reminded that they don't know what we are trying to test.

Dave is teaching Al a new card game: That is the first sustained interaction that we have observed between the friendship cliques Al-Ed and Dave-Frank.

On the seventh day, Chet attempts to discover what the questionnaires are designed to measure and what we are after. Most of the others had expressed this concern, more circumspectly.

7 Mar. Ed demanded of the staff whether there is any "real" reason that a friend could not come and visit him (it is not visiting day, however the friend is leaving town). The Director is consulted and gives his permission.

> . . . . . Al came in angrily stating that if he had known, he too would have had visitors . . . . .

This is the first of several observations on the competition for visitors and on the importance of visitors to self-esteem.

During this first week Frank was active in deciding where to put the TV set, announcing that the "only intelligent place" to put it was by the window. Two others wanted the TV by the fireplace, agreed to Frank's demand. He tended to select the programs or to change channels. He was also vocal in labelling as "ridiculous" the Director's decisions that subjects could not fly kites (because of rapid weight-loss at the time) and that they should help wash dishes.

Al expressed concern over his career plans and the need for more communication with the Outside (the delay in bringing in a TV set). Both Al and Bob busied themselves with art work. Bob began a long-term pattern of isolation from and rejection by the others. Ed was withdrawn and ill-- an adjustment pattern which did not persist after the first several days.

Second Week

Mer. The Ss seat themselves around the table in our sessions in a way which foreshadows their subsequent relations: Bob and Al farthest from the other Ss and closest to the staff. A discussion of how to spend $20, provided by the Director for magazines and newspapers, was opened by Dave with an expression of suspicion of our motives. Most of the Ss threw out suggestions and challenges, but did not support one another's ideas or press for constructive solutions. In the face of the authors' refusal to indicate decisions or declare a consensus, Ed took the lead, dominated the debate, and finally called for a vote. Four of the Ss responded to Ed's lead, Chet and Frank voting half-heartedly and belatedly.

> Dave remarks in parting that he sees what we are up to, we are getting (or did he say forcing?) them to make decisions. I say yes, that is what I said at the beginning of the session! He still appears suspicious.
>
> Passim--Al remarks that he just does what he is told and gets it over with; "that'is the easiest way."
>
> Chet interprets a TV character to me as someone who is "new and doesn't get along with the others yet."

The dietitian reports what she calls a "conspiracy," not "malicious," over the coffee ration: The Ss are not abiding by the quota; i.e., they are beginning to nibble at the regimen.

The first run was made on a non-zero sum game, Prisoners' Dilemma (see below). Al at first refused to act as a monitor, saying that "Jesus says I don't have to." When told that we can do without him, he says he was

only kidding. Again the Ss, especially Dave and Frank, make loud remarks about the game and have to be hushed. To the authors' surprise, the Ss immediately and tacitly concert to become a "team" and to turn the game into a zero-sum game against us, avoiding competition with one another, and exacting the maximum amount of money from us.

> Dave, before and after the game, is sarcastic to the point of insolence . . . . . says he is not at all interested in designing games and will not answer the questionnaire, but does . . . . . Ed is visibly irritated by all this excitement, says he doesn't understand the game. . . . . Frank remarked at the end of the game, when told that his team could have earned more by competing more: "We're going to split the money anyhow. Ha, ha!"

11 Mar. [One of the nurses] is agitated that Frank, Ed, Dave, and Al have refused to play cards with Chet and Bob. She fears that this is a hardening division. . . . . Chet had evidently become isolated again and offered to teach her chess (a fairly wild suggestion).

12 Mar. Frank, in the presence of Dave and a staff member, launches into a general attack on the rules. He complains that the rules are inconsistent and that "they" are going to cut "their" own throats. He refuses to say who "they" are. He cites, as an instance of his complaint, a rule which applies to the Ss but not to the staff; and he invents an extremely improbable hypothetical example to discredit the restriction on visitors.

After the first visiting hour the Director put a limit on the number of visitors that could be in the Penthouse at any one time. The

Ss interpreted this to mean that they each could have two visitors at any one time. Perhaps to avoid the obligation-system implicit in trading visitors, they did not hit on the idea that one S could draw on the unused quota of the other Ss until several days later, after the idea had been mentioned by the staff. Even then we did not observe any explicit exchange of favors: it was tacitly assumed that if there were fewer than 12 visitors present a S had a "right" to fill out the quota. This implicit first-come-first-serve rule was not a source of conflict because only one S had a large number of visitors and two or more usually had none.

12 Mar. Frank predicts somberly that the experiment is going to blow up. He says he hopes the experimental games will not involve decisions, because he does not like decisions. He and Dave are very suspicious about the purposes of the experimental games and make charges of trickery and manipulation. Money lost (between Ss) in these games is consistently lost to Dave, Frank, and Ed, who later and by other measures prove to be the most dominant and popular Ss. The Ss divide up the winnings into equal shares after each game, all winnings being put into a common pot; this behavior was exhibited spontaneously by the Ss, as if there were no other conceivable solution.

During the course of the week the Dave-Frank clique experiments at being friendly with Chet, Ed, and Al on different occasions. The topic of food gets raised, as it does hereafter about once a day throughout the confinement (this is probably inevitable, since the TV commercials are so often about food).

Al announces, in the course of a fantasy-competition lasting several days, that he is President and is going to become King or Emperor. Chet claims more modestly to be a European king of old. Ed enters the competition at the margin by asserting he will be Pope. Frank humors, with some

irony, Al's claim to the Presidency. It is of interest that the Ss who later proved to have the highest prestige as well as the one lowest in prestige did not engage in this "competition" for status. (It is like a play within a play, a comedy relief which parallels the real action.)

A more serious contention arose between Al and Frank, Al challenging Frank's near-monopoly of meal-time conversation. It may be relevant that Al's close friend is Frank's roommate and sometime friend.

Bob initiated what turned out to be a long history of accidents and neglect centering around the medical routines.

Third Week

15 Mar. Third Week. The Ss are difficult to locate when the time comes to give them the third part of our politico-legal questionnaire. They are upset by the questionnaire, presumably because it taps their feelings toward morals and authority.

> . . . . . Dave first of all makes fun of our enterprise by making jokes into the tape-recorder, then he and Frank raise a sustained attack on the questionnaire, asserting that what we are getting at is psychological or it is nothing, and the opinions we ask are superficial and ambiguous . . . . . Dave becomes exceedingly insolent in a sweet, "I don't understand why you are such fools, explain it" kind of supercilious way. . . . . We try to stress that this is a scientific inquiry and point out that they don't find the treadmill interesting either.

Dave remarks pointedly: "That's different because the Director (Nutritionist) knows what he's doing."

. . . . . Bob was very reasonable and retained his criticisms because he "didn't like the direction the discussion has taken." Ed asked for more concrete problems and fewer abstract, indefinite problems. The others were punks, following the Dave-Frank lead.

Although upset by the Ss' reactions and outraged that they would so undermine our work, we decided to go on as before and treat the previous session as a product of the unusual stress they are under. The Ss" behave as if nothing has happened. Dave expresses the opinion that there is "a misunderstanding" between him and the authors.

16 Mar. Al and Ed continue to play cards together, but Frank and Dave seem to prefer walking and talking outside to a four-handed card game.

17 Mar. I go to the next regular session, mainly to present a conciliation game in hope it will be more congenial to Ss. . . . .

Some delay in getting Ss together. Dave comes in late from treadmill, wearing dark glasses, being jocular and descriptive. The session begins with a good deal of hostile joking. The conciliation idea backfires because the Ss are annoyed that their initial solutions are not simply accepted; i.e., the addition of sub-problems and complications is too frustrating for the Ss. The tenor of their first solutions is that a rule would be set down in a conciliation situation and all parties would automatically comply. When questions of enforcement and ambiguity are raised, Al reverts to joking about himself as "Prexy" and "God." Frank lies down on the floor as if dead. Two other Ss leave the table and wander around the room. Dave insists that the problems under discussion are not "real" and that he is not interested in mere games. The discussion verges toward death, disposal of corpses, and cannibalism on a space craft. Dave and Frank state dogmatically that they will not cooperate with "games"; that they cannot stand making decisions; and that the authors are just trying to stir them up. They do not respond to a plea that we need their help and are willing to modify our agenda to make the sessions less stressful. The matter is taken up with the Director the next day and Dave and Frank are dropped from this part of the experiment.

It is noteworthy that Frank's position in this dispute is that the investigators ought to talk with the Ss separately. We hypothesize that the very <u>confrontation</u> of all the subjects is for some reason unpleasant (i.e., they could not possibly make a serious colleagial decision <u>en banc</u>). The last stage of this particular confrontation is recorded in the log as follows:

By this time Frank has lain down on the floor because he does not want to participate; Ed is making something with paper and match stubs on top of the table; Chet is in reverie; Bob has withdrawn to get some coffee; Dave keeps getting up and sitting down; and Al is looking disconsolate.

On the bulletin-board there has appeared a cartoon showing the Devil being bathed by the sun's rays. It is labelled "Frankie." According to one of the nurses the cartoon was drawn and posted by Al (cf. the Frank-Al competition).

19 Mar. The next try at experimental games (with the other four Ss) is quite successful. They are most cooperative, Ed assuming Frank's former seat at the head of the table. They are constrained to ask whether the other two are still in the experiment and are told that they are only in a peripheral sense. They then, to our surprise, divide up their winnings four ways. Bob makes a sign which he puts on the pot: "KEIN ARBEIT, KEIN FRESSEN."

Ed is observed to exercise some initiative in turning on the TV set in the late afternoon, without consulting the others. He appears to employ the technique of announcing there is a good program or movie on, waiting to hear objection, and proceeding to turn it on.

A day later:

Bob's "KEIN ARBEIT" sign is missing. I ask what happened. He says it is probably a "house-cleaning casualty"--he doesn't know. . . . . .

I stay around during lunch. Frank is noisiest --singing and talking--dominates the conversation.

He says at one point that it would be a good idea to get rid of Chet. Ed reads aloud from a "Wonder Woman" comic book. Frank and Bob get into a discussion of whether crime is disease. Frank says Chet is the only one [of the Ss] who is sick. Chet counters with "Frank is the only one who is healthy."

20 Mar. A disagreement arose over the Ss' "right" to sunbathe without underwear-tops (necessary to catch bodily wastes from the skin and perspiration). This is settled by the Director in the Ss' favor.

During this week one of the friendship groups, Ed-Al, was conspicuously compliant in helping with the dishes and otherwise cooperating with the staff. We suggest that such behavior may have been meant to distinguish them from the clique of Dave-Frank (who give the impression of wanting to establish a sullen, delinquent subculture, or of wanting to draw a very sharp line between Us and Them, Inside and Outside, etc.). Frank, Bob, and Al were heard by staff members to remark that they did not like the authors' sessions and they were "not what normal people should discuss." (Al) This comment, along with the behavior of Dave and Frank in our sessions, represents a definite approach to conflict--that explicit discussions of conflict should be avoided like the plague.

Al's verbal competition with Frank at table continues. Al fancies building a bridge across the Atlantic Ocean (linking himself with the Ss who are planning to go to Europe?); Frank pooh-poohs the idea; Chet says he wouldn't use the bridge. Frank's domineering behavior at table seems to increase the solidarity between Al and Ed.

A miniature noose was found, extended from the kitchen ceiling, the day after Frank and Dave had refused to participate further in the authors'

sessions.

References to bestiality, homosexuality, insanity, and prison life appeared during this period.

Fourth Week

22 Mar. The Ss (excluding Dave and Frank) take well to conciliation games and readily assign themselves roles on a space crew. Ed is "elected" captain after the others have chosen roles, Ed has neglected to choose, the role of 'captain' is still open, Al says to Ed "Be captain," and Chet says, "Yes, you be captain." Ed agrees with an "Oh, shucks!" reluctance.

24 Mar. Discussion of a 12-man space-crew and search for realistic problems: Privacy strikes Al and the others as a very basic need. I am irritated at their reluctance to talk and at the amount of priming I have to do to keep the discussion going. Ss getting up to make coffee; Bob walked around the room for a minute; Ed and Al playing with a candlestick.

. . . . .

Before the meeting, Al and Ed are playing cards and joking with the dietitian about sex. Al continues to mention food, longing for a tuna fish sandwich. Chet seems to be at loose ends. Bob is busy as usual. Frank and Dave are friendly. . . .

In the session on privacy it emerges that Chet and Bob have very different notions from Ed and Al as to minimum requirements to protect personal privacy. The discussion of what rules there ought to be about privacy

is inconclusive; opinions on the relative importance of noise, space, seclusion, touching, odors, etc., are quite divergent.

26 Mar. Ed gets very angry at a member of the staff who asks him to complete a psychological questionnaire, contending that he just "can't" answer some of the questions. He is, paradoxically enough, usually more cooperative with the authorities than are Dave and Frank, and at the same time touchier about specific requests and with certain staff and Ss.

All Ss are somewhat less cooperative this week. There is a marked falling off in their projects--painting, writing, reading, study. Frank is repeatedly observed to imagine blowing things up, people, and institutions, sometimes speaking that way light-heartedly and sometimes earnestly.

28 Mar. Dave and Frank make a good deal of commotion during the visiting hour, at a time when they have no visitors and Bob is trying to entertain several visitors. They are warned against walking on the parapet, which is against the rules; thus begins a long dispute on the parapet rules (see below). They offer, as a first defense a) that there is no sense to the rule and b) the Director knows they do it (and thus condones it).

Fifth Week

29 Mar. The Ss persisted in perceiving an experimental game as a game against the staff and not against one another, even though they could have won more money from the investigators by competing. It may be that they were balking at the symbolism of the game, which involved a fighter crew attacking a bomber formation. In any case, the Ss ignored or misunderstood explicit instructions to the effect that the object of the game is for the fighters to attack and for the bombers to defend.

30 Mar. A general meeting of the Ss was called by the Director to review certain complaints. 1) A woman had complained to the Director that she was

sprayed with water from the Penthouse while she walked on the sidewalk below. The Ss let on that they are slightly amused. Chet, who was involved but not alone, appears to accept most of the blame for this incident; a staff member was also sprayed, primarily by him. 2) The Ss are asked not to go around in their underwear after 9:00 in the morning, for the sake of appearances. 3) The Director announces that the head nurse is in full charge in his absence. This announcement was thought to be necessary because the Ss inclined to quarrel with her more and more about minor rules.

> All hands tend to think this [water-throwing] incident is humorous and to accept as reasonable the Director's injunction that "we can't have water, urine, or whatever coming down on people."
>
> . . . . . Throughout, Chet is restless and mischievous. Bob is amused and adopts an "Oh, come now" attitude. Frank appears chastened, compliant, respectful, but eager to get a word in eventually. Dave is absolutely silent and looks puzzled if not apprehensive. Al looks mature and somber, smoking a pipe silently. Ed (symbolically) flees the scene by staring at the TV set (the sound is off), changing channels while the Director is talking, turning on the sound whilst the nurse is talking and the Director has left the room momentarily, and complaining at the end of the meeting that it caused him to miss part of "Fugitive Kind" with Marlon Brando, whom he always liked . . . . .

30 Mar. One of the nurses remarks that the behavior of two Ss with a mutual visitor seems peculiar (we cannot reproduce the details here). The possibility that these Ss receive narcissistic "supplies" from the outside raises the question whether leadership among the Ss is a function of position in a delinquent sub-culture. We notice later that the Ss closer to these two Ss engage in overtly delinquent acts, as if to recommend themselves too as daring fellows.

31 Mar. In a regular session with the authors, the four cooperating Ss reach a consensus rapidly but are reluctant to vote. Chet is practically bludgeoned into agreement by Al, when there appears to be a gap in the consensus: "You agree, <u>don't</u> you." Al and Ed were raucous and undisciplined. There is some poking and touching observed among the Ss, heretofore not done with impunity. Further references to cannibalism are recorded.

Frank's dominance of breakfast conversation is successfully challenged by Al. Frank is depressed and complains bitterly about the food. Al expresses half-serious censorious remarks to Chet, a sometime friend of Frank's. Chet, in turn, deliberately drops a beaker on the floor to test the staff's reaction. Bob and Dave seem to be avoiding interaction during this period.

Meanwhile, Dave, Frank, and Chet are observed to be spending more time together; Ed has become friendly with Bob; and Al complains of feeling tired and becomes less assertive at meals (abandons his bid for leadership?). The next day Al and Ed are both engaged in being friendly with Chet. Bob is again abandoned, or withdraws, or both. Chet is "permitted" to watch a certain TV show at a time when Frank "traditionally" watches another show. Chet thus becomes some kind of a pivotal person. He does not, however, join with the two cliques (Al-Ed and Dave-Frank) as they now resume their foursome at whist. Chet is observed to be slightly arrogant

now (which is out of character), and the foursome are quieter, as if they have settled into a pattern.

Bob was seen to turn on the TV unilaterally, albeit at a time when the other Ss usually do not watch it. He is largely isolated from or by the others and is the first to leave table at feedings. Meals have become much less orderly, the Ss coming late, dallying, carrying the food away with them, leaving some of it for later, and so on.

For several days Frank's moods seem to correlate exactly but indirectly with Al's. Frank solicits the approval of Ed and Dave before turning on the TV at a time when the Ss usually do not have it on. Ed later turned on the TV and changed channels once without consulting the others. Dave is the only one observed turning the TV off; the others just let it go on and on, walking away from it or ceasing to pay any attention.

Chet has begun a sequence of having to be reminded and exhorted to abide by the medical routines. The Foursome talk in falsetto and dialect voices while playing cards; Frank and Dave become acrobatic, and clown a good deal. More complaints about the food. Some speculation about what would happen if they made sexual advances to the dietitian. Complaints about the way in which the staff administers the strength-tests.

Most of the Ss appear more irritable this week, complain of bad dreams, and chaff at the schedule. One of them persists in walking on the parapet, contrary to rules. Frank's technique for changing channels on the TV is to make two or three disparaging comments about the present program (presumably he is awaiting confirmation or opposition); then he jumps up and changes it without consulting the others further.

2 Apr. In the regular discussion session and in experimental games, the Ss have become increasingly zany and immature. Asked to assume roles as members of a space crew, they choose to be plants and animals. For example:

D.S.: . . . . . Who wants to be what on the conciliation board?

Ed.: I'll be a forest.

Al: And I'm going to be the frog.

. . . . .

Bob: I'll be the jewel in the frog's head.

D.S. What would you like to be, Chet?

Chet: The Archbishop.

They continue to refuse to compete in experimental games; the most assertive S appears to lose consistently and to be the least willing to compete with his peers. Discussion of the games bec me impossible because of the ridiculous (and ridiculing) behavior of the Ss.

> The post-game discussion deteriorated rapidly, owing mainly to Al's very clever ridicule (pretending to be a toad, and croaking randomly while I was trying to be serious). This, sanctioned by Ed, Bob, and Chet (in that order) broke me up and I was put in the most uncomfortable position of being a party to insanity and calling them back to order. My irritation was doubtless visible.

Some of the Ss just wandered away from the table; the quondam leader, Ed, stated that the problem then being introduced by the investigator would be interesting to do some other time.

Frank is again heard to joke that he might throw Chet over the parapet. This is part of an on-going fantasy about dropping peers and staff over the edge, blowing them up, burning them up, cutting them up, packaging them, mutilating them, and so on. This recurrent theme originates most often

with Frank; but it is shared in varying degrees with all the others.

Apr. More complaints about rules on visitors. Speculation by Frank that during the next experiment "someone" is going to kill the Director.

Sixth Week

5 Apr. The leader of the cooperating Ss, Ed, immediately rejects our suggestion that they might want to use our sessions to write a skit about life in the Penthouse. He says this is obviously designed to get them "to release tensions." Initiative is thus, as usual, thrust back upon the investigator, and all attempts to proceed with work are resisted with ridicule, inattention, and physical coming-and-going. Bob "absents" himself much of the time by covering his face with a place-mat, making it into horns, making it into a snout, etc.

> Chet is almost alarmingly eager to take roles on our Conciliation Board, and talks about the hypotheticals as if they were bigger than life.

In the use of the TV, great reliance is evidently placed on preemption and priority in time.

7 Apr.

> Presented U. S. v Holmes [a case of shipwreck, self-defense, and homicide]. They really went for it! Next time we discuss the decision.

The non-cooperating Ss, Dave and Frank, entered the room at the end of the session and gave evidence that they want to play too, except under different rules. They will test us. They playfully throw pebbles at us later the same day.

9 Apr. The next session on legal cases and hypotheticals is very laconic. Ed reads a magazine; Bob is absorbed in drawing a flower. Before the session, Al insisted on discussing the shipwreck case with us, appeared very concerned that he support the "right" alternative and perplexed that the moral issues were so complicated; he has shown himself in other contexts to be eager to appear mature and to win the approval of the authorities. So he behaves in isolation; with his peers, however, he becomes childish, as if seeking a solution to the problem of how to win their support without openly defying the Outsiders.

10 Apr. The Ss have begun to complain more about the food. Chet inadvertently spilled his formula. Frank believes that the dietitian is deliberately making the food worse because he previously complained to her about it. There is a relatively invariant feeding order, i.e. in terms of who arrives first at table, stays longest, and says most. This mirrors, with some distortions, the status-relations of the Ss.

Some of the Ss have become more irritable, depressed, and prone to outbursts of temper. Others, presumably the better-defended and more ascetic seem to be happier in--or at any rate indifferent to,--the growing stress. More food fantasies and complaints about the present diet; one S throws food on floor. The better-controlled Ss talk and reminisce a good deal about food; the ill-controlled Ss complain about the present fare. The less popular Ss are observed to have more interactions with the staff.

During this period two of the more mature Ss are noticeably giddy, sentimental, silly, engaging more in isolated rituals pertaining to Nature and the Sun. Two Ss have become devoted to physical culture and spend time idealizing the past. The more passive Ss have become fairly assertive--or, more accurately, easily piqued and surly. The better-controlled Ss appear slightly depressed on days when they cannot go outside by themselves;

one of them complained of feeling "cooped up" like a "caged lion."

A protracted feud between Frank and the head nurse commenced as to whether a certain door should be kept open or shut. Frank wanted the door shut to keep noise out of the other rooms; the nurse wanted it open to be able to hear the telephone. It was inferred from later communications that an underlying source of chagrin was that the noise was being made by Dave, who was exercising on the treadmill in the room with the nurse.

Frank and Al engaged in skirmish over various sections of the Sunday paper; it threatened for a moment to get out of hand. The more subdued Ss tend to make mistakes regarding the medical routines; and they are beginning to complain about the food, coming late for meals, and toying with their food. Some "noise" has appeared in the Al-Ed friendship; Dave-Frank have slowly drifted apart; and all the Ss have begun to exhibit "cocooning" behavior, because, as they told us, they did not want to get involved, did not know what would happen if personal relations became too intense, and preferred to keep to themselves. The shier Ss have been imagining various trips they will or might make after the confinement. The following

10 Apr. quotations are from individual interviews with the Ss during this week, on the topic, "What is the group like now?"

> ". . . everyone would rather stay in his own sphere because it is easier than trying to set up something here in this situation, where you know you can't leave."

> "We all feel the need not to express ourselves completely. It is close in here at times. I don't want to get involved. Have to be here for two more months."

". . . You learn to ignore people more. . . . I don't know anybody up here; I have no reason to try. I'd just as soon not go into any big thing."

"It is an unknit group [Question: Would you say it is a closely-knit or a loosely-knit group?] . . . Everyone is together singly. . . "

". . . Everybody has settled into his own position. . . ."

". . . It is only a group insofar as we have to stay together. We wouldn't stay together, that's for sure. . . ."

Seventh Week

12 Apr. The cooperating Ss were asked to consider a case of cannibalism on the high seas (Regina v. Dudley and Stephens, 1881). Bob was upset at the decision of the other three; half way through the discussion he rolled up the place-mat and made it into horns. The three took the view that the perpetrators of the cannibalism ought to be excused, owing to the extenuating circumstances of the case. Al provided distraction by putting flower petals in his ear.

(Long silence)

Al: And yet the people who did this felt as though he wouldn't live even if they didn't kill him, . . .?

DS: That's right.

(Long silence)

Al: None of the men were medical at all were they?

DS: No.

Al: In other words it's just layman's opinion that he was going to die before they were . . .

. . .

Ed: . . . The business of not consulting Parker seems to me the important thing.

. . .

Chet: . . . it was obviously a matter of survival and I think no one should be punished.

12 Apr. All the Ss convened to discuss the possibility of an outing. Frank asserted there was only one place he would consider going--a certain park--then he left the room. The others, having explored several other possibilities, agreed on the park with one or two hangers-back. When the day arrived, they all went on the outing without remark.

13 Apr. Ss mention possibilities of violence to selves and staff, in rather hypothetical, predictive, and warning manners. They refuse to comply with a new dietary rule "unless it is an order."

Frank is furious about a psychological test which asks which of his peers he likes best and which least. He protests that that is none of the staff's business. He is also incensed that a staff member (a former S) in addition to the consulting psychologist has seen the results.

14 Apr. Dave and Frank stick around more and more at the beginning of our formal sessions. The others are frustrated and annoyed at experimental games where the best solutions are fairly tricky (e.g., randomized play). They engage in second guessing, glaring at the investigator, travesties and

giddy behaviors.

Two or more Ss have adopted the technique of greeting staff members with reminders that the staff is privileged and the Ss are deprived: e.g., "What did you eat for lunch?" or "Why aren't you out drinking beer?" Dave develops a florid distress over the potential abuses and intrusions of the Outside Authorities; he is brought into line by Frank, who terms these attitudes "crazy."

A rather elaborate system of favors, attention, and supplies has grown up between the Ss and the staff. It involves a division of labor and an obvious matching of supplies, talents, and needs. This system--we suspect but cannot prove--involves as much, and during certain stressful periods of the experiment more, interaction than exists within the peer group.

Other Ss have begun to make errors in the medical routine; alternatively, the same Ss are most insistent that the schedules and routines be abided by.

Fluctuations in the number of incoming and outgoing telephone calls and visitors have been noted from time to time by the staff, but careful records were not kept on this point. The less dominant Ss are hardest to arouse from sleep in the morning and are late and silent at meals; the more dominant engage in metaphysical conversations at meals and card-playing afterwards. All Ss appear to be slowing down of late. More complaints about the food; and fears have been expressed by Frank and Chet that the present diet will do serious, if not permanent, damage to their health and musculature. An attempt by Chet to conduct isometric exercises for the others has been largely abandoned; although most of the Ss still do the exercises after a fashion, and three or four of them have a strong interest in their physical condition and prowess. This correlates negatively with references to homosexuality.

Eighth Week

19 Apr. A conflict has arisen between two of the Ss over the limits of personal privacy: the first let on that the second was not friendlier or more open because he had something to hide. This was resolved by the two, the more seclusive repudiating the intrusive acts and questions.

The Ss have become more and more reluctant to consider alternative interpretations and rationales in our formal sessions. They are also becoming sensitive to all issues that remind them of personal intrusion or violation of their privacy.

> Ed spent early session putting half an egg shell (from Easter decoration) in his eye as if it were a monocle. Al made a small dinosaur out of clay and put it in the egg-shell. Chet and Bob were often distracted. Chet has become rather giddy and hebephrenic at times.

Some have become careless about the treadmill and other minor medical routines. Some have been seen hanging over the parapet (the brink); they insist that the rule is against "walking" on the parapet and they ridicule a staff member who claims that is not the spirit of the rule.

20 Apr. The treadmill breaks down over the weekend. One S's account is that it broke down because a certain other S stomped on it; another's account is that a different S was on it when the belt suddenly folded over on itself; yet another account is that yet another S deliberately jammed his slipper in the mechanism. It is predicted by one of the Ss that the treadmill will keep breaking down for the rest of the experiment.

21 Apr. The cooperating Ss are well-behaved during a discussion of simulation and the aims of our legal-political experiments. They are, however,

visibly lethargic and their contributions to the discussion were accompanied with signs of effort and fatigue.

23 Apr. Movies were brought in for the Ss. Al declared he had no interest in them at all (possibly a repudiation of the staff, but more likely a reaction to a difficulty he was having with Ed). Frank told us that he and Chet planned to burn us, the Director, the Assistant Director, and the psychologist in a fire; not out of personal animosity but because we are all part of "the system." Frank, who was most adamant about where the Ss should go on their outing, is exerting a small amount of initiative to arrange a trip to a nearby park.

Much time has been spent watching the TV. The Ss are listless and continue to "forget" many of the medical routines.

Departure from "custom" evidently requires common consent, witness the procedure used by Ed: He asked if "anyone would mind" if he took the TV into his room to entertain visitors and, hearing no objection from "anyone," did so and returned it in an hour.

Some respiratory and nervous complaints are reported. One S has spent a good deal of time sleeping lately. Two others have been observed making animal noises at passers-by below. One of these attributed his lack of mail to the University's incompetence.

Two or three of the Ss spend long periods of time on the telephone. They are Ss who receive the more visitors and who are most dependent on the staff for support and communications.

Frank, who worried about lack of mail, has become incensed about wire-tapping and violation of the mails. Some of this irritability is relieved when the Ss learn that movies have been obtained for them.

More complaints of colds, aching teeth, and the pain caused by eating the dietary wafers. Very little group behavior is noticed; the Ss tend more

and more to keep to themselves and to deal with one another abruptly and infrequently. Most Ss appear to be in better spirits after visiting hours; one generally seems depressed after his visitors leave. Those who receive no visitors are covertly critical of those who do.

Frank and Chet have been planning, in a non-serious way, a joint business enterprise when they get out. They and Dave then produced a fantasy about throwing people (unspecified) off the roof. Dave has been observed playing a good deal of solitaire; he usually plays whist or gin with two or three of the others.

One S is now complaining of liver and digestive troubles; another, of heart burn. Work on personal projects has virtually stopped. More reading and napping is observed. Also more irritability toward the staff.

Ninth Week

Apr.

Before our formal session, Chet, Frank, and Dave engage in extensive acrobatics and exercises. They pass off a question about the requirement that all the Ss get the same amount of exercise. They evidently have disposed, unilaterally, of that rule.

Frank has now taken charge of arranging the trip to the park.

> . . . . . He predicts that I might get killed on this outing. He also says, playing with Chet's light meter, that something like this might blow up the world, or that something inside him might blow up the world.

During our session the Ss are uncooperative:

> Bob lies down under the table. When I advise him to sit up because we can't hear him, he rests his chin on the edge of the table and

> talks that way. He. . . is generally rude and uncooperative . . . the first time I have seen him that way. Chet also mutters things and won't repeat them. . . . Al is a trifle nasty and goes through a number of his falsetto voices for me. . . . Ed is rather silly and impatient. All hands keep getting up from the table to make coffee, get mail, etc. The heat is oppressive today.

Our formal sessions are called off at this point, in a matter-of-fact way, on the grounds that we have too much data.

Later that day an argument develops on political assassination and survival if everyone else were destroyed in an atomic war. Dave tips Frank's chair over backwards (breaking it) to demonstrate an epistemological point; Frank, whether or not convinced, is furious; there is a tense moment during which it looks like they might come to blows. Other pushing and roughhouse--out of character for the individuals performing it--is evinced during this period.

27 Apr. The Ss continue to keep largely to themselves. The excursion to the park changes this pattern a bit. Dave and Frank go running off ahead; Ed and Al stay with the staff member; Chet is straggling between; and Bob is straggling far behind. This processional is a reflection of the friendship relations and to some degree of the status relations and the delinquent leadership of the group. When the staff member announces that all the Ss will have to remain in sight of one another, Frank declares: "<u>That</u> will not be necessary!" There is a slight sobering up, but little evidence of depression, at returning to the Penthouse; Bob says, on getting off the elevator, "Back safe."

28 Apr. Chet produces a large bowie knife, with which, says he, he intends to scalp everyone at the end of the experiment. Frank imagines throwing Bob over the parapet to his "fans" (Bob has many visitors) who are waiting below to catch him. All Ss exhibit indecisive behavior in coming into living room, retreating to bedrooms, coming back to living room for a moment, retreating again, etc. A new decisional technique is noted: When Chet comes into the room and wants to change the TV, he asks Bob if Bob is watching the present program, even when it is obvious that Bob is reading and paying no attention to the television. This is an extreme case of right by priority.

30 Apr. Some competition is seen among the Ss for the attention of staff members. By and large, the Ss stay in their rooms more now. They tend to drift away from, come late to, and toy with the meals--in a fashion that reflects their status relations. They make complaints about one staff member to another, but are exceedingly shy about stating directly their demands and complaints. Frank was told he should address his question to the relevant staff member in person; he replied: "If I told him to hurry up and get those movies, he would throw me over the parapet." They, or most of them, appear convinced that they need intermediaries in dealing with the authorities.

Much of the quality of the communications among Ss is captured by the posture of Frank, who often sits side-saddle in a chair, watching TV or eating, casting remarks at (to?) the others as if he didn't expect, or couldn't count on, a response.

1 May The Ss are still irritable and abrupt. Dave persists in walking on the parapet in view of staff members. Complaints of diarrhoea and heart-burn. The more sociable Ss are withdrawing into themselves; the less sociable seem unaffected, if not thriving. The more irritable and the low-

status Ss spend little or no time at table, sometimes eating while standing up, sometimes taking the food elsewhere.

There is evidence of personal disorganization in the neater Ss; they become disheveled, slovenly, forgetful, dull-eyed. The Ss often remind the staff that the staff eats real food and the Ss eat formula, thus providing a clean distinction between Inside and Outside.

Ss are especially unmanageable in the early morning; increasingly hard to awaken. One is described by a nurse as "most uncooperative in a very pleasant way." On the other hand, the prevailing attitude is that here are men who must needs do what they are told, and who prefer to be told precisely what to

Toward the end of this period the Ss are spending more time together and some of the initial friendships seem to be reviving.

Tenth Week

3 May

Al is eager to go on another outing, "anywhere" so long as he can get out of the Penthouse for a while. The others are interested but less urgent. The three or four Ss active in planning this second trip are intent on enlisting junior staff members to get the permission of the principal investigators; again, there is a clear reluctance to make demands on the authorities, or to consort with them.

Jokes are made by Ed to effect that the Ss not visible in the living room have "gone home." The Ss sometimes react strongly and negatively to food commercials on television; more often, they joke about them. Following a beer-and-pizza commercial, Ed casts a birthday cake (plaster-of-paris, brought him by friends) over the parapet in a fury:

> . . . A new program comes on the TV. A man in a hospital bed is being fed by a nurse; she then takes away the food. Says Ed with irritation, "Why doesn't she feed him more of it, why doesn't she rub his feet?" Then a commercial comes

on; a merry group of people bringing pizza and beer to a friend's apartment; bubbly beer is being poured. Ed gets up suddenly, goes toward his room, grabs the . . . cake in the hallway, runs through the glass doors behind the TV and, leaning over the parapet, hurls the cake outward [into the darkness]. Then, flushed and defiant-looking, he strides through the living room, into the toilet, where he emerges a few minutes later with a urine sample.

. . . Later, Bob is gleefully relating Ed's deed to Dave, who is also delighted. Bob reports (he had run out after Ed and witnessed it first-hand) that the cake lit on top of a car below (where my car is parked). In fact, it had landed on concrete between some cars. Bob, Frank, and Dave are intrigued at the damage Ed did and speculate whether the car-owner will get insurance coverage.

4 May Frank says that to his mind the staff members are "cartoons." This S later fancies that if the campus police come up (as they were about to) to warn the Ss against hanging over the parapet, he would hit one of them "and he'll probably shoot me."

Dave is apprehended at night attempting to leave the building. He says he just wanted to see if it could be done, and doesn't know why he did it.

5 May While Chet is talking to a staff member about helicopters, Frank intervenes and says he will kill Chet with an ashtray [!]; he appears to be serious, in a vague way. Frank is later ridiculed by Al in front of the others; evidences of his social incompetence are cited and he is called a child.

[The investigators were out of town the rest of this week.]

A staff member recalls that Bob has been distorting messages and shows some signs of befuddlement, e.g., reporting that someone had come to visit him when the person had in fact only talked to him on the phone.

A fair amount of real and fancied aggression toward the staff was observed during this period. Role-reversals were suggested by the Ss, e.g. putting staff members in jail for the rest of their lives and feeding them

the formula. Insulting jokes were made about the female personnel. Jokes were made about eating one or more of the staff. Staff members were occasionally pushed in a semi-joking way, and one was threatened by Ed with a poker. It ought to be mentioned that these "jokes" had about them a grim and despairing quality; they were accompanied by much affective discharge but little enjoyment.

More group activity was observed, primarily watching TV together. Some of the Ss still spend long stretches of time alone; others are on the telephone more than before. Some claim to be feeling better.

Dave, Frank, and Chet engage in delinquent antics pretty consistently. Ed, given more to highly personalized aggressions, destroyed a glass belonging to Bob, and subsequently destroyed one belonging to himself. There is additional evidence that latent hostilities are now being directed against fellow Ss and not just against the staff; Chet has been threatened lately with being thrown over the parapet and being blown up while on the treadmill.

Physical strength is one of the ingredients of status in this group, such that success at isometric exercises, acrobatics, and ergometer tests is used as a way of bragging, or of ragging the poor performers. On inquiry, this concern with strength is justified as preparation for emergencies and, more often, as (Frank and Chet) an attempt to keep up and protect one's general health. The Ss who excel on this score (Frank and Chet) tend to fare less well in the verbal competitions. One of the verbally skillful Ss stole a part of the medical equipment and hid it in a cupboard, thus preventing a strength test from being given that day.

During this period Frank and Ed have withdrawn completely for the better part of a day. Ed kept moving from place to place to avoid talking with anyone. Frank closed the door to his room and would not answer when

spoken to or called.

Bob is again having a bout of making mistakes and getting things mixed up. Al has found it increasingly difficult to eat his dietary wafers. Ed is seen less and less often eating his meals at table, on time, or seated. For that matter, nearly all the Ss eat rapidly and leave the table abruptly.

10 May

Eleventh Week

12 May

On the second outing to the park, the decision as to what area of the park to go to is left to the subject whom our socio-metric tests show to be the most popular, Dave. However, on arriving at the park, Frank and Ed become critical of Dave's choice, and the final choice is made by the triumvirate. The order of climbing a nearby mountain strictly follows the status-ranking of the group, except that the leading physical-culturalist, Chet, is advanced in rank. He, it is worth noting, climbs another ridge of the hill, while the rest of the expedition proceeds upwards in a column. The Ss return to the cars in roughly the reverse order that they climbed the mountain. Their behavior on the outing is heavily childish. Al is somewhat reluctant to return to the Penthouse.

They return to confront the Director, who is upset because one of them had advertently or inadvertently cheated on the diet by neglecting to eat all his dietary wafers. No one admitted the mistake, which raised very serious questions about the data and the Ss' attitudes toward the rules of the experiment.

13 May

Al says he would like to watch a certain TV program next. Frank says: "Forget it!" Al makes compromising noises to the effect that it probably isn't that good a program. Dave, the most popular S at this point in the experiment, gets up and turns on several different channels, ending up with the one they had been watching at first.

A notice was posted asking the Ss to sign up if they would be willing to participate in some final sessions, one of which would be to play experimental games for money.

> I thanked Dave and Bob for signing up . . . they tell me that the others didn't sign up (after 48 hours) because they didn't see the notice (on a bulletin board which they pass several dozen times a day, and which contains notes and the daily schedule) . . .
>
> . . . After 72 hours Chet and Al had also signed. Will remove the list tomorrow, after 96 hours.

The Ss often seat themselves before the TV in a pattern that reflects the structure of the group: friends and high-status individuals in proximity. Most of them have become more communicative of recent days.

Talk turns now to getting out, how many days remain, etc. The more sociable Ss seem to be cheering up; the less sociable ones are springing symptoms like headaches, distemper, and malaise.

Chet was observed on the roof howling--at the full moon, he said. The previous week he and Frank had imagined being a bear and a gorilla and attacking the dietician. This behavior contrasts with the complaints of some of the Ss at the beginning of the experiment, that they did not feel they were being treated as real people.

15 May Since there was no response to the Director's plea that the Ss tell him which of them did, or might have, left the uneaten dietary wafers earlier in the week, the investigators conducted a formal inquiry into the matter. Frank's reaction was strong and negative.

> Frank: I refuse to participate in anything of this, uh, nature.
> D.S.: Well, I, uh, we have to keep a record of this for the purposes of our contractors . . .
> Frank: Well, I didn't do it, you know. . . . I don't want to be involved in the persecution and inquisition of anybody.
> . . .

> Dave: Somebody evidently forgot.
> Frank: That's what I say, somebody evidently forgot. . . . Unless somebody actually did it out of malice. And then whoever that is will have to tell you. . . .

Al and Chet remarked how easily the bags of wafers might get mixed up, since they did not have the Ss' names on them. A number of envelopes were provided for the Ss to submit to the Director a sealed statement of their recollections on this matter. Bob and Frank were eager to get the envelopes and end the session. Al was interested in knowing how much data was affected by this delict. Bob pointed out that the wafers might have come from any of the previous days.

> Dave: If they came from previous to that Tuesday someone knows they didn't eat their cookies and deliberately put them somewhere. . . . uh, to create the crisis.

One of the Ss wrote the Director that he thought he might have done it, because he was forgetful and because none of the other Ss could have.

Twelfth Week

17 May All except Frank agree to participate in final discussion session and a session of experimental games. In the discussion of U. S. v Whitney, Ed is isolated in a vote of 4-1 sustaining the conviction. Dave, also a high-status S, promptly changes his vote to join Ed, thus leaving the vote 3-2.

Dave takes every opportunity to speak obscenities into the tape-recorder. This anarchic outcropping is consistent with a long history of minor delinquencies in his case. He is also fond of the following pre-emption technique: When others are talking and he is trying to watch the TV, he turns the machine up to an ear-splitting level. The others generally protest, and he acts very innocent.

Ed and Bob brandish a large knife and declare that they are going to barbeque the staff members present (a barbeque is being held elsewhere in the building, and the fumes are unavoidable).

21 May During the last set of experimental games, the Ss joke that they will just take the investigator's money from him by force and throw him over the parapet. This is consistent with periodic, unconvincing claims that they are only interested in money, i.e., are not committed to one another or to substantive activities. They throw the money on the floor after the games, and profess to be indifferent as to receiving the exact amount owed them. Decision-making on the gaming teams is dominated by the higher status Ss. By way of explaining why they avoid competition in competitive games, Ed says, somewhat apologetically, "We are pals; and you are one of the Others."

Most of the Ss are recurring to their original projects and interests. Bob has constructed a decoration above the fireplace: a gaggle of paper dolls, all females, dancing with one another. Frank and Ed are asking, not without disdain, what is going on "in the outside world."

A new trio (Dave, Ed, and Al) has emerged in card playing, the fourth (Frank) of the earlier foursome being out of the picture much of the time. This appears to be part of a rehabilitation or elevation of Al, the least popular S in the foursome: concurrently his standing in sociometric tests has improved.

Three of the Ss have required psychotherapeutic attention of a supportive variety. One of these was in need in order to face his return to his life on the Outside.

The healthier Ss have resumed speculating about what they will do and where they will go when they get out. One has reported dreaming about food--the only such report we received.

The foursome (Dave, Al, Ed, and Frank) resumed card-playing at the end of this period. They occasionally joined in singing old-fashioned songs like a barbershop quartet, Dave rarely joining in and Al always leading. The song-leader, Al, is both the initiator of most of the in-game chatter and the butt of jokes and snide comments. Dave, the (sociometrically) most popular of the four, is generally silent and is almost never the butt of such comments.

Thirteenth Week

21 May Three, and sometimes four, of the Ss are seen playing cards often and joking with the staff. The two isolates, Chet and Bob, are also friendlier with the staff. One of the high-status Ss, Ed, is the object of some murderous fantasies, propounded in his presence by Dave and Al. The next morning he is observed for the first time eating breakfast, seated, with the others. It is notable that such a familiar technique of "lowering" a peer is employed only at the very end of the experiment.

The Ss have re-ordered themselves--i.e., their popularity and assertiveness have altered--in the direction of conventional competencies: the heretofore popular Ss who adapt poorly to conventional authority have become
25 May less popular and vocal, and vice versa. This is partly due to certain revelations, which we deem too sensitive and too remote from our competency to discuss here. (It is necessary at this point to reiterate our resolve to pass over certain very important sectors of the group life: Knowing that homosexuality, in some of its forms, is necessary and universal in any well-functioning one-sex society, we nonetheless decided to leave this area of investigation to future investigators with special training. The same decision was made about the important area of socio-cultural factors,

especially salient with Ss as in Penthouse II from deviant subcultures, as for example religious preferences, physical and spiritual rituals, dress, use of stimulants and depressants, life-goals, etc.)

26 May Bob and Chet are observed eating dinner alone, the others approaching the table only after they are finished eating. The others seat themselves and converse in a way that reflects their standing in the group as measured by sociometric tests. After dinner, the Ss circumspectly discuss various kinds of delinquency which involve the whole group, save one; that one volunteers something about himself that suggests he has been delinquent all along; the circle is closed.

27 May The Ss are now more subdued. Two discuss violent dreams they had the night before. There is a goodly amount of joshing that the newly ascendant S, Al, thinks he's pretty hot, but is not. Frank, Ed, and Dave, playing cards with him, jump on him in a mock wrestling match, ostensibly staged because we had come "to see us interact."

> Ed says that if the next Penthouse crew is not permitted to have visitors, they will become aggressive and take it out on the staff, because "people would rather do that than admit they are anxious."

Bob insists that we state in our report that he "negated" the others from the beginning of the experiment because he had work to do. (Done.)

> . . . I remark that they survived as big as life . . . He says that is the way I would interpret and misconstrue things. (Angry and beleagured.) Therefore, says Bob, it was only a group of five. He emphasizes that the head nurse has had an extraordinary effect on the group and we ought to be aware of it. I say, we are . . .

All this by way of explaining his unpopularity.

28 May The Ss are in good spirits as they eat a huge breakfast, including steaks, preparatory to leaving the Penthouse.

> Al produces a phantasy about marrying the dietician: this is their engagement breakfast. He is apprehensive about going "all the way" to San Francisco on the bus alone. . . . Chet, to the annoyance of the head nurse, has just begun to pack all his stuff . . .
>
> Dave says that the Penthouse is a very "safe" place and one hates to leave it.

The order of leaving also reflects the status relations that obtained within the group.

CHAPTER III

NARRATIVE: PENTHOUSE III

Because our psychological consultant Martin Stow was present in the Penthouse III Experiment, no log was kept of it by the authors. The narrative which we now present is, therefore, brief and heavily dependent on the occasional notes of Mr. Stow. Furthermore, the strategy of Penthouse III involved a deliberate choice by us to sacrifice qualitative for quantitative data: hence, Mr. Stow's time was largely spent doing relatively precise sociometric reports at randomly selected intervals (as to which, see his account in Chapter VI).

Our experiences with the highly anarchic and "anti-legal" Ss of Penthouse II led us to wonder how the same techniques and tasks would fare at the hands of what appeared to us to be a more normal sample. The Director's plans for Penthouse III included having twice as many (i.e., 12) Ss in the same space for half the time (43 days) during June and July, 1965. From a socio-legal standpoint, this meant an opportunity to observe better the effects of confinement per se, though for a shorter term. Moreover, the Ss in Penthouse III were not permitted visitors and were limited in their telephone contacts with the outside (they were permitted television, radio, records, and reading materials).

Another innovation (which proved to have little or no behavioral significance) was the division of the Ss into two groups of six, the one to be given a formula diet like Penthouse I and II, the other to be given the Gemini diet (a varied diet of packaged, dehydrated, bite-sized items). The staff for Penthouse III was mostly the same, the chief exception being

the presence of Mr. Stow as an experimental S. As before, a policy of full-disclosure was pursued, so that the Ss knew Mr. Stow's purposes from the start (without knowing all the details of his, or our, techniques).

Our aim in selecting Ss for Penthouse III was to find 12 Ss who were, if possible, polar opposites of the previous six; and at the same time to get a mixture of science-oriented and tradition-oriented types, with a (psychologically) borderline case or two for realism and as controls. In this we were very successful, owing to the fact that the experiment was planned for the summer months (June-July) and more volunteers were available in the University milieu. Our selection was, to be sure, limited by the experimenters' requirements of physiological health and an age spread.

Of the 12 Ss, six had had military experience; one was about to enter upon a career as a submarine officer; one was a native of Hungary, one a Negro-American, and one a Chinese-American; one was trained in physics; seven were in the social and psychological sciences (two of whom planned to go to medical school); four were students in literary-humanistic fields; and one was a professional boxer. Their ages were 20 to 39. Their average score on the Minnesota Multiphasic Personality Inventory was quite normal for college males.

At the end of the third week of Penthouse III the Ss were permitted by experimenters to take a thirty-minute walk together out of doors. This decision--to which we were not privy--altered the confinement-crowding variable so that there were two periods, one of three weeks and one of slightly more than three weeks. In general, the Penthouse III Ss were so well adjusted to one another that, despite the doubling of the Penthouse population, we observed little of the latent and patent hostility, distress, and anti-law behaviors of Penthouse II. We became accustomed to referring

to the twelve as "Boy Scouts" and were continually amazed at their comparatively cheerful and constructive deportment. How much of this to attribute to Mr. Stow (a specialist in counseling psychology), how much to the healthy, vacation-camp dispositions of the Ss, how much to the consequent improvement in staff morale, how much to the shorter duration of the experiment, and finally how much to our criteria of selection--we do not know. It also deserves mention that the manifest crowding, especially the sharing of a bedroom (approximately 10 x 12 feet) by four grown men, may have imposed on the Ss more awareness that they would have to locate non-disruptive means to express any irritability. As we note (see, e.g., Chapter VIII for the psychometric data), there was a considerable increase in sleeping, use of telephone, watching TV, frivolity, verbal aggression, dreaming, isolation, and other "cocooning" behaviors.

June

The opening dinner for Penthouse III (June 14th) went smoothly, except for minor stirrings amongst the Ss when it was announced that part of the work would be a flatus experiment in which each S would spend several hours with a tube in his lower intestine (see below for the effects). The Ss all gave the general impression of being well socialized and mature. One of them, however, owing to some personal crisis, decided he had to leave the very next day; and he was replaced at once by an alternate.

Our socio-legal investigations were taken very seriously from the start. Much of our success here was probably due to our participation in selecting Ss and (cf. Penthouse II) the definite perception by the Ss that we were a legitimate, permanent, and pre-planned part of the total experiment. The technique employed was to present a legal case for decision de novo (for this data, see Chapter V); questions on points of fact would

be entertained briefly by the investigator, who then left the room. This technique, hit upon intuitively by us, removed the investigator as a target of frivolity or hostility or quibbling and decision-avoidance, and forced the Ss either to confront one another in the assigned roles (usually: plaintiff, defendant, and judge) or rebel against the scenario at once. The tape-recordings indicated some levity and, in the case of one S, a dramatization of the role so deadly serious as to be a mockery; but overall the Ss did what was expected of them.

Toward the end of the Penthouse III experiment we discovered two kinds of deviance developing in our sessions. One was a tendency to step outside the assigned role, particularly at the end of a discussion, to neglect to identify one's self to the typist, to make raucous remarks in parting, and to "lose track" of which side of the case one had. One of us had to take the part of a S who was unavailable one day because of medical routines; and we testify that this task of mustering arguments for one party in a case on short notice is annoying.

15 June On the first full day of the experiment Otis asked Martin (i.e., Mr. Stow) why someone his age was participating as a S. Martin explained his professional interest in the social-psychology of small groups. He was quizzically accused by another subject, the same day, of being a "spy". The curiosity about his work was heightened when he began to make our pre-arranged sociometric reports. He explained:

> . . . that he was checking occasionally to see what the group was doing at a particular time . . . Comments continued to be made from time to time . . . and some, particularly and Otis said that they wanted to go into hiding to give Mr. Stow a hard time. This was all in a humorous vein.
>
> [Indented passages are from Mr. Stow's on-the-spot notes.]

23 June At an afternoon recording time a week later he

> . . . noticed a scarcity of Ss and was suspicious that a game of hide and seek was about to occur. . . . those on duty (Hal and Ray) and Ike and Don were visible; the remainder played hide and seek for about fifteen minutes. Gradually all but Sam were found and when Mr. Stow returned to his desk and admitted defeat, Sam stepped out of Mr. Stow's closet. . . .

15 June On the first full day of the experiment (June 15th) the Ss held an informal meeting, initiated spontaneously as they were watching television in the evening. The Director had intimated to some of them that it would be possible to have additional physical exercises if the group unanimously agreed to participate in them. The Gemini group had been discussing this prospect at dinner, and the discussion spread to the Formula group. After debating the matter and manner of the exercises,

> . . . Sam called for a vote and all agreed to participate except Ray. Sam immediately stated that this settled the matter as one man had the power of veto. Ike said, "Now wait a minute," and it was obvious that the matter was not closed. Ike . . . suggest[ed] that men could participate in any way they desired . . . and that Ray should not deny exercise to the others . . . There was some feeling of non-verbal hostility from the group toward Ray. Ray appeared adamant about the control argument so Mr. Stow suggested to him that it was really impossible to control absolutely the degree of activity . . . Ray then agreed and the group disbanded for bed.

16 June The next day we observed the group in an exercise period and would estimate that the amount of exercise actually performed was highly discrepant, ranging from about 1-10 minutes.

21-28 June During the second week there arose a dispute between those who wanted to hear classical music and those who wanted to hear popular music. (Parenthetically, we might mention that Penthouse III was far noisier than Penthouse II; during the working day there was almost always music or TV playing at a loud volume. Functionally, this noise level discouraged normal conversation, including civil requests and demands by the staff,

and swamped out the perhaps over-stimulating rush of individualized communications.) The pops circle, led by Lee, whose hi-fi was placed in the living room for common use, had the advantage that Lee could pre-empt the use of the set at almost any time since it was "his machine." For the first several days there was little formal discussion of what sorts of records would be played. The losers simply left the field. But finally (inevitably?):

> . . . the classical group, in this case Ken, Pat, Otis, and Mr. Stow, were listening to a record while Lee, Hal, and Ike were sitting at the table chatting. Lee announced that at the end of the record he was going to play one of his own. There was a visible stir of dissent but nothing was said. At the finish of the record Lee went to change the record and Pat spoke up to say that they had not heard both sides. Lee stated that the classical group played more records than the popular group and implied that since the set was his he had the prerogative. After a few more exchanges Lee said that he could remove the set and Pat told him to do so if he wished. Lee put on the popular record; the classicists departed the room. When the record was finished Lee turned off the set and Ken, Pat, and Otis returned and put the University set into operation.
>
> During the exchange . . . the only other participant was Ike who said something to the effect--"Let's not have any arguments between us."
>
> . . . On June 24 [i.e., four days later], Lee put a notice on the Hi-Fi . . . that opera, vocal, and folk music should not be played (including specific records such as the Limelighters, etc.), only instrumental music. This was commented upon by various members of the group. In the afternoon . . . Lee decided to withdraw the Hi-Fi from the living room because he had decided to sell it. . . .

30 June At the end of the third week the treadmill broke down and one of the experimenters decided that the Ss who did not have ergometer scheduled could take an escorted walk around campus for half an hour. The Ss were excited at this prospect. Sam wanted to know what door they would leave by so he could meet his girl friend there. After he had telephoned the girl friend, the head nurse learned of the plan and stated that dates would

be inappropriate because the other Ss were not planning meetings. Sam was upset and reported that his girl friend was too. The Ss dressed up for the outing.

1 July

> . . . Upon arriving outside, Sam's girl friend was waiting and he signaled her to join the group. They walked hand in hand throughout, mostly separated from the others. . . There was no immediate or evident reaction to Sam's independent action by other members of the group.
>
> Once outside, the Ss commented on the pleasant feeling of walking on the ground and the fresh smell of the grass [i.e., after 16 days' confinement]. . . . The pace was slower upon returning. . . . Ken, Jack, and Hal picked some flowers which they placed upon their desks upon returning . . . The whole affair had the air of a children's visit to the park . . .

During the first week, Lee had independently arranged with the Director for the showing of a movie.

> . . . there was no group meeting as to what movie should be shown--it was selected by Lee. The movie met with a positive response from the group.

June-
5 July

During the third week:

> Sam suggested to the group informally that we should decide formally what movies we wanted next--a group meeting was decided upon. At the beginning of the meeting Sam came forth immediately with the recommendation that Lee chair the meeting but not have a vote . . . met with strong opposition from other Ss and Lee . . .
>
> Late in the day Sam told Mr. Stow that the Gemini group had held a caucus during dinner and decided to ask for the meeting and to select four movies [in advance of it]. . . . only two were selected, but all the movies proposed by the caucus received at least six votes . . . Ike was quite upset [that his selection got fewer than six votes] and he polled the Gemini members to ascertain why they had reneged on their agreement and complained that he would not enter into such an arrangement again. . . . The caucus had tried to convince Ike that his selection was not the type of picture . . . the general group would go for but Ike was adamant.

28 June-
5 July

Also during the third week and by the same route, the Ss held a formal meeting to decide on the future selection of TV programs.

> . . . A minority (Ike, Lee, and Sam) had complained previously that once a program begins it should not be interrupted, even though it overlaps with a program the majority wants . . . Pat and Otis had argued the point and it was decided that a meeting would be the best recourse. Pat was for structured rules which would allow selection of the programs for the day either a day or a week in advance. Otis was opposed.

Eleven Ss met (Sam was on the treadmill and had given his proxy to Stow). Lee left after a few minutes, giving his proxy to Ike. The motion of pre-scheduling TV programs was voted down after a brief debate.

> . . . (The basic controversy concerned with right of the minority to exercise some control over the majority). After some discussion . . . it was decided the majority would allow the minority a "special program" providing the majority felt that it was really important to the minority and not just a "regular scheduled program." Pat expressed the fear that people would come in, vote on a program just to change it, and then leave. The group pointed out that there had been no instances of this and that the majority would be fair . . .
>
> Comment: This is a conflict between the usual "cultural" majority and minority--respectively Ken, Ned, Pat, Stow, Otis, and to a lesser extent Sam, Gabe, and Jack, as opposed to Hal, Ike, and Lee. Ray usually does not participate actively. . . . Pat split from the majority not to support the minority but to seek greater structure. . . . [Lee and Sam] had come close to physical aggression when the majority had changed a program . . . and were verbally castigated by Lee. Immediately afterwards Sam asked Lee to move his chair back so the fellows on the couch could see better. Lee said he wouldn't move and gave Sam "the finger." Sam said if he did it again he would break it for him. Ike made a pacifying remark and Lee remained in his seat for half the program, then departed.

7 July At the mid-point of Penthouse III (July 7th), Mr. Stow made some observations on the fate of the initial rules. The rules were presented to the Ss in writing under the caption "Helpful Hints" and were promulgated by the Director in the briefing session as rules of the house.

1. The Ss were proscribed from going on the parapet or on the roof.

> . . . Within the first week the Ss were sitting on the parapet and had begun to lie on it to watch the scene

below. There was no walking on the parapet or "horse-play", however. Most frequent trespassers were (in order of frequency) Ike, Hal, Sam. Trespass on the roof was not observed until the third week: Sam and Lee, once each.

2. Indoor furniture was to be brought back inside daily.

. . . By the second week, rice mats were being left out overnight, as were bridge tables and chairs. Dining room chairs were brought back because they were needed for dinner.

3. Bedrooms were to be mopped and cleaned daily by the Ss.

. . . This was done for the first round (a cycle of the four men in each room). After that it was done about 50 percent of the time, with either the cleaning or the mopping omitted.

4. Ash trays were to be emptied by the Ss. This was seldom done, and it was left entirely to the janitor by the third week.

5. Ss were to read the schedule carefully each day, so they would be prepared for their tasks.

. . . by the second week Ss waited to be told when activity was ready for them. Over half of the Ss inform the next man of completion of treadmill. Schedules <u>are</u> read but information is quickly forgotten. It was necessary to address a staff memo to the Ss to "jack them up."

6. Bedroom doors were to be kept open between 9:00 a.m. and 9:00 p.m.

. . . By the second week bedroom doors were being closed during the day, most frequently by those in bedroom 3 (Pat, Ken, Lee, Otis), then Bedrooms 2 and 1.

7. The rules against playing the TV after 11:00 p.m. was complied with, except that once, on a weekend night the occupants of Bedroom 3 took the set into their bedroom, where they were joined by Hal and watched the Late Show until 2:00 or 2:30 a.m.

8. Lights were supposed to be out by 11:30.

. . . Compliance in Bedrooms 1 and 3. Late conversation in Bedroom 2 by second week.

Additional rules: Morning urination was to be done between 7:15 and 7:30:

> General compliance but occasional forgetting to move bottle to lower shelf after 7:30.

Ss were to be awake and up by 7:30.

> General compliance except for strong resistance from Ray and some from Hal.

The telephones were not to be used by Ss until after 7:00 p.m., and then only one extension was to be used (the other kept open for emergencies).

> By second week calls were not so limited . . . Daytime calls becoming more frequent. Calls are made on all phones, particularly those reserved for staff because the Ss call two at a time and want privacy not afforded by "subject" phone. Most frequent long calls: Jack, Sam, Ike, Hal, Gabe, Pat, Ray, in order of length and frequency.

Visitors were not permitted in Penthouse III:

> . . . Initially no objections. By third week Sam had worked out a visit through the glass door with his girl friend; this was imitated by Ike and Hal.

The TV was not to be on during the working day.

> . . . A verbal statement which was not clearly understood stipulated no TV before 7:00 p.m. TV begins regularly at approximately 5:00 p.m. and stays on until 11:00 p.m.

7 July In the fourth week the Director held the first meeting between himself and the group since the initial briefing. Lee asked about the regular purchase of magazines. A few changes in the medical routines were announced by the Director.

> . . . He discussed the infringement of rules, specifically mounting the parapets and visitors in the upper stairways. There were no comments.
>
> Lee asked if we are going to have another flatus experiment; Dr. M. answered yes. Lee then stated it was not part of the contract and sparred for a few minutes on technicalities. . . . no one else spoke on the subject. When support from the group did not materialize, the discussion turned to other subjects. Ike was worried that a bean dinner [for the flatus experiment] was going to be substituted for

> the last steak dinner; severel commented that they didn't particularly care for the flatus experiment; . . . the conversation broke up . . . with the announcement of lunch.
>
> At the Formula table Lee and Ray continued to discuss their grievances. Lee felt the contract was being violated and he was disturbed at the lack of support given his arguments. Ray wanted some type of group resistance. . . Ray felt that the withdrawal of blood just before the ergometer might be physically dangerous and that an increase of half an hour on the treadmill was not in the contract. All efforts to discuss the other side only led to increased anxiety from Ray and aggression from Lee. When the meal was finished they both withdrew to Lee's bedroom to discuss the matter. . . .

8 July Next day a petition was being circulated by Lee. The petition itself complained of the flatus experiment, but much of the support for it came from men with other complaints about the experiment, e.g., those who did not like the ergometer, or the blood samples. The Ss were approached singly, apparently in the order that he thought they would accept the petition.

> . . . When Mr. Stow declined to sign (by this time all but Stow, Sam, Jack, and Ken had signed) he was asked if he would state his opinion in a letter to the staff; this he said he would do but suggested . . . a meeting with the staff . . .

The meeting was arranged:

> . . . During the petition meeting it had been obvious that the basic complaint . . . was dissatisfaction with the flatus experiment but that, as Ned stated, the problem was more one of the lack of communication with the staff and the feeling of de-individualization. . . .
>
> Dr. Morgan made a brief statement . . . Comments then began in orderly fashion (after several statements each from Lee and Ray) from others--Pat, Otis, Ned, and Ike (a conciliatory statement by Ike rejecting [partially his statement at yesterday's meeting] that "we were looked upon as guinea pigs"). A "reasonable" quality pervaded the group except for Lee [who questioned the design of the experiment and] was rejected by some signers of the petition--Ray, Otis, and Ned.

The flatus experiment was then defended by the medical staff, who subdued the complainants.

> . . . There was a final question by Dr. Morgan concerning satisfaction with the meeting and only Lee continued to express strong negative feelings.
>
> Lunch was served . . . and the staff remained and discussed individual problems . . . The atmosphere was quite positive and lacked any anxiety.
>
> Jack commented that Lee had isolated himself from the group by his behavior.

16 July At the end of the fifth week, we attempted a socio-legal discussion with all twelve Ss. (Up to this time the Ss had been divided into groups of three and groups of six, with varying membership. See Chapter V.) To our chagrin, the tape recorder was not functioning properly and we did not get a faithful record. However, the debate on Regina v. Dudley and Stephens, a case of distress and cannibalism on the high seas, was discussed by the twelve earnestly and in good order. Lee was designated judge because we wanted to neutralize his insurgent tendencies and to see how the others would react to his leadership. The other eleven Ss were to think of themselves as advisory judges or jurors.

> After the first formal round of comments it became clear that the majority favored guilt, with some leniency due to the [extenuating] situation. A minority ascribed to the equal responsibility of a third party [not legally liable], Brooks, who, rejected the murder, acquiesced to the cannibalism . . . However, this minority agreed with the majority concerning guilt. Another minority believed in the innocence of [all] the defendants . . . on the basis of survival and partial insanity.
>
> . . . Those who supported innocence were Jack, Sam, Otis, Ray, and, in his final comments, Lee. Of these only Otis and Ray continued to support their position after the first statement . . .
>
> In their final statements all of the deviants voted for guilt, but with lesser punishment . . . In effect they had changed from innocence to guilt of the defendants but transferred their arguments to substantiate clemency. The judgment of [Lee] indicated that while he believed in the innocence of the defendants, on grounds of self-defense, he would follow the advice of the majority [I'll go along

> because the vote is so overwhelming."] . . . The sentence was ten years in jail, with time off for good behavior.
>
> Although the formal session terminated, the discussion continued with only one member (Sam) absenting himself. The communications were directed toward the judge . . .

This informal discussion continued most seriously for several minutes. The investigator's opinions were also sought; and the Ss appeared to be completely absorbed in the decision

July 15-20 About this time, the investigator interviewed those staff members (N=6) who regularly worked eight-hour shifts with the Ss during their waking hours. The staff were asked to characterize each of the Ss, to comment on leadership within the group, and to recall any out-of-the-way incidents during the previous five weeks. (The interviews were held at this time, incidentally, because we supposed that the fourth and fifth weeks would have been the most stressful for Ss and staff alike.)

The dietitians complained of minor infractions of the dietary laws, including resistance, quibbling, and outright violation. For instance:

> . . . My back was turned away from the sink and I heard somebody walk in and turn the tap water on . . . I said to him, "What are you doing with the tap water? You're supposed to be using distilled water to rinse out your cup and then drink the washings." He said, "I'm not going to drink it; I'm rinsing it and throwing it away. I don't want you to come back and tell me to clean my plate again." And I could hardly believe it . . . I told him "What's the purpose of the whole experiment if you're throwing it away? Why am I standing there weighing it?" . . . His tray is usually messy; he spills on his tray . . .

Another S took his coffee over to the couch twice (all "food" was to be consumed at the table), and the second time

> . . . he refused to go back so I had to take the cup away from him, placed it on the table and I said, "When you're ready, you come back to the table and finish it . . ." and about half an hour later he went back and finished it.

Some griping about the food was reported; for example, one S was said often to respond

> "Oh, God, this is awful," and all, but he always cleans his glass out well . . .

Other staff members reported the tendency of two of the Ss to interact oddly with the staff:

> . . . he's constantly getting people to do things for him. He delegates duties to everyone that comes in that door.

> . . . he's a chatterbox . . . would love to start a conversation at any time. . .

In the late afternoon or early evening one of the staff had observed a friendly pillow-fight between three or four of the Ss (probably Ken, Pat, Hal, and Ned). Another S was suspected of creating an incident deliberately.

> . . . he had soap on his spatula. He got up from the table and yelled and ran to the water tank . . . I've caught [him] a couple of times complaining of soap on his spatula when I've washed the spatulas in an ammonia mixture . . .

It is of interest that this incident concerned one of the most respected and mature Ss. Another dominant S refused to go on the treadmill "for quite a while" after it had broken down:

> . . . he wouldn't go on then and when it was finally fixed then he said, well, you know, "My time is passed."

27 July On the final day of the experiment, the Ss became more active and were in higher spirits.

> . . . Individually motivated activity is more frantic (the schedule has also increased in tempo . . .). For the last two nights there have been pillow-fights, rubber-band fights, and general "horsing around" to a greater extent than usual.

> . . . Ss are more permissive regarding invasion of psychic space--aggressive behavior has been interpreted humorously and arguments are less hostile.

The Ss reported that the following matters had irritated them during the course of Penthouse III: the flatus test ("degrading, humiliating,

repugnant"); a roommate who wanted the lights out at 11:00 p.m. instead of 11:30; "sudden and unexpected changes in food"; the Hi Fi and TV decisions; the "military" regimen; ambiguity in the regimen; authoritarianism of the staff; lack of visitors; wearing of long-underwear; being patronized by the staff; disappointment in the character of another S; the supercilious attitude of another S; being pressured by another S in card games; being thwarted by the majority as to TV viewing; losses in poker; and lack of "meaningful" communication with other Ss.

28 July Penthouse III concluded with a dinner of steak and "desserts contributed by the families of two Ss." Feelings were mixed; and there was a good deal of anxiety because of the separation and excitement because of the presence of the press. The head nurse was given a bouquet of flowers by the Ss. One S had departed before dinner and another became upset and left without completing the meal. Two had gone out temporarily and returned barely in time for the dinner.

Six of the twelve stayed on for another phase of the flatus experiment.

CHAPTER IV

DECISION AND PERSUASION: PENTHOUSE II

Modern institutions have developed out of the most elementary forms of social behavior. Today we find the two existing together. It is unfortunate that we have lost sight of the parallels between the town meeting, the folk-movement, the Fehmgericht, the acting primary group, the family council, the partnership, and the deciding individual. The parallel is apt to be regarded as metaphoric, or as a peculiar line of perspective, whereas it is a mathematical progression.

The medieval village was, for most purposes, a closed society, for which traffic with other societies and with "foreign" rulers were both rare and proscribed. In this particular, the village is comparable to what has come latterly to be an unusual social arrangement: the confined microsociety--the submarine crew, the astronautic team, the wintering-over group in Antarctica. We raise and avoid the question of how significantly different the modern primary group and other microsocieties are from their primordial counterparts.

Assaults on one's dignity, identity, and self-definition are probably more alarming in the microsociety because there it is harder to isolate or minimize the assault, and because the subject is perforce more dependent on relations with the tort-feasor for everyday gratifications and lateral support of status and reputation. (By the same token, it is riskier to tread on another's psychic space, and it is more to the advantage of all parties to understand clearly what is common property and what is a private plot.)

Our leading interest in Penthouse II was that six mature men were restricted to a surface area of 2600 square feet and that they had to decide de novo how to allocate the space among themselves. By "space" we refer to 1) physical space; 2) physical objects (rooms, chairs, medical equipment, books, etc.) within that area; 3) the presence within, and appropriation of, the space of and by certain personalities; 4) dispossession by virtue of noise; 5) dispossession by virtue of odors; 5) ousting for special purposes and routines; 7) division of space by time (e.g., the changing character of a bedroom by day and by night); and suchlike. In other words, the central factor from our standpoint is the meaning of space-use to the participants. The core of these meanings, we postulate, is the preservation of inviolate psychic space--interests felt by the individual to be so closely bound to his well-being, survival, and self-maintenance that he will not tolerate their manipulation, infringement, or de-privation. We postulate further that people differ vastly in their definitions of minimal psychic space.

The concept of psychic space is important to decision-making and persuasion because it is a limit. Within this limit one will not permit others to make decisions and one cannot be open to persuasion. We are not only advancing a definition (viz., that psychic space is such a zone of emotional histamines and anti-bodies); we are also pointing to a notorious fact of life which manifests itself in states of hysteria, panic, schizophrenia, and other symptoms of inaccessibility, regression and ego-loss.

We postulate further that sensitivity to psychic space becomes inflamed in the microsociety as a result of the gross ecological factors (inhibition of freedom of movement and loss of numerous nutrient, social, and sexual gratifications: see Appendix B) that sustain the illusions of free flight, survivability, and invulnerability. These postulates we make

because our own expectations were so badly jarred when we approached confined Ss with decision-making tasks. In particular, we discovered a heightening of the sense of psychic space, an aversion to decisions (which reactivate conflicts and thus exhaust internal defenses), and a tendency toward cocooning as a last-resort retraction of psychic space.

We approached the Ss of Penthouse II naively assuming that they would dutifully perform certain exercises that would permit us to measure their decisional and bargaining behaviors--persuasion, leadership, coalition-formation, rule formation and manipulation. We met instead a nearly solid front of opposition to our investigation. For we had exposed a raw nerve without providing any anaesthetic. On this score the Ss were correct in taxing us with not knowing what we were doing. Exploring.

The nerve was both individual and social. It was part of the panic system in the individual Ss which warned them sharply against getting "stirred up" against their fellow sufferers in such close quarters. And it was, derivatively, a group phenomenon which caused the Ss to identify strongly with one another and to reject outside irritants in concert.

Our interventions into the emotional life of Penthouse II (we realized better later) were fashioned to test the cohesiveness of the Ss' peer group and the nature of its endo-legal structure. The answer that came back instantly was: very cohesive, tightly structured! We relate our side of the tale to the reader at this point to alert him, in the following exposition, to what it was we thought we were doing. He should also be alert to a connection which is left relatively implicit, and that is the lesson which the course of formal and informal decision holds for a theory of endo-legalism or <u>code</u> within the peer group. An aversion to formalism prevents us from making the necessary translation from 1) the

rules implicit in particular, existential decisions and 2) the elaborated code which those rules of decision belong to by inference.

Now to our observations. We distinguish broadly between advertent and inadvertent decisions. The first are decisions which, to our best knowledge, involved some solicitation of discussion or consent before the utterance of the decision. The second are decisions which, to our best knowledge, were uttered without giving them a second thought (so to speak) or by appropriation, pre-emption, and assertions of priority.

Advertent Decisions

To distinguish those decisions in which our presence probably bore heavily on the Ss from those in which there was no structuring by us, we shall first report the advertent decisions made in our formal sessions.

A.1. Experimental Games. We asked the Ss to play strategy games (as a diagnostic exercise) for small amounts of money, once a week for nine weeks, i.e., until it was decided to call off the formal sessions (see above, Chapter II). The games were Prisoners' Dilemma[1] and other non-zero-sum games described in J. D. Williams, The Compleat Strategist. The consistent result was that the Ss turned the games, from competitive games between teams of Ss, into zero-sum games against us. This was true even when all the participating Ss could have won more from us by competing.

The stated aim of the first game of Prisoners' Dilemma was for each team to get the maximum number of points (pennies) according to the matrix:

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[1]Prisoners' Dilemma is a schematized and mathematicized version of the situation where one prisoner knows he can get a lighter sentence by confessing (his accomplice then gets a stiffer sentence), a slightly heavier one if neither does, and so on.

		Team B: Coop	Team B: Compete
Team A	Coop	3A/3B	0A/10B
	Compete	10A/0B	1A/1B

The Ss at once and without consultation fell into an alternating cooperate-compete pattern, i.e., they took turns winning ten cents. This continued until the 9th trial, whereupon Team A voted cooperate when (to continue the pattern) it should have voted compete--a deviation that was explained by the captain of Team A as "just for fun."[2] The 10th through 16th moves continued the prior pattern. On the 17th move, Team B voted cooperate when it should have voted compete; on the 18th, they both voted compete when Team B "should have" voted cooperate. Moves 19-24 reverted to the pattern. Moves 25-28 froze on a cooperate-cooperate pattern begun when Team A chose cooperate instead of compete. Moves 29-44 reverted to the early pattern. Move 45 was cooperate-cooperate, with Team B breaking the pattern by voting cooperate. Moves 46-50 reverted to the early pattern.

Thus, the Ss won $4.64 out of a maximum $5.00 from us, with both teams voting "compete" only once out of 50 moves. The captain of Team A said afterwards that they all tacitly assumed it would be a game against us and that the money would be divided evenly among the Ss at the end of the game; and so they did.

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[2]For a discussion of the place of strategy games in decision theory, the tenor of much of which is to show experimentally how untrusting and uncooperative people are, see Anatol Rapoport, Fights, Games, and Debates (1961). See also Lawrence W. Littig, "Behavior in Certain Zero-Sum, Two Person Games," J. Social Psychology, p. 113 (1965); and Lester B. Lave, "Factors Affecting Cooperation in the Prisoners' Dilemma," Behavioral Science, Vol. 10, p. 26 (Jan. 1965). A new trend is represented in Stuart Oskamp's and Daniel Perlman's "Factors Affecting Cooperation in a Prisoner's Dilemma Game," J. of Conflict Resolution, vol. 9, p. 359 (Sept. 1965)

It is interesting, in addition, to treat the compete-cooperate alternation as the norm and consider the deviations: Team A voted "cooperate" twice when it "should have" voted to compete; Team B voted to "cooperate" twice irregularly and to "compete" twice irregularly. It is of course possible to view these departures as the accidental product of confusion or boredom; they may represent the willingness to pay four to eight cents per move to introduce a little variety into the game. If, on the other hand, we assume for a moment that it is not accidental that the Ss departed from (or adhered to) the pattern, we notice the following: The Ss did not know how many trials there would be in the game, and it may have been that Team A wanted to end the game (9th and 25th moves) on a note of cooperation. The dominant man on Team A and the dominant man on Team B were close friends and, furthermore, the Team B-dominant was dominant in the friendship relation. It may have been that the less-dominant friend was less willing to compete and more eager to cooperate than was the more-dominant friend. When, after the 25th move, the two friends were replaced as captains of their teams by two less friendly and lower-status Ss, the two teams engaged in more cooperate-cooperate behavior and in no compete-compete behavior. Expressed in terms of cost, the two teams with the close friends as opposing captains were willing to forfeit 12 cents to be able to avoid competing three times and 8 cents so that both could compete once; whereas the teams with non-friends as opposing captains were willing to forfeit 16 cents to avoid competing four times.

The unusual quality of these findings can be seen by comparing them with those of Morton Deutsch, whose Ss (those told to compete actively and not to communicate) coordinated their behavior only 12.5% of the time.[3]

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[3]Morton Deutsch, "Trust and Suspicion," J. of Conflict Resolution, vol. 2, p. 265 (1958); discussed in A. Rapoport, op. cit., pp. 218 ff.

Our Ss collaborated (we avoid the term "cooperated" because that was the designation of one of the "moves") 84% of the time. It might be contended that in our matrix (above) the spread between "cooperate-cooperate," 6 cents, and the "compete-cooperate" alternation, 10 cents, is so obvious as to induce what we in fact found. (Deutsch's matrix featured only a 1 cent difference and a risk of losing 10 cents with the mixed strategy.) However, it is our position that quantitative differences ought not to affect much the results if the game, on decision theory premises, reveals strong dispositions of human behavior and perception. Hence, the discrepancy would be attributable to personality differences, the fact that our Ss belonged to a confined society, subtle factors in our manner of administering the game, or some other environmental influence.

When the game was played over with the cooperating Ss, i.e., without the two close friends, the other Ss adopted the compete-cooperate alternation throughout. They even stuck consistently to a cooperate-cooperate pattern in a variation of Prisoner's Dilemma where the <u>only</u> way to get money from us (cf. putting the opposing team in the red) was to tolerate the boredom of coop-coop for 25 moves, with a maximum joint income of 2 cents per move. The conclusion we draw is that the inclination to cooperate with peers and oppose outsiders increased as the experiment wore on and as the close-affiliation factor was minimized by cocooning.

Another variation of Prisoners' Dilemma gave each team a modest reward (1 cent) if both cooperated and a much larger reward (10 cents) to the one that voted "cooperate" if the other voted "compete."

		Team B	
		Coop	Compete
Team A	Coop	1A/1B	10A/-10B
	Compete	-10A/10B	-1A/-1B

When a high-status team was opposed to a low-status team, both voted "cooperate" until the last three moves, i.e. (with that particular pay-off schedule) the low-status team gave the high-status team 10 cents by voting "compete" three times. The teams were then mixed (high-low-status) for 25 runs; and they both lost money by voting compete for six moves, both voted cooperate once, lost more money by voting compete twice, then established a pattern for 16 moves whereby the one team consistently lost 10 cents to the other. This irrational pattern may possibly be explained by the fact that the total status of Team A (the recipient of $1.60 at the expense of Team B) was slightly higher, the members were generally more assertive, the dominant member of a moderately close friendship was on Team A, and the members of Team B were not on good terms.

If these decisions during experimental games are related to the affiliation-system of the group, or to some other aspect(s) of group structure, it is evident that these systems must be very salient indeed. It is also evident that these systems are more salient than either the exo-legal system (i.e., rules about how the games ought to be played) or so-called rationality (i.e., maximizing either the amount of money to be got out of experimenters or of peers).

In yet another variation of the Prisoners' Dilemma, the payoff schedule was such that the best payoff was indifferent between compete-compete and an alternating compete-compete. We theorized that the Ss, especially the high-status Ss, would prefer to risk some losses, during

		Team B	
		Coop	Compete
Team A	Coop	1A/1B	0A/6B
	Compete	6A/0B	3A/3B

the initial confusion of getting the alternating strategy working, rather than having to say the word "compete" over and over. In fact, both teams voted compete for 20 moves. Possibly the presence of two high-status friends on the same team affected this result (that is, gave them enough sense of solidarity that they didn't mind "compete"). Or it may be that they were secretly addressing their "competes" to us and not to their peers. Or it may be an example of marginal utility pure and simple, since there is no "rational" reason to take the risk of losing money while getting onto a mixed strategy. The risk, however, could have been minimized if one team had voted "cooperate" and stuck on one mixed strategy (which would have brought them back to a tribute-money posture, one team "giving" the other all the booty).

The Ss were next asked to make an undisclosed number of moves in which the payoff schedule would be kept a secret until the end of the game but the results of each move would be announced (e.g., "Team A just won 10 cents, Team B won nothing"). The actual payoff schedule was a series of five matrices determined by rolling dice, i.e., there was no discernible order to the payoffs and we went from one matrix to another in serial order with each move. The Ss were greatly irritated to discover the randomness of the matrices. They glared at us and quickly left the table and went about other activities. The discussion leading up to the revelation that we used random values was as follows:

Bob: It seemed to be on a four-place rotation of some kind but it didn't prove to be a rotation . . . the whole strategy was rather makeshift--there was no strategy.

. . .

Al: We did the same, we just uh waited and then we competed or cooperated depending on how we felt . . .

D.S. . . . these were the matrices which were determined by rolling dice.

AAAHHH

Al: It's almost impossible to figure it out--that's why we didn't try . . .

. . .

Bob: Now that we know the kind of trickery you've injected in the air, we'll try to restrict [?] ourselves next time.

As in the previous variation, the high-status team (the same two Ss) voted "compete" more often (13:6) and won more money than the low-status, non-friends team.

A simpler variant of Prisoners' Dilemma was played using the very first matrix reproduced above, except that the matrix was rotated clockwise 90 degrees after each move. Although neither team caught on, Team B, consisting of the two low-status non-friends, hit on an approximation. To this approximation we attribute the extraordinary result that both teams won exactly the same amount--a result that appears highly improbable by chance. On our theory, Team B, getting an inkling of the revolving matrix, instinctively acted to redress the balance (then heavily in its own favor in the ratio 2:1) by letting Team A, the high-status friends, win consistently at the end of the game.

The Ss were also given variants of Blotto, Muscovite Guards, Fighter-Bombers, and the Lady and the Tiger from The Compleat Strategist. In the first game of Blotto[4] the Ss were asked to choose sides; the two friends immediately chose to be on the same side. Their tendency was to adopt a

[4]Blotto is a game in which variable rewards are given for blind deployment of forces in a divided field (e.g., hill, valley, forest, as regions).

strategy of dividing their forces in the Blotto game between two of three possible positions; whereas the other team invariably put all its forces on one position. Under the rules of the game the non-friends team won heavily. We interpret this as a product of the friends team's unwillingness to compete or collide with the lower-status team. In a second try at the Blotto game, the Ss chose to be on the same teams; but they were required to write down ten moves in advance, i.e., they could not vary their strategies as each saw how the other was playing the game. When the results were announced, it turned out that each team made the same move the first eight times, so that both lost all their men. The low-status, non-friends team carried this strategy through the ninth and tenth moves, ere the other team divided its forces over three squares. These strategies also show the high-status friends team ending the game on a non-competitive note.

In the Muscovite Guards[5] game the friends were split up. The one friend was out of the game the second move because he lost at Russian Roulette, and the other friend dropped out in the sixth move (out of ten) for the same reason. It is noteworthy that the first friend chose to pull the trigger 100% of the time (2 out of 2); the second friend never pulled the trigger before the tragedy and 50% thereafter; the successor to the first friend pulled the trigger 50%; the successor to the second friend pulled the trigger 25%. The game was accompanied by some hilarity.

In the Lady-Tiger[6] variant, the friends were on the same team again as Young Commoner and friend; the non-friends were playing Wicked King and

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[5]Essentially Russian Roulette with optional turns, survivor takes all but low risk-takers get no winnings (other than decedent's estates).

[6]In our variant on this familiar puzzle, the Young Commoner suspects the Wicked King has misled the Princess into believing she knows which door contains the Tiger; there is still the question of envy, etc.

Adviser. In ten trials the Young Commoner got devoured by the tiger twice, the first and the last times. All the rest of the time the Commoner and the Wicked King varied their choices of which tiger-cage they designated. We interpret these results, partly because of the great hilarity that accompanied the first and last incident, as being (first) the result of finding the avoidance pattern and (last) the desire of the low-status team to compete and to show what they could do if they wanted.

Finally, the Ss were given the Fighter-Bomber[7] game, which they played very irrationally, i.e., contrary to the announced goals of the game. The high-status friends team lost heavily, the captain thereafter saying he assumed that the undisclosed payoff schedule would reward him for playing against the investigators and not for following the rules. Neither team chose the obviously preferable solutions of randomizing their strategies or sticking with a ratio deducible from the rules. Once again, we see the high-status Ss refusing to compete, even where it means losing heavily.

The finding that has emerged from this recapitulation of the behavior of Ss in experimental games is that the higher the intra-group status of a would-be competitive team of Ss, or the stronger the ties of friendship between the members of the team, the less they will compete with their peers and the more they will define the situation as a competition with (if anyone) non-peers. Since we have defined status as a sociometric of "liking", affiliation, and desire to associate with, we are left with the following hypothesis: The stronger the affectional ties in the microsociety, the harder it will be to introduce competition for any purpose and the

[7]A problem of which bomber to put the Bomb on and, alternatively, which to attack at differential risks.

easier it will be to displace anti-social feelings onto outsiders.[8]

From our subjective standpoint as investigators, the most important finding from the experimental games was the unrelieved opposition, or at any rate resistance, to our interfering with the delicate underlife of the peer-group, and the constant pressure to make the games more interesting, to exert all the initiatives and give the cues, to entertain.

A.2. Formal sessions. Content analyses of the protocols of our formal discussions with the Ss twice a week over nine weeks show a rather close relation between persuasion, status, affiliation, and decisional skills. Using a fairly crude measure of persuasion--a unit of persuasion being equal to the utterance of an opinion subsequently supported or not contradicted (explicitly or implicitly) by a peer--the highest- and the lowest-status Ss proved the most persuasive in formal sessions.

We found consistently--in one session with six Ss, one with five, and fifteen sessions with four Ss--that persuasion was exercised in direct relation to status, except that the lowest-status member of the discussion group was slightly more persuasive than the second-lowest. We also found that with the four cooperating Ss the incidence of opinions supporting or opposing peers' opinions was inversely related to persuasion: The more persuasive the S, the less (proportionately) he acknowledged favorably or unfavorably the opinions of his peers; and both the least persuasive and the most persuasive Ss expressed more opposing than supporting opinions toward their peers. See Graph I.

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[8] For validation of this hypothesis in the context of the business firm, see Lewis B. Ward, "The Ethnics of Executive Selection," Harvard Business Review, vol. 43, p. 6 (March-April 1965).

The same relation between status and support of peers is shown by taking the ratios of supporting to opposing opinions vis à vis peers: The highest and lowest status Ss expressed fewer supporting opinions per unit opposing opinion toward peers. (In absolute numbers, the highest status S expressed 10% fewer of either than did the lowest status S.)

Descending Status	Ratio of Supporting-Opposing Opinions with Peers
A	.61
B	1.45
C	1.05
D	.67

As to substantive decisions--our first formal session led to the assertion by all save one of the Ss that they did not like to cooperate with legal-political experimentation, especially in the form of questionnaires. This opinion ran from complaints that the experiment was "boring" and "too hypothetical," to the absolute refusal of two of the Ss to participate further. Although the insurrectionary Ss prefaced their attack by saying the work was too conflict-laden, the body of their criticism was that the experiment was ill-designed and that we didn't know what we were doing. A secondary argument was that such work was not part of the Ss' contract. We thrust the decision back onto the Ss, saying they should withdraw if they thought their further participation would harm the experiment. The decision then taken by two Ss was explained by them to the Director as a result of the work's being too upsetting and (at the same time) uninteresting.

Our general assumption is that (ex definitione) there can be no decision without an antecedent conflict and that every act or nonfeasance by a sentient creature is a decision.[9] In the present case, we should

[9]For elaboration of this reasoning, see the classic article by Irving L. Janis, "Decisional Conflicts: A Theoretical Analysis," Journal of Conflict Resolution, 3, March 1959, p. 6.

emphasize the technique employed by the insurgent Ss to escape the agitation we provoked in them. They exhibited heated and protracted obstructionism and argumentation to get the investigators to call a halt to the proceedings. To do so the Ss had to perpetrate what appears to be a non-decision--the advancing of "rational" objections to the experiment in response to our invitation to comment on the questionnaires. For example:

Dave: . . . What I think is ah you with testing are defeating your purpose . . .

TC: Testing what?

Dave: . . . You're not approaching the subject I think in the most economical manner . . . . The answers you get are ah first level answers . . .

. . .

Al: I'm not doing this to be nasty, I'm not doing it because I want to get back at you guys but that's the way I feel.

TC: As I say I think it's very important that that attitude is represented.

. . .

Al: . . . our prejudices can enter in, can be a factor . . .

TC: . . . That's why we want to find it out.

Dave: Do you know what the prejudice is, though?

. . .

Dave: Where is the line between psychology and law? . . .

TC: You could hardly pose a harder question for anyone . . .

Dave: Are you aware of the ah . . .

The amateur quality of the objections and the ultimate resort to the lament that the experiment was proving too upsetting (not to speak of the desperation implicit in the hit-or-miss, frontal attack on methodology

that they launched), point to internal conflict as the motive for this decision. The technique, as we have noted, was to try to hang the decision on the experimenters and on objective considerations. The explicit decisional canon was that one does not have to do illegitimate and incompetent work; the implicit canon was that one does not have to do work that excites conflict, strong feelings, and personal distress. We speculate that the conflicts (whatever they were in the individual case) were provoked by asking the Ss 1) to face one another around a table (which they otherwise did, if at all, only at mealtime), 2) to discuss complex issues of morality and law, and 3) to do this at the behest of older, more authoritative males.

In a second session just prior to the departure of the insurrectionary two, the Ss revealed the conflict all the more starkly. Our strategy in this session was to emphasize the importance of such research to people who have to live crowded together in extreme environments, the need we had for their cooperation and good will, and our willingness to modify our experiment in any way that would make it less stressful for them. One of the two responded by lying on the floor, hands folded across his chest, saying he could not participate under any conditions. The other continued a running methodological argument with us and scorned the experiment as "not interesting" and "not real." These reactions, in our estimation, point to decisional motives which are highly personal and independent of the social situation. The four cooperating Ss participated with some élan during this session. Two of the four distracted themselves from time to time by playing with bits of paper and molding clay--a technique which the four used thereafter to avoid full complicity.

In subsequent discussions with the remaining four Ss, decisions were accompanied by a great deal of circumlocution: joking, irrelevancy,

exasperation, reliance on the investigator to carry the ball and give direction, signals that they were bored and wanted to quit, abrupt departure from the table toward the end of the sessions, wandering about the room, talking in falsetto voices, etc. For example, one of the standard tasks was for the Ss to act as a conciliation board and to decide cases (which had actually arisen in the Antarctic or in the Penthouse) that might arise on a space ship. When asked what roles they wanted to assume as space crewmen, A said: "I'll be an onion roll." Responding to the same request in a later meeting, A said: "I'll be a forest." B: "I'll be a frog in the forest." C: "I'll be a jewel in the frog's forehead." D: "I'll be bishop over the forest." The Ss' decision to joke at this time and in this context 1) put us on notice that they were not "really" involved in the work, 2) expressed the attitude that the work did not deserve to be taken seriously, 3) shifted the burden of going forward back to us, 4) thereby leaving us with the option of either rewarding them even more (with coaxing) or 5) demanding that they wise up--which would be 6) to risk their refusal to cooperate further in a situation where we had no formal sanctions and where 7) Ed's delinquent leadership (as "onion roll") had been confirmed by the others in turn and in order of status, such that 8) we were permitted to proceed with the inquiry at sufferance.

Asked to suggest realistic problems that a conciliation board on a space ship might have to resolve, one of the Ss suggested that the food supply might run out; another suggested that the captain might get diarrhea and be unable to navigate the craft. These ideas were passed over by us on the grounds that they did not pose true <u>conciliation</u> problems. Al (who in this session had chosen the role of "captain and head of everything") proposed that they consider "what would happen if someone was unable to

function," which he specified to mean, "Let's say some of the people are tired of the hours they have and they want to start sleeping at a different time." This exchange ensued:

Al ("Captain"): They like the daylight hours.

Chet ("Astrophysicist"): There's no daylight.

Al: Well, we know that, Chet. [pause]

Ed ("botanist"): The Captain can't administer corporal punishment without the . . .

Bob ("Radio Operator"): Yeh, this suddenly becomes an irrelevant question . . .

Ed then suggested that the Captain "hasn't said a word yet" and that the problem just came up. Bob protested that the problem was too difficult and there were too many possibilities. We volunteered that there are ways to narrow the possibilities. Al suggested that we give them a problem because the Ss were "having a hard time thinking" (this assertion was accompanied by manifest chagrin and restlessness on the part of the other three Ss). We suggested that there might be one group that strongly wanted to change the schedule and one group that strongly opposed such a change. The gist of the following discussion was that the work schedule on a space craft ought to be changed around once a week. Chet, who had opposed this, stopped talking and neglected to raise his hand when the "captain" said, "Those who dissent, raise your hands." (This formula was Al's second, the first being, "Those who dissent, leave the room"--something of a joke as regards either a space ship or a penthouse.) In the course of the discussion it was the highest-status S, Ed, who evidently ended the debate, by anncuncing that the "captain's" solution (a rotating schedule) was what he advocated ten minutes before. That remark gave the captain two votes and presumably provoked the suggestion that the dissenter step outside.

Without pausing to analyze the content of this decision (notice the question of the authority of the captain to punish, the denial that there can be discord, and the desire to change the rules governing routine), we see a progression from 1) "This is not an answerable problem" ("irrelevant"), to 2) "This is incredibly easy" (the captain is just to "announce" the hours), to 3) "This is too difficult, and we give up." The reformulation of the problem progressed from 1) the assertion that the problem will never arise, to 2) "We just raised it," to 3) the suggestion of rotating the schedule, to 4) the seconding of that suggestion, and 5) a challenge to dissenters. The leading characteristic of this decision is the poverty of detail--both as to how such a dispute might look and also the concrete terms of the solution. Again, we see the subjects pressing the investigator to present a problem; they then define the problem as nonsense or patently obvious; they quickly run out of patience; and they come to a rapid, formal, "solution." The motive appears to be to get the thing over with,[10] and to avoid any protracted disagreements among themselves. The decisional techniques just outlined might be called <u>decision by avoidance, denial, caricature, and formal fiat</u>. The decisional canon, we infer, was to reach near-unanimity on a least-common-denominator basis without stimulating genuine dispute.

Our discussion continued, on the topic of a clash between military and scientific personnel "wintering over" in the Antarctic. Al, exerting some initiative in his position as "captain," said: "Well, if it really bothers the morale of the Navy personnel then I'd have . . . [pause]

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[10] It should be mentioned that we were deliberately undemanding and indulgent toward the Ss, and did them many personal favors, so that they had some reason to please us by performing minimally.

something would have to be done [to] the scientists [who refused to bathe and change clothes] . . ." In response to a probe, he suggested segregating the scientists. Ed said: "You know, just keep all military people in one hut and all scientists in another hut or something." We doubted whether this would be possible. Al said that such problems should be "defined" before undertaking the mission. Ed suggested, alternatively, that there should be special rules within the closed environment: ". . . you know, like certain standards of neatness or, you know, certain things like that." Bob interjected that they were supposed to be setting up such rules here and now. Chet asserted that an offender should be required to take his meals by himself. Bob questioned us as to whether there <u>really was</u> a disagreement in the instant case. We confirmed that there was, and characterized the enforcement of the rules proposed by the Ss as "punishment." Ed quickly declared that it wouldn't be punishment to enforce the rules he had in mind; then Al interrupted to say that he too thought it wouldn't be punishment . . . interrupted himself to ask whether <u>all</u> the scientists in the hypothetical case felt this way . . . then reiterated that they "should have to eat by themselves."

This section of the protocol illustrates what we shall be referring to as the dissociative technique of decision-making. The leading quality of the preceding passage was the air of non-solution: the Ss evaded the substantive decision by responding 1) that "something" would have to be done, 2) that the disputant could be ("you know") just separated, 3) that there should be "special rules" in advance, 4) that maybe there was no real dispute, 5) that the solution would not "punish" any one in any case, and 6) (again) that the offenders should be segregated from the others.

This emphasis on separation (of problem from solution, and of offender from complainant, evidently voluntarily) is felicitous, for it minimizes the right to punish, it forestalls confrontations between disputants, and it evades all the ugly complications pertaining to sanctions, noncompliance, insubordination, and consensus in the confined microsociety. The decisional canon here appears to be libertarian and individualistic.

The next turn of the discussion was the question by Bob, whether "there is anyone" who can "discipline these scientists." We remarked that there was a chief scientist in the picture, here represented by Ed. Al then remarked that there would be a breakdown of morale "if there wasn't some degree of cleanliness."

> IS: So, I take it then you would enforce . . .
>
> Al: I would not say force, I would certainly try to persuade them . . .
>
> Ed: . . . if they expected to share recreational facilities with the Navy personnel they should also consider that those people were being offended . . .

We thereupon asked the Ss to consider the extreme case where the scientists would not compromise. Ed proposed letting them "live by themselves." He revised this, under questioning by Al, to "make them build [a new hut] if they want it that much—'cause that would serve as home anyway." Al asked if he would have jurisdiction, as captain, to keep them out of the recreation room; "Could I make them eat by themselves? Then that's exactly what I'd do." Ed countered that the facilities could be used in shifts. Al said you "<u>could</u>" do that. Bob remarked that that solution wouldn't work on a cramped space ship. Al suggested special clothing or air conditioning to remove the complaint. Bob again recommended having all the rules set

down in advance. Al agreed, "in a booklet."

To paraphrase this passage: 1) there must be someone (other than us) who can discipline the offenders; 2) no one is going to be forced; 3) people should be more considerate; 4) they should be permitted or made to live apart; 5) physical arrangements could be better; and 6) rules could be listed in advance. These solutions have this in common, that the offenders should not be made to interact in particular ways. The closest our Ss get to direct social control is to "make" (a term ambiguously between "force" and "let") the transgressors withdraw. Such a reaction by the Ss is not at all surprising in view of their overall anarchistic bent; we merely call attention to the persistence of techniques which split the central interpersonal conflict into fragments that are absurd or "technically" simple (e.g., better air conditioning), and which avoid the clash of wills and the submission of the one to the other.

The problem of physical crowding was broached. Al said that the "only" way you could avoid body contact under crowded working conditions would be to have a chair with "a little bar or something around the outside, you know." We observed that on a space flight this would all be extra hardware. Al: "Then you really can't do much about it." Ed raised the question of rest periods when "people" could "be silent for a while." Al suggested constantly changing the work shifts; it would not, he added, lead to factionalism because "they would be continuously changing." We imagined a fist fight, resulting from the crowding. Al: "The only possible thing you could do . . . would be trying to make the people understand that it's an unfortunate thing and stop . . . ." Chet volunteered that such fights resulted from personality conflicts and could not be done away with by rules; he disapproved of disciplining the offenders. Al declared, "You'd

have to . . . discipline both of them rather than just one. He thought the discipline might consist of taking a recreational privilege away. We asked what ought to be done if the fight were started by a notorious, intractable trouble-maker. Chet: "Give him some chemical that makes him a very pleasant person." Chet elaborated his point--under narcosis the trouble-maker would be hypnotized and told to behave. Bob's solution for people like that was that "you just take a straightjacket to them." We suggested that the malefactor may be the only one on board able to do a certain task; Al: "I don't think that should be allowed to happen." Bob interjected: "Put him in the pokey." Al: "You have to allow him to feel a part of the group." Chet reverted to the narcosis-hypnosis solution. Al: "The medical officer can hypnotize the captain [Al] for that matter . . ." Chet protested that the crew should be screened so that the incidents propounded by us would not arise. Ed argued that, even if the screening weren't perfect, a space crew would train together and (thus?) the problems would not arise.

These reactions to the problems of physical crowding, unauthorized touching, intrusion, and assault and battery, are notable in their evasion to <u>moral</u> authority as a solution (e.g., dressing down the offender, or administering a calculable and determinate punishment) and in their preference for <u>physical</u> restraint (involuntary hypnosis, the straightjacket, conditioning) which supposedly leaves the moral core of the personality and the individual's psychic space untouched.

We next adverted to a problem where the captain and the chief scientist on a long space voyage fall into disagreement, during a radio blackout, as to the proper course for Mars. Al: ". . . call back for someone who is higher than both of them to make the decision." We ruled this out because

because of the radio blackout.

Bob: . . . it's very simple, you just have to find out who's right. This isn't a subjective thing at all.

Ed: This scientist should have one of his subordinates . . . figure out their declination and explain why [ground control] was wrong.

D.S.: [What if the captain couldn't understand and wouldn't accept the scientists' calculations?]

* * *

Bob: Put some of Chet's chemicals into his frozen strawberries.

D.S.: It would have to be done fast. That would essentially be mutiny.

Bob: That's what you do with those kinds of captains.

Here we see the Ss assuming quite willingly either that a ramified and complex clash of authority <u>cannot</u> arise or, if it does, that the <u>scientist's</u> authority should have precedence. We hold it significant that this sort of solutions also involves a flight to "objective" factors and avoids the possibility of moral and emotional conflict.

We have devoted this much space to the first formal session with the four cooperating Ss in order to lay out the method that we have employed in analyzing decisions. By <u>decisional motives</u>, we mean, following Janis, the psychological and situational conflicts and frictions, the painfulness of which impels one to resolve the conflict (decide the problem, alter the situation). By <u>decisional techniques</u> we mean the relatively invariant responses and habits (e.g., avoidance, legalism, Kantian equity, withdrawal, dissociation, <u>ad hoc</u> reasoning, etc) which individuals have for executing the conflict and without which they would be overwhelmed by a chaos of alternatives, values, gradations, and immolative attractions. By <u>decisional canons</u>, we mean the substantive rules (principles, laws) that are affirmed

or implied in the presentation of decisions to some audience (including one's own conscience); i.e., it is "self-evident" that (I) a human being has individual dignity that ought to be respected (therefore, a member of a space crew should be able to be left alone if he needs to be alone) but (II) one has a duty to help the sick (therefore, a member of a space crew should not be permitted to be alone when he acts withdrawn and depressed). Using these concepts we shall produce more abbreviated accounts of the other formal sessions with our Ss.

In the next regular session the four cooperating Ss were asked to consider what rules, if any, there ought to be on a long space flight regarding personal privacy. The highest-status S, Ed, wanted to know whether the crew would wear helmets. His question pertained, it seemed, to the matter of free conversation among the crew; but he did not pursue it, and a long pause ensued. We announced that we wanted the record to show "no response" to the question. Whereupon Ed immediately began raising questions of how a space crewman could signal the others that he just didn't feel like talking. Al and Bob made slightly ridiculous suggestions along these lines, e.g., that the person wear a "blue light" when he doesn't want to be talked to and a "red light" when he is willing to talk.

D.S.: How would this system work?

Bob: It wouldn't. (laughter)

Notice that Ed, a man especially touchy about his psychic space, "decides" that the foremost problem in the area of privacy in a space craft is being talked to when you want to be left alone, ere Al and Bob, who are vastly more gregarious, propose a non-serious "solution" to Ed's dilemma and, when we probe, abandon it. Thus Ed's decision as to priorities is effectively undercut by the <u>ad absurdum</u> technique. We may speculate that this happened

to Ed, who was generally treated far more gently by his peers, because he vainly decided to introduce a question of privacy that was of concern to himself and only to himself, i.e., he did not profess group interests.

We restated the problem. Bob replied that ground rules should be preventive rather than remedial. "I can't," he said, "think of too many rules, other than to be nice, we really need before you left the ground." Ed then declared that it is better to have rules "because some people's idea of being nice involves back-slapping." Bob retorted that this is something you consider and "check out" with people before they are thrown together. Bob next shifted ground by quizzing us about the layout of a space ship. We again restated the problem. Ed thereupon said that "you could" set up ground rules on common courtesy, he supposed. Chet warned against it, and cited an experience of his own where courtesy on a merchant ship proved very irritating to some crewmen.

We next posed the problem of how the available space should be allocated among men of differing ranks. Chet said the captain should get more space "maybe." Ed said it ought to depend on the amount of room required by the job one has to do. Bob disagreed. The discussion veered back toward noise as an invasion of privacy: Chet wanted to know why a space craft couldn't be wholly soundproofed. Al advocated setting aside areas for work, conversation, sleeping, etc. Chet recommended having two living rooms, one for scientists and one for military personnel (because they would have different jobs to do); he also suggested having bunks that could be closed off and soundproofed, permitting complete withdrawal.

We asked whether the Ss had arrived at a rule that could be stated. Al said: "Just something about no unnecessary conversation while performing

whatever it is you're doing during work periods." Ed added that there ought to be a rule restricting noise to certain times and places. Chet said the rule would be that "nobody is supposed to disturb somebody else who is working." Ed: "Yeh, unless it's absolutely necessary." Asked to assign priorities to the kinds of privacy they would prefer, the Ss' opinions ranged from recommending the minimum privacy needed to accomplish one's job (Bob), to a semi-serious scheme for having sliding panels and walls separating those who did and didn't want to talk (Chet), to the notion of rotating areas of quiet and non-quiet (Al). The reader--making due allowance for the hypothetical nature of the questions posed and also for the immediacy of such questions to the Ss's situation--will notice the Ss' preference for question-begging solutions (e.g., the ban on "unnecessary" conversation, the "unless it is absolutely necessary" reservation) and for mechanical solutions (sliding walls, zones, etc.). These are to a large degree techniques of decision <u>avoidance</u>. We note furthermore the absence of extreme choices, such as the suggestion that all rule making should be done on an <u>ad hoc</u> basis when the time comes (and not before!) or the insistence on listing and codifying <u>all</u> rules in advance. Lest it be thought that our Ss adopted decision-evasive techniques on hypothetical questions only, see (below) our discussion of informal advertent and inadvertent decisions that affected their group life crucially.[11]

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[11]Also, compare their distaste for decision-making with that of case-hardened professionals and experienced public servants, as recounted in Warner Schilling's excellent article, "The H-Bomb Decision: How to Decide without Actually Choosing," <u>Political Science Quarterly</u>, vol. 76, p. 24 (March, 1961).

The next formal session was devoted to the case of a crewman who refused to wash his coffee cup: the captain was furious with his insubordination and asked the conciliation board (our four Ss) to discipline him. Their immediate solution was to put names on the cups so that the offender would have to drink out of his own dirty cup. The question of disciplining him was rejected in the following way:

D.S.: How about the immediate problem of disciplining this . . .

Bob: I think the captain is unreasonable.

Al: Yeh, if he wants to drink out of a dirty cup, let him . . .

It should be said that Bob's view of the captain was evidently a minority opinion; the other Ss, led in this case by Al, adopted a dissociative technique, viz., since they had discovered a painless and reasonable solution to the practice that gave rise to the dispute (the leaving of a dirty, anonymous coffee cup), they deserved to "forget" the request to discipline the offender and to pass over our reminder.

The coffee cup problem was elaborated into a problem of a very sensitive but absent-minded crewman who carelessly, and despite numerous warnings from the captain, continues to use <u>other men's</u> cups. The captain asks the conciliation board to discipline him. Ed suggested that he be warned again. Al (who was pretending throughout to be a frog and was talking in a croaking voice) raised the question of communicable diseases (physically based). Ed changed his position and recommended that the man be told to wash all the dishes as punishment. Chet objected to disciplining someone who is "merely" absent-minded (as Chet was about Penthouse routines). Bob seemed to support Ed's position. Chet insisted it wouldn't help, because

the man is absent-minded. Ed, supported by Al and Bob, next hit upon the idea of not allowing the offender any coffee 'til he leanred to wash the cup. Chet accepted this solution with some reservations. The discussion became zany at this point, involving schemes for disposing of paper cups in deep space and for taking turns doing the dishes. When we attempted to steer them back to the conciliation problem, the Ss jokingly decided that the best solution would be to tie the cup around the man's neck; Bob, "Forever, if necessary." In this sequence we see the higher-status Ss revising their positions to accommodate Chet; we see them efficiently coming to a unanimous decision that the offender should be deprived of privileges (again burying the captain's demand for punishment for past offenses); and we see them then turning to a kind of parody of the problem, in which the offender ends up with the shameful cup dangling from his neck. The virtue of the parody, we surmise, is that it puts distance between the Ss and their responsible, corrective decision against someone who could easily be their peer.

The absent-minded crewman was featured, in our second variation, dropping used Kleenexes on the floor all over the station. The captain wants the conciliation board to "do something about it." Protestations of disgust. The two more assertive Ss agree at once that he should be given one handkerchief and that will be that. Again there were extended jokes and spoofs on the subject; and the free-wheeling discussion again found its way to the solution of pinning something on the front of the offender, in this case a sanitary bag for used tissues. Perhaps inevitably, there developed a scenario in which the absent-minded fellow with the coffee cup around his neck gets involved with the absent-minded fellow with the Kleenex bag around his neck. The Ss never returned to the problem of

disciplining the offender, nor did they say anything that would indicate a willingness to ostracize him or to criticize him personally.

A third variation on the absent-minded crewman: He becomes increasingly absent-minded about his personal habits and about his duties; the captain wants to know what can be done to improve his morale. Ed, the highest-status S and generally leader of the discussion, firmly suggested that a doctor should be consulted before any punishment is given out. (We had not mentioned punishment at this time.) Bob (very much in character) recommended attaching other crewmen to him "until we find out what's bothering him." Ed argued for confining him to a smaller space, an idea rejected by Bob and cutely ridiculed by Al. Chet protested that Ed's solution would never work and that he, Chet, as ship's doctor, should treat this "dangerous" man with chemicals and hypnosis. There followed a dispute between Chet and Al (the then captain) concerning jurisdiction over the man and his work schedule during the medical therapy. A vague consensus emerged to the effect that the man's job must have been too hard for him. Here we notice the dissipation of Ed's (confinement) suggestion and a preference for scientific (medical) expertise--a result that may reflect the Ss' sensitivity to physical confinement and that may mean that Ed, the participant with the most status, was able (as we observed elsewhere) to exert persuasion only by incorporating the views of two or more of the others into his proposals.

To our surprise, the Ss responded laconically to the question of what <u>immunities</u> the subjects in the next Penthouse experiment ought to have. Ed said he didn't think "subjects need to wash dishes," "That's what the keepers [<u>sic</u>] are paid for." Questions were raised about the physical arrangements with twelve men in the Penthouse. Ed then recommended that there should be a place that is absolutely private and that "desk drawers

should not be capable of being violated by anyone else but the person whose desk it is." He referred to these things as common courtesy. Al showed some concern about regulating the use of the telephone; and the session ended. Our impression of the extreme passivity and regression of the Ss was confirmed here and at other points hereafter, witness the disinterest of the Ss in the opportunity to draft a code, or at least express strong feelings, on the matter of their own immunities and the protection of their psychic space (a topic about which, all the other evidence indicates, they were deeply concerned).

In the next formal session the case of U. S. v. Holmes (26 Fed. Cas. 360, 1852) was presented and the subjects were asked to decide it as though they were a court of appeal. The case involves the classic dilemma of self-preservation in a swamped and overloaded lifeboat. The Ss were at pains to discover what became of the captain (who escaped in the jolly-boat, abandoning the passengers and part of the crew) and to emphasize that the defendant, Holmes, had gone out of his way to save a woman with child. They deemed the whole situation "terrible," especially the captain's behavior. They tentatively suggested that the crew should not have preceded the passengers in the longboat at all. A couple of frivolous comments were tendered. We were asked to restate the facts. Bob alleged that he first understood that the defendant had not used force to throw some of the passengers to a watery death. It was observed that there were more than twice as many passengers as crew in the boat. The familiar technique ad ignorantiam--here, that certain crucial facts were missing, such that the Ss could not possibly be expected to form a moral judgment--was used. They ultimately, after an unusually long and intent debate, decided that Holmes should be acquitted and that he should be compensated for his nine

months in jail awaiting trial.

The Ss' reasoning in the Holmes case was markedly pro-defendant; they produced numerous arguments to show that others were as guilty or more guilty than Holmes, and that Holmes had no genuine choice in the matter. That is, they avoided attacking directly the proposition that Holmes performed the act charged and that the act was plainly illegal. We refer to this decisional technique--comparable to the indirect proof in geometry--as decision by indirection: The denial of the chief allegation and its submergence by "parading the horribles." It is also noteworthy that the arguments alluded not at all to legalisms and strict constructionism--the principles invoked were those of equity, mercy, and comparative innocence--out of motives (we suppose) of self-interest and identification with the accused.

The Ss were asked to act as a conciliation board in drafting a rule for the subsequent experiment. The problem was stated as one of inspection by the Director for health and fire dangers. Hypothetically, the Director might want to look through all the Ss' personal effects from time to time. This notion was, of course, resisted strongly. The predominant feeling was that these would be phony reasons for invading their privacy. No one took the position that the inspection would promote their general welfare. The rule agreed upon unanimously, after a quick compromise on details, was that the Director should be able to inspect visually the closets, drawers, etc. at pre-arranged times; however, each S should have a footlocker or box where no one else could look. The motive here appears highly defensive of their psychic space; and the technique, again, is fiat, denying the legitimacy of the conflicting claim and treating the opposing interest as an unfair and shameful imposition. The decisional canon seems consistently

to be libertarian and anti-responsible.

The famous case of Regina v. Dudley and Stephens (Q.B., 1884) was stated and it elicited several concrete questions from the Ss. The questions pertained to the exact condition of Parker (a cabin boy devoured by the defendants twenty days after the capsize of their yacht) at the time he was killed, the length of time the perpetrators had been without food, and why they had not waited for the languishing boy to die before putting the knife to him. In the order given, the opinions were:

Bob: Reduce the death sentence to life in prison;

Chet: Acquit the defendants;

Ed: Find them guilty but refuse to sentence;

Al: Reduce the death sentence to ten years each.

We declared that the death penalty would stand because the Ss did not present a majority opinion. This naturally scandalized them and they insisted on debating the case further. Bob proceeded to revise his opinion so that it agreed with Al's; Chet and Ed continued to assert that the conviction be reversed, Chet going so far as to argue that Dudley and Stephens had saved three lives. Al then changed his opinion to agree with Chet and Ed. We discussed the actual appeal and Queen Victoria's commutation. Bob, who had thus been voted down by the other three, began to lose his temper as they applauded the Queen's decision. It is of interest that Al, of lower status than Chet and Ed and a close friend of one of them, made the accommodation that produced the majority and that he did so after Bob had compromised in his direction (thus isolating Bob in a painfully obvious way and recapitulating what was going on informally in the group every day). Once again, we see the near-complete denial of guilt and responsibility. The decisional technique is a fairly unadorned one of leadership and coalition--

one might speculate that Al, a relatively authoritarian S and the roommate of Bob, based his position on lending Bob some initial lateral support and (later) on the admission of Ed that the defendants were somehow "formally" guilty after all. Ed, here in such a position that he had to guess how to shape a majority opinion (assuming he designed to influence Al), cleverly took a position close to the more popular Chet and left the door open to Al's conservatism (by finding the defendants "formally" guilty).

We, pleased with the responsiveness of the Ss to legal materials, continued to present cases as if to a supreme court on appeal. The case of Rachel v. Oklahoma (107 P.2d 813, 1940) involved a conviction for outraging public morals by virtue of a white woman's being intimate with a colored man in the latter's apartment (the police peeping through the window shade).[12] The Ss were unanimously outraged at the conduct of the Oklahoma City Police. As in earlier cases, the Ss showed the desire to reach beyond the parties and punish those who were "really" at fault. (The direction of this bias was to punish, if anyone, the authorities.) Although they were unanimous in dismissing the charges, Ed (the leader at this point) distinguished himself by stating reasons of policy relevant to the legal issues in the case.

The Ss were next given Brown v. U.S. (256 U.S. 335, 1921), a case on the right of self defense and the necessity of retreat. The Ss considered all sides of this case in a craftsmanlike fashion. Bob, as he often did, said that the issues were too complex for him to decide; he went on to condemn the deceased for being hot tempered and suggested that the defendant should have quit his job rather than run the risk of tangling with the deceased, a co-worker. He voted to sustain the conviction. Chet voted to reverse, as did Ed and Al. Bob was once more peevish at having been outvoted; Ed was again most articulate in fashioning his opinion. The technique

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[12]This case and several others used by us were taken from Edmund Cahn, The Moral Decision.

used by the majority was the standard juridical device of restating the facts so that they more clearly fit the rule (self-defense). The byplay suggests that they identified with the killer and not with the deceased (who had provoked the scene and attacked Brown with a knife). Chet and Al mentioned the possibility that Brown, by carrying a gun in his coat, may have planned to kill the deceased all along; but their decisional canon was one of self-defense, honor, and individualism.

The Ss were asked to decide the case of the harlot's child (I Kings 3), where King Solomon threatens to sever the child and declares, after the outcry of one of the harlots, "Then let her have it." The Ss did not take to the ambiguity of "her", nor to the idea that the one who did not relent might have been the mother. One S raised the clever pleading-point that the child is long since dead so there is no controversy. The consensus appeared to be that it was less important who the true mother was than that the child should live. This line of argument was initiated by Ed, the highest-status S, after an interlude of punning and talk about eating the child.

Rochin v. California (342 U.S. 165, 1951), a case of stomach pumping by the police to recover narcotics swallowed in their presence, appalled the Ss. They proved to be very touchy on the subject of search and seizure generally, and they argued at length with us as to the right of police to break into a dwelling house and who should pay for broken doors and windows. Three of the Ss would have reversed the decision on the ground that, even with a search warrant, the police have no right to invade the body. The fourth based his reversal solely on the lack of a search warrant. None addressed himself to the legalistic arguments, introduced by us, that the law of California and of the land (Wolf v. Colorado) at that time permitted the

admission of illegally-obtained evidence. Al, like the concurring justices in Rochin, conceived of the case as one of involuntary confession. The course of this decision led Bob, the most dissonant of the Ss, to express, with some antagonism, sentiments far removed from those of the others, but later moving closer to the others.[13]

In a session devoted to the overall topic of simulation, it was Ed who acted as spokesman and who said he would be willing (as a scientist on a space expedition) to plant the U. N. flag on another planet and claim the planet for the U. N. The others indicated that they would prefer to stick to their scientific roles and not perform political acts. (Bob said he did not regard the U. N. as sufficiently representative of the world community.)

The Ss were next asked to consider an imaginary libel case, wherein one mayoral candidate in the heat of the campaign accused the other of being a Communist and the other replied that his rival was a homosexual. At once the Ss discounted both the libels on the grounds that they were part of campaign oratory, not to be taken too seriously. They also tended to insist that the charges were equally damaging, that the penalty for one should be visited on the other as well.[14] The two highest-status subjects decided that the cases should be dismissed and the litigants invited to bring them again after the election; the other two Ss appeared to accept this decision. Our protest, that these were libels and ought to be decided now, was met with the suggestion that we had invented the scenario and could invent our own solutions.

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[13] He prefaced his final opinion, somewhat obscurely, "O.K., this being a very unpopular opinion, I'm still reversing the decision and kicking it out because of inadmissible evidence."

[14] We had posed the problem in such a way that the one party had suffered a loss of reputation and the other had lost his job, as a result of the defamations.

We turned then to Frank v. Maryland (359 U.S. 360, 1959)--a case of penalizing a Baltimore householder for refusing to let health authorities inspect his basement for rat infestation without a search warrant. Al (contrary to our expectations) opined that the health inspector should have been permitted access to Mr. Frank's basement, "I think he had a right to do so . . . as long as he told him that this was part of the law of the state." Even more surprisingly, Chet and Ed went along with this view (a view wildly inconsistent with their general position on personal privacy) because "he wasn't asking entrance into the house to pry into personal affairs, [but] he was asking entrance to the house for a public concern, just as if a meter man comes to read the meter . . ." Al agreed with a reason advanced by Chet--that the officials had a right to inspect because Mr. Frank was unable to control the rats allegedly on his property and unable to confine them to his own lot. Bob, in effect, refused to state his opinion, albeit giving the overall impression that he sided with the majority for different reasons. In elaborating their views the majority, led by Ed, drifted toward the position of jailing Mr. Frank for a while and searching his basement in his absence. The sole allusion to their prior insistence on individualism was Ed's remark that Mr. Frank's desire to keep the authorities off his property was "romantic," "a complete expression of American individualism to raise rats in one's cellar or to provide places for homeless rats."

We regard this departure from their earlier thinking as probably the product of two events: 1) the quickness of Al in expressing a strong opinion against Mr. Frank, and the joining in his opinion by Chet, thus forcing Ed (Al's usual cohort) either to accept something of the sort or to side with the perennially unpopular Bob; and, more importantly, 2) the

content of the case--health and cleanliness--at a time in the experiment when hypochondriasis was much in evidence and with individuals who were rather fussy about sanitation. The decisional technique, if we understand it rightly, was one of pre-emption: key members of the group placed themselves squarely in a position which could not be repudiated by confreres without considerable embarrassment and/or realignments of the informal coalitions within the Penthouse.

We then reintroduced the hypothetical libel case, specifying that the election is over with and both mayoral candidates persist in their suits. After a spirited debate in which we were pressed to specify more and more facts, three of the Ss decided to award damages to the candidate who lost his job after being called a Communist and nothing to the candidate who was called a homosexual and lost his good name in the community. The process of reaching this decision was so chaotic that we cannot characterize the technique except to note that Bob switched his vote and said he would "go along" after we elaborated our own theory of how the case would be decided in a court of law.[15]

The formal sessions were thereafter called off for three weeks out of regard for the fatigue of the Ss and because we needed time to digest the experience.

During the last week of the experiment the cooperating four and one of the two insurrectionary Ss volunteered to participate in a final session. Whitney v. California (274 U.S. 357, 1927) was presented involving the application of a criminal-syndicalist law against a woman who

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[15]This procedure was not employed by us in other cases, and was used here only to salvage the hypothetical case from the confusion brought on when the Ss discredited all the testimony that went to prove the 'defense of truth' for the defendants.

had formerly been active in the Communist Labor Party. The highest-status member of this group of five Ss, Dave, led off by stating that he would sustain Miss Whitney's conviction; he was followed by a less popular S, who agreed. The third opinion was given by Ed, the former leader of the cooperating Ss, who heatedly defended Miss Whitney's right of free speech and association. The next two Ss agreed with the first two, thus creating a clear majority of 4-1. Then, in keeping with the literature on small group dynamics, the first speaker, Dave, switched his vote so as to associate with the other high-status confrere. Leaving his three supporters high and dry, the status-leader decided he wasn't sure of his first vote and wanted to change it.

> Dave: Well, I'd really like to abstain on this issue.
>
> D.S.: O.K., but you can't abstain.
>
> Dave: I'll go with Ed; she's innocent. But for the reason she probably didn't actively advocate violent means . . .

"But for the reason" was a phrase designed to salvage part of Dave's earlier argument and to indicate that he was not merely <u>following</u> Ed. Dave and Ed looked momentarily exuberant; the others looked chagrined.

Following a rambling discussion of rules for the next Penthouse experiment, this group of five was given <u>Skinner v. Oklahoma</u> (316 U.S. 535, 1942). Skinner was a chicken thief who was scheduled to be sterilized under Oklahoma's habitual criminal act. The Ss went off on a semi-hysterical phantasy about chickens (bestiality) at first; then Dave stated categorically, "You can't sterilize him." Ed suggested that there is no reason to think that Skinner's children would be criminals. Other reasons were offered, in an order roughly following the status-relations of the group, why the sterilization would be cruel and senseless. The opinion was

unanimous to reverse the lower court's decision.

The decisional technique in these last two cases is fairly uninteresting because it merely involves the search for a rational basis on which to hang one's sentiments. It is interesting, however, that in the second case none of the Ss spoke a word in defense of the statute, nor even speculated what might have been the reasoning behind it. In the first case, their strong feelings for individuality and privacy were probably in abeyance because of the alleged association of Miss Whitney with bombings and prospective violence; it was not until Ed developed the distinction between advocacy and action that Dave considered shifting sides. The disapproval of violence is very likely related to the fear of violence in the confined microsociety (see the references to murder, suicide, bombing, etc. in the Narrative).

Informal Advertent Decisions

We shall now describe some decisions that the group made with eyes open but outside the structure which we or the Director provided. In deference to common language, we shall designate deliberations as first-order decisions and acts which require antecedent (non-verbalized) decisions as second-order decisions. Nearly all our discussion here will be of first-order decisions.

Frank, the more forward of the two returnees, responded to the Director's invitation to decide how many cups of coffee the Ss wanted by recommending to his peers six cups per day. The others appeared to accept this; and, by a decisional process which we were unable to discover, the Ss were all consuming six cups beginning the next day. It seems likely that Frank's suggestion was followed implicitly in the absence of counter-

proposals and because of precedence and job-seniority. We call this technique the defeasible proposal--a choice which becomes vested with finality if uncontradicted within a reasonable time.

Ed enters and leaves the dining room often--as if to check the TV programs. Our impression is that he cannot resolve the dilemma of whether and how to deal with the staff and his fellow Ss. Another second-order decision we observed the first week was the attempt of Dave to teach Al a certain card game (an endeavor having interesting inadvertent consequences for the Al-Ed friendship and on the formation of the Dave-Frank-Al-Ed clique).

On the question of where to locate the TV set, Frank again employs the defeasible proposal technique, coupled with the assertion that it would be stupid to place it anywhere else. Two Ss who had weakly expressed other preferences gave in to Frank.

The response to the rule limiting the number of visitors was, as we remarked before, spontaneous and evasive of any exchange of privileges: the total quota for all six Ss (i.e., 12 visitors) could be used by any S if unused visitors were still available. We do not know who designed this solution; our impression is that it was a tacit strategy.[16] A second example of tacit agreement (linked with a defeasible proposal) is the decision, heralded by Frank, that they would simply divide their winnings from experimental games evenly, regardless of what team won or lost.

Ed was observed using Frank's technique in connection with selecting TV programs: He would announce that a good program was about to come on

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[16] See Thomas C. Schelling, The Strategy of Conflict (1960), passim, for the analysis of tacit bargaining.

and he would turn to that channel after a period of grace. At this stage of the experiment (the second week), we did not know what would happen if the announcement was disputed. On another occasion, when Ed had turned on the TV to watch a favorite movie, Dave and Frank offered opinions about the quality of the movie and supported Ed's choice before the others. Bob made an ambiguous remark about the movie, which was passed over by the others. We begin to see a system of majority rule emerging, with the votes weighted a bit in terms of status.

In some ways the routine hardened into a system of rights, prerogatives, and jurisdictions by sheer force of habit. For instance, Ed's adverse possession of the TV at a certain hour to watch a show he "always" watches is ceded to Chet, with much to-do, for the limited and express purpose of watching a special program. Underlying this explicit concession there are probably some meanings having to do with making Chet a gift and "recognizing" him as a creditable member of the in-group (see Narrative, Fifth Week). The "customary" rules have become sufficiently well established to dictate (i.e., to foreclose) decisions in some contexts and to force consultation in others. Thus, Frank very respectfully asks Dave's and Ed's permission to turn on the TV set at a time when the living room is usually quiet, whereas Ed is seen changing channels during normal viewing time without announcing his intentions in advance (the others were reading or otherwise inattentive).

Al was very much concerned to discuss U. S. v Holmes with us, revealing a technique of decision by approbation. This was Al's standard tactic in dealing with authorities. It involves the well-known process of hinting at one's sentiments, waiting for the other's assurance, revising one's professed sentiments to suit the assurance, awaiting further assurance, and so on. All

their specialized relations with one another and with particular staff members.

The determination of where to go on an outing was left in doubt after Frank declared he would only go to the park. Feeble dissents and alternatives were expressed. When the day of the outing arrived, all the Ss were in agreement that they would go to the park; we do not know how this consensus was achieved--it looks to be another example of the defeasible proposal stated with sufficient force that no one wants to provoke the unpleasantness that will ensue from strongly advocating another program and trying to persuade Frank and others to compromise. It is noteworthy that Frank, manifestly the most disturbed and distressed by decisions and interpersonal conflict, is so clever in forcing his preference on the group and in forestalling genuine debate.

Al violated custom to the extent of moving the TV into one of the bedrooms so that he and a visitor could watch it there; this was done after asking if "anyone would mind." No one seemed to.

The decision in the eleventh week to go on another outing to the park is chiefly the doing of Al, who most urgently wants to get out, "anywhere." The decision as to where in the park to go is left initially to Dave, but at the last moment Ed and Frank induce him to alter it slightly. This is an instance of the veto-power of status-equals and the more assertive high-status Ss.

The most direct rebuff we observed among the Ss was between two of near-equal status, where one was closely allied and present with his buddy, the most popular S. When Al asserted he wanted to see a certain TV program at a time when Frank and Dave were watching another program, Frank said emphatically: "Forget it!" Al proceeded to debunk the program he had wanted

to see, as if to "make good" his loss by adopting the Frank-Dave position. Dave, without acknowledging this exchange, changed the television to the channel he and (we presume) Frank wanted all along. This job was executed in an altogether tough manner; we suspected that the program that Frank and Dave wanted was the one they usually watched at that hour, and that Al wanted to innovate. If so, this is one of a number of examples of the force of priority in time.

Inadvertent Decisions

We refer literally to all the Ss' behavior which is not either a) automatic or strongly habituated or b) the product of deliberate choice and reflection. In other words, we mean here to discuss the observed behaviors which logically must have been produced by a whole range of dim, semi-conscious, unconscious, capricious, intuitive, and unwitting or inexpressible choices. Since this class of decisions is too large (not because it is immune from scientific analysis), we shall only address ourselves to those inadvertent decisions that bear directly on what we conceive to be the intra-group dynamic. That is, we are passing over those non-deliberative behaviors which are mainly reflexive or appear to be aimed at the staff.[17]

(The behavior that comes under this rubric may or may not have been performed wittingly. We do not mean to suggest that the Ss were not aware of what they did in all these instances, though that might be the case. We only mean to say that these behaviors involved decisions but were not perpetuated as decision-making.)

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[17]On the question of which behaviors by human beings have ascertainable social meanings that can be deduced by the participant-observer, see the intriguing essays of Erving Goffman, or the works of George Herbert Mead and social-psychologists of that stamp.

Frank's conduct at the "last supper" (see Narrative) set the stage for a kind of delinquency and immaturity that was much in evidence later. The explicit remarks of Al and Ed also indicated that they did not intend to act too responsible and that they would not need to. We regard these acts as notice of intention to regress. Circumspectly, the Director and the staff are being told, e.g., through Frank's cutting up and playing with a yo-yo during the briefing, that he intends to be uncooperative in a certain style. Many exploratory acts (so-called "testing" of authority) are understandable as inadvertent decisions to meet the due process requirement of "notice."

Likewise, Bob's (typically) aggressive presentation of his role in the Free Speech Movement is his way of determining where he stands with us. The underlying decision is a tactical one: to attack our apparent position rather than running the risk of exposing his own and having it ridiculed. Bob thereby puts us on notice that he is a daring and even radical fellow . . . a word to the wise.

Dave's warning, that the formal sessions would prove to be a struggle and the only question was who would break whom, was a self-fulfilling prophecy, since he was the leader of the Ides of March insurrection. His announcement or definition-of-the situation as one of "breaking" one another, was a subliminal way of putting the whole company on notice of his secret and projected intentions. That was eminently fair, from his standpoint, since he did not see himself as provoking the struggle and since (on another level) he had thus given us clear warning of how he intended to respond to this (projected) threat. His declaration, within the hearing of the other five Ss, also can be considered a bid for leadership (and, indeed, he did emerge as leader of one of the two delinquent subcultures).

A similar interpretation can be made of Frank's behavior in saying out loud that the questionnaire was "absurd." Frank went even further, telling us that the questionnaire would show him (Frank) to be an anarchist and that his reaction to things he didn't like was to blow them up. That is, Frank decided to tell the other Ss and us that he was preparing to withdraw from our part of the experiment and that, if his retreat were impeded, he just might become violent. (His publicized phantasies were often about becoming violent, though he never did.) This variety of indavertent decision is reminiscent of the defeasible proposal, except here it is placing others on notice as to a course of action which one intends to pursue unilaterally; the others are indirectly "invited" to follow suit; hence, we call it an invitational decision.

Al's joke that he might not "want" to cooperate with us is of a piece with Dave's and Frank's acts. Al's rationale was that the questionnaire was too hard and that the questions were meaningless. He withdrew his "joke" (as he did his threat not to participate in experimental games) when we expressed regret and reminded him that he didn't know what we were testing. His play is a form of blackmail that we call an exploratory threat (humorous variety).

The deliberate decision in the first week to vary the visiting rules to let Ed's friend see him before leaving town, may have had an inadvertent aim as well: Ed burst in on two of us to make his demand, and we in turn called the Director at his home to get his decision. There were several latent contingent parts to this event: it put us in the position of a) being mean and refusing a "reasonable," innocent request, or b) making a decision to infringe the rules on our own authority (i.e., segmenting the hierarchy of authority), or c) acting as Ed's intermediaries with the

Director, or d) insisting that Ed himself call the Director (i.e., stepping out of the chain of command). This intricate technique--an analogue of the "double bind" that Gregory Bateson observed in the relation of schizophrenic children to their mothers--may be inadvertently meant as a generalized challenge to the authority system. Such challenges are made regularly, especially when one is adapting to a new situation, to ascertain the state of the system.

Frank's denunciation of the rules and prediction that "they" are going to cut "their own throats" is so similar to previous examples as to require no further comment. His performance was in the presence of Dave and was aimed at one of us, suggesting that he may have been speaking Dave's mind as well, or seeking Dave's approval, and putting his protest into the information system at a point a good safe distance from the Director.

During the third week we experienced a fairly endemic exhibiting of fantastic claims to status: emperor, president, pope, king, deity, etc. This may have been compensatory, since it was done by those in the middle-to-bottom of the status-ladder, who perhaps felt they could afford to joke about it. The episode also served to put one another on notice that the claimant did not <u>merely</u> accept his undistinguished position in the Penthouse social system; and, at the same time, that he acknowledged his additional claims as slightly ridiculous. Following Goffman, we view this behavior as a kind of "face-work," i.e., an endeavor to rehabilitate the self after an infringement on one's antecedent dignity (and psychic space). We call the decision to reaffirm one's value in the face of altered status a <u>dis-sociative decision</u> (what Goffman calls "role distance").

Frank was not the sort of person from whom one "ought to put up with" constant meal-time chatter. Al, just below him on the status-ladder,

essays to shut him up. Al was nearly as talkative and a good deal wittier. A rather serious engagement ensued and resulted in a standoff. We see this as a variant on the challenge-to-the-system technique, directed inwardly at the structure of the group, and as a bid for help from the others in putting Frank in his ("rightful") place (subordinate to Al).

The brief dispute over the Ss' "right" to remove their long underwear-tops while sunbathing involved not only the question of sunning oneself, but also the matter of separating "essential" from "inessential" rules. The Ss, partly on cues from staff members and partly by fiat, decided which rules were expendable and to what degree. This decision was accepted slowly over days and weeks and was based on numerous little tests (i.e., reasonable and innocent nibblings) of the state of the rules.

Ed's furious reaction to the request to complete one of the psychological tests can be seen as another event in this sequence of rule-nibbling. Ed had, to be sure, strong personal motives for wanting out of the stressful chores; but it is significant that his temper-tantrum was enacted in front of four other Ss and two staff members. There is an interesting parallel here with the Boeing study,[18] where the Ss "defined" the psychological monitoring as expendable. Allowing for Ed's hypersensitivity, his outburst probably contained something of the frustration that all the Ss felt about the non-physiological work.

Dave's and Frank's antics during one of the visiting hours has already been interpreted as rule-nibbling (the saga of the parapet rule) and as competition for the visitors' attention. Their behavior is, at one and the same time, an infantile response to the expansion of the Penthouse

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[18] The Boeing Company, Manned Environmental System Assessment, NASA CR134, November 1964.

social system and an assertion of disdain and daring (for the benefit of their peers).

Ed's "absenting" himself from the Director's disciplinary talk by watching the TV (sans sound) we take to be an assertion of immunity and innocence. It also puts the Director on notice that he is depriving Ed of a TV show that he wants badly to see (a masochistic gambit). Mostly, we suspect, it means to advertise that he had nothing whatever to do with throwing water over the parapet onto passing women.

By the middle of the experiment, the Ss' testing of the medical routines took the form of "forgetting" and clumsiness. It may sound odd to call this a kind of decision, but on reflection it appears to be purposive behavior and an understandable avenue for expressing the exasperation produced by unrelieved confinement and a minimum diet. This decisional technique we refer to as selective inattention, meaning the unwitting determination to neglect a duty. It is an important and easily overlooked part of rule-degradation.

The Ss' talking in falsetto voices, complaining about the food at specific times, and fancying various criminal and sexual activities, have well established psychological meanings which we pass over here. It is noteworthy that these behaviors are also vehicles for asserting claims of daring, leadership, delinquency, wit, and other allotropes of prowess, as between peers.

Frank's feud over opening and closing the door to the treadmill room is a function more of the maker of the offending "noise" than of the noise itself. It is Dave, his buddy, who is (he later complains in our presence) "stomping" on the treadmill in the same room with the head nurse. Frank's choice (of feuding, rather than removing himself to a quieter area) suggests

that he found some kind of advantage to becoming embroiled (as he often did) with the nurse. Secondarily, it was a way of protesting the nurse's affiliation with Dave; and finally, it was a defense of Frank's quiet enjoyment of his customary space in the living room. We call this layering of social meanings with a single act decisional condensation.

The enforcement of certain dietary rules (e.g., rinsing the cup clean) met, as we reported above, with the response that they would do it only if it was "an order." This reaction was rapid, spontaneous and indignant. Beneath it (we hypothesize) was an instantaneous decision to comply ere 1) informing the dietition that they did not do so willingly, 2) treating the enforcement of the rule as a noxious imposition for which they ought to be further compensated (another masochistic gambit), 3) bolstering the solidarity of the peer-group, and 4) further testing the coherence and strength of the rule-fabric.

Frank's complaints about the sociometric tests, which asked about friendships and likings within the group, reflect his concern with his psychic space. Our assent to his refusal to answer some of the questions presumably gratified his decision to take a stand, at this time and place, on the issue of how far we should be able to enter into his private world. This class of substantive decisions we call identity decisions (this is me, that is you), which are, as everyone knows or learns, also susceptible to defeasance and mistake of fact. Chet's declaration that he intended to scalp everyone with his bowie knife at the end of the experiment may be viewed as another kind of defense of interests in personality--in this case, as retaliation for all the little incursions into his private space.

Ed's outburst of temper, during which he threw his birthday cake over the parapet, has personal meanings that we shall not bring out here.

From the group's standpoint, it is interesting that Ed destroyed food that was not food (a plaster-of-paris cake), a fraudulent delicacy, a symbol of their deprivations, a marker of passing (wasted?) time, a reminder of the Outside and of the freedom of Outsiders. It is all the more interesting that Bob falsely reported the cake landed on and damaged a car below (like a bomb). This simple act appears to have been a symbolic repudiation of a number of things.

The aborted or play-acting quality of the cake incident is also visible in Dave's being caught trying to leave the building at night: This behavior expresses his desire to walk out on the experiment (something he was free to do at any time) in such a manner that he would probably get caught, and with the apparent intention of returning anyhow. It thereby becomes a threat of what Dave might do and at the same time another challenge to the rule-system.

Imitations of wolves, gorillas, lions, and other animals by the Ss suggest the notion of a totem animal into which one is being transformed by the strangeness of the environment. The imitations contain an accusation, "Look what you have brought us to," and a disclaimer, "It's not me that wants to attack the dietitian." We regard these and numerous other bizarre and zany behaviors as containing dissociative decisions.

The resumption of four-handed card games, like the reversion to a more civilized meal-time routine, shows an increase in group solidarity such as the Ss can afford toward the end of the experiment. The underlying decision here, we hypothecate, is a basic strategy of affiliation that depends on a large number of factors, especially the prospective retrieval of their individual psychic spaces status quo ante. The increase in "groupiness" is, obviously, the consequence of abandoning cocooning behaviors

as the pressure of the confinement relaxes.

Numerous other incidents amenable to interpretation as inadvertent decisions are neglected here (but see the Narrative), because they would only be redundant of the preceding points.

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Dissecting the course of our Ss' decisions, as we have just tried to do, in leisure and cold blood, may leave the false impression that their decisions were habitually artless and negative. The scope of our inquiry has not permitted us to reveal the fuller meanings of the Ss' behavior or to appreciate adequately the altruistic aspects of their willingness to cooperate with us <u>at all</u>. Those soulful qualities cannot be reported justly; they must be seen and experienced. It is this very element of awe and fatefulness in individual decisions that we have to pass over silently.

CHAPTER V

DECISION AND PERSUASION: PENTHOUSE III

The preceding chapter sets forth our general approach to the analysis of decisions. In Penthouse III we did not purpose to interest the Ss in experimental games. Instead, we concentrated our efforts on the deciding of actual legal cases within a format of rotating roles: pro, con, and decision-maker.

Rather than reiterate the laborious analysis of Chapter IV, our presentation of decision-making in Penthouse III is fairly abbreviated and schematized.

A. Informal and Inadvertent Decisions

The Narrative of Penthouse III (Chapter III) relates the details of the cases to which we now refer.

Architectonically, the decisions of all but one of the original twelve to stay on and to cooperate with the experiment is the most impressive. Qualitatively, it is not different from the same decision of the Penthouse II Ss. Stylistically, however, it was worlds apart. The twelve were far more visibly committed to the regimen; they were less its "victims" and more its collaborators. We attribute this difference to the relative durations, the "vacation" atmosphere of Penthouse III, and the variant characters of the Ss. What is striking is the difference in technique: The six stayed on with sullen resignation, as if to exact additional psychological rewards for their sacrifice. The twelve endured with a much more patient, optimistic, and responsible mien. Both groups were free to leave at any time, albeit the six were paid on a linear scale and the twelve were paid nearly everything

for the last week (an arrangement which itself could have been, but was not, made into an "injustice").

Another long-term decision--expounded by Martin Stow in Chapter VII in statistical terms--was the pro tempore withdrawal: napping, sunbathing, sitting alone, "concentrating" on work projects, or grouped passively. The twelve engaged in these behaviors in a highly regularized and controlled way, varying of course, from person to person. We suppose that with four men to a bedroom these (one is tempted to say "scheduled") withdrawals were all the more essential to the Ss' health. This rhythm of socializing and withdrawing is no doubt largely unconscious, but none the less a decision of the utmost moment to the fate and structure of the experiment.

The demand of two or three of the twelve for more exercise had been discussed over dinner. As the discussion expanded after dinner, it was clear that two or three also opposed additional vigorous exercise. Hence, an issue for decision. As Mr. Stow observed, "No one questioned the single-veto provision implied by Dr. Margen," i.e., the range of the decision was accepted as within and subject to his jurisdiction (cf. the later flatus insurrection). The acceptance of this condition and the willingness to accommodate dissenters meant that the solution was only formally proper. That is, the Ss agreed to get the "same" amount of exercise only after they had agreed that each could do whatever and as much as he wanted. This sort of decision, when the antecedent rule is stretched out of shape to preserve or obtain intragroup consensus, we call a consensus-declaration. It is not a decision at all, in the normal sense (of sacrificing part of a conflict), but an ad hoc, high-handed legislation of group feeling into rule-abindingness.

The Hi-Fi Dispute was (complex enough in its own right) closer to the simple democratic model of conflict-resolution--a vote is taken and the

argumentative minority is ignored or ostracized. In this case the "vote" consisted of a "visible stir of dissent" and the calling of the dissenter's hand when he threatened to withdraw his hi-fi set. The adaptation up to this time--perhaps up to the time a majority of taste became crystallized--was for those who objected to the present music to leave the room. Both techniques are a semi-ritualistic show of force.

We note in passing that one of the least assertive Ss advanced the majority position in the Hi-Fi Dispute. We raise and avoid the question of personae as a crucial element in decisional technique.

The "joke" played on Mr. Stow during the scheduled time of one of his sociometric recordings was a profoundly significant group decision, comparable to the questionnaire insurrection of Penthouse II (15 March). We are again impressed by the neuro-ethical toxicity of overt probings into the otherwise public behaviors of our contemporaries. Here, the other Ss were unashamedly playing cards or watching television and yet were made uncomfortable at Mr. Stow's openly recording that he observed them to be playing cards or watching television. On this one occasion he had to record that they were gone (cf. Ed's remark in Penthouse II, that the Ss "have all gone home.") or were to be found in really funny positions. The Ss most sensitive on this count were those most generally introverted. The decision of seven of the Ss to hide from Mr. Stow may have been an expression of their desire to escape all this scrutiny, or it may have expressed a fundamental objection to watching what by common consent and common decency is not "supposed" to be "seen," or both.

The arranging of movies by one S was probably part of a more general and sustained bid for delinquent leadership. This interpretation

is supported by the fact that the maneuver of getting him to chair the meeting without having a vote, was advanced by one of the (sociometrically) higher status Ss. Here group solidarity came into play again, and it was insisted that everyone, including the chairman, must have a vote. The caucusing of the Gemini Ss--the only example of moiety competition we have--was interpreted at the time by Mr. Stow as an attempt of one Gemini S to minimize the influence of another. It was, in any case, evidently resented by some of the Ss, especially by the man whose choice did not receive the agreed upon caucus support. This effort at majority-fixing and -manipulating fell, we surmise, before the juggernaut of group solidarity. Such a conclusion is better supported by the TV Dispute, which occurred that same week.

The TV Dispute arose because conflicts of interest had led to the enunciation of three ideologies of viewing: 1) the preemption school (once somebody is watching a program he should be able to finish), 2) the majoritarian school (the greater number should be satisfied), and 3) the contractual school (the schedule should be agreed upon in advance). A meeting was called to settle the conflict: That is, the Ss perceived that there was no acceptable way to get a favorable decision with present techniques and that the solidarity of the assembled group might possibly extrude a decision (or some collateral benefit) for them.

The substantive decision in the TV Dispute entailed a certain amount of question-begging, since a) it reverted to the former, presumably conflict-laden, *modus vivendi*, and b) it left to the majority the determination of allowing the minority "a special program" when they (the majority) felt it warranted. Like so many decisions in everyday life, this is not so much a decision, as an abandonment of grievances. In this case, it is a ripening of the majority position into pan-group consensus. We call this exercise in

decision-making a solidarity-invocation because it is a capitulation by the dissidents that the instant dispute is not so important as cohesion of society, at that point in time and with those options.

As to the catalogue of rule-erosion and -violation in Chapter III, it is noteworthy that the rules were challenged in some sort of order, gradually and according to a strategy of chiseling on the (to them) "obviously" ridiculous rules first. There was, moreover, a degree of specialization (as in Penthouse II) so that, e.g., the more openly delinquent or ill-controlled Ss will violate more serious rules in the presence of more authoritative staff (polite Ss tended toward errors in labelling and quibbles or "jokes" with minor staff). The rules in Penthouse III (also in the predecessors) were chiefly attacked as follows: 1) the spirit is distinguished from the letter; and 2) the spirit is limited to a particular context. This technique is powerful in alliance with a need to increase psychic space. Thus, it is possible to say that the spirit of the telephone rule means that one is not to make frivolous phone calls during the day, at least not when the staff needs to use the phone, at least not when someone needs the phone for an emergency (to be defined by each user). Or, it is possible to engage in good-faith compliance with the parapet rule, i.e., not to walk on the parapet, at least when people are in nearby offices and might be alarmed by their misperception of the danger, at least not recklessly, etc. This is the well known technique of rule-digestion and ad absurdum subversion so popular with children.

The Ss' decision to accept the Director's reaffirmation of their communal aims on July 7th festered, somehow, so as to provoke the insurrection of July 8th. Why ever? The phenomenon seems to be mainly a matter of individual psychology, since one S was compromised during the July 7th

meeting and rejected by his peers when he started to deliver a bill of grievances to the Director. (We pause to compare this challenge, which we highlight by calling it "insurrectionary," with the above examples of rule-nibbling. The insurrectionary approach is a direct challenge to the authorities, their legitimacy, their fidelity to The Contract, i.e., to the font of derived rules or their "constitutional" basis.) This S was able to revive his complaints, with the help of another malcontent, during the meal after the meeting. The success of the two Ss in getting most of the others to sign a petition suggests to us not so much that the two were highly persuasive with their petition, as that they tapped the latent ambivalence and regret of the Ss at having sacrificed their self- and group-interest to the larger purpose and consensus. In other words, we take this delayed insurrectionary expression to be a measure of the intensity of self-preservative instincts and anxieties among otherwise well-adjusted Ss in a confined society.* From another perspective, the insurrection can be viewed as a contest between peer-group and hierarchy loyalties. It begins to look like an iron law of confined environments that peer-group solidarity is primary.

The tactic of the instigator of the flatus insurrection was to mobilize the peer group by getting them to sign his petition in the order of persuadibility. Four held out; and the instigator reacted by asking them to send a letter, embodying the grievances, to the staff: making them thereby his agents. They countered by offering to get the Director to hold another meeting. Notice that so far the Ss have behaved as though the central issue were the <u>way</u> in which grievances ought to be presented; they

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*As Mr. Stow's report shows, this rejection of the Director was accompanied by dissociative signals: "Nothing is really happening."

have not squared off as two factions. The counter-ploy was especially felicitous, as it permitted the quondam minority to emphasize that the basis of the insurrection was highly differentiated and was not the flatus experiment alone. The more this point was appreciated, the more probable it became that a new consensus--i.e., a new ordering of grievances and acceptable solutions--could emerge. The Director used this state of affairs optimally by putting the flatus issue last on the agenda, so that the more legitimate gripes had been answered already. The staff's exposition of the flatus experiment was then accepted in good spirit: "Only the instigator continued to express strong negative feelings." It may even be conjectured that his continued opposition was for the purpose of saving face; in other words, he was not "sacrified " to the authorities by the group to protect the majority of the Ss, for he continued to be reasonably solidary with the other Ss and himself rested his decision in Regina v. Dudley and Stephens on that solidarity.

It is extraordinary that the genuine disaffections within the peer-group lasted to the end, or almost to the end. One S had announced weeks in advance that he intended to leave so soon as he passed the last dye-marker; and he did. Some of his fellow Ss strongly disapproved of this because they put store in the fellowship that would be had during the final feast. Another got anxious during this meal and left before it was over. Other examples of fractionalization and dissidence are too personal to mention. We want to call attention, however, to the fact that no such affront to the group sentiment was tolerated during the confinement.

B. Formal Decisions

Turning to the formal sessions which we ourselves conducted on a series of legal cases and on two minor simulations, we shall present the

results of our content analysis of persuasion and persuadibility in these sessions, several colloquies from the sessions to show the typical patterns of persuasion, and some rough correlations between decision-making behavior in formal session and personality attributes.

The Penthouse III Ss, it must be noted, were asked during the initial interviews whether they had any objection or reservation against participating in decision-making sessions when they would be required to take an assigned role. Each had replied 'No,' thus committing himself in a way the Penthouse II Ss had not. Our design was to rotate the roles of Pro, Con, and Decision-maker as among several Ss on the same substantive decision. This procedure would have given us a neat measure of the persuasion-potential of each S with the others. In fact, we got something else again, because: 1) the second and nth time that the same case was presented for decision it was no longer the same thing--being now familiar and boring--and it was all the more an artifact, eliciting a sleep-walking performance from the Ss solely to please the authors by going through the motions. 2) Some of the Ss resisted mightily the taking of roles, even though this is familiar and innocuous activity, as they knew from high school debates or play-readings. The impression we got is that they feared that what they said (it was being transcribed) would be "held against" them somehow or would "count against" them. 3) The medical-nutritional routine of the Penthouse made it virtually impossible to assemble the Ss in the desired order, so the session-groups were forever being scrambled, and 4) in addition, the Ss sometimes inadvertently forgot what roles they were supposed to take. 5) The game itself became so annoying or uninteresting to them that they fell to making nearly instantaneous decisions; and we were driven to stipulate that they spend, e.g., "no more than thirty and not less than twenty-five minutes on this

problem" to get them to discuss the cases. 6) A strong tendency toward frivolity appeared about half-way through the experiment, as if to remind us and one another that the socio-legal experiment was not for real.

These resistances to the Pro-Con-D-M matrix were so strong and subtle that at the time it seemed perfectly clear to us that the Ss deserved to get a richer and more varied fare of legal problems to exercise their wits on. We even decided half-way along to abandon our matrix for a quasi-jury system of D-M and advisory judges. Our response can only be attributed to the intuitive awareness that the Ss did not like us to "pit them against" one another in our first matrix and that they enjoyed the more solidary *primus inter pares* format of a jural *banc*.

A content-analysis of the Protocol of Penthouse III was performed to determine the persuasiveness of the Ss with one another. The results are shown in Table A. The procedure was to take transcriptions of the formal sessions, most of which were devoted to the deciding of actual legal cases, and to analyze each transcript as follows: The assertion of a substantive opinion was noted; if another S adopted or endorsed the opinion subsequently, the first S to advance the opinion was given a point; and so on to the end of the transcript.* The total number of points for each S was divided by the number of sessions in which he participated. The end product of this crude technique we called a "persuasion index." Since the Ss were alternated within the sessions--as to roles and as to confreres--everyone had a roughly equal chance to influence the others. It must be

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*We defined "persuasion," following Hovland *et al.*, as acceptance of a new opinion; but having no measure of "new," we regarded all adoptions and endorsements as new. See C. I. Hovland, I. L. Janis, and H. H. Kelley, *Communication and Persuasion* (1953).

emphasized, however, that we did not and could not scramble the Ss in such a way as to get a statistically valid sampling of the effects of each on each in formal discussions. We believe that these results offer a crude index of intra-group influence in the area that bridges the "natural" exercise of persuasion in the informal life of the group and the "official" statements of the Ss in the written sociometric tests (IGRI).

Table A shows some but not all of the Ss regarded by their peers as influential by sociometric measures (see Chapter VI) to be persuasive in our present sense. Table A is probably as much a mixture of assertiveness, what Goffman calls "face-work," and other behaviors as of persuasion, since our behavioral measure picks up some of the Ss' forwardness and interprets it as persuasion if later reiterated by more reticent Ss. (On the other hand, the session itself was a void, and each S had an equal chance to speak first.)

Table B was derived by counting the number of times each S elaborated or altered his position in response to the ongoing debate. (It is therefore some kind of measure of sensitivity to the decisional process.) The total for each S was divided by the number of sessions in which that S participated. Table B shows (dividing into high and low halves) that the Ss more persuasive with their peers in debate are generally those more "present" and morally implicated in the activity, or vice versa.

Table C was obtained by dividing Table B by Table A. The reason for doing so was that a measure of S-complicity <u>per unit persuasion</u> might reveal a connection, or lack of connection, between those who communicated interested in the proceedings and those who wielded influence in them. At the same time, common sense suggests that those who are more supine and

Table A. Persuasion Index

Ike	2.33
Sam	1.36
Lee	.92
Otis	.64
Ray	.58
Ken	.57
Martin	.57
Ned	.54
Jack	.38
Gabe	.36
Hal	.31
Pat	.23

Table B. Decisional Sensitivity

Ray	5.43
Ken	4.75
Sam	4.63
Lee	4.33
Martin	4.22
Otis	3.87
Ike	3.25
Pat	3.20
Gabe	3.11
Jack	3.00
Ned	3.00
Hal	2.30

Table C. Group Influence Index

Ike	1.39
Sam	3.40
Lee	4.71
Ned	5.55
Otis	6.05
Martin	7.40
Hal	7.42
Jack	7.89
Ken	8.33
Gabe	8.64
Ray	9.36
Pat	13.91

compliant may be less influential than those who are firm, adamant, and less communicative.

Table C suggests that persuasion, in part and beyond some threshold, is (as common sense says) independent of presence, compliance, and interpersonal flexibility. The most notable changes of position are with Ray, Ken, and Ned. Ray, a highly temperamental person, gets a progressively lower rating on Tables B, A, and C. Ken, a cool and easy going person, follows the same pattern. Ned, submissive and sometimes withdrawn, gets progressively lower on Tables C, A, and B. The logic of all this appears to be, and we hypothesize it is, that a) the more sociable Ss are relatively less persuasive in formal confrontation, yet b) are more apt to exhibit both behaviors (decisional sensitivity and persuasiveness) than are the socially withdrawn Ss, who c) to the extent that they interact do so by exhibiting decisional sensitivity rather than proferring decisions and solutions. For our Ss, this hypothesis can be validated or invalidated by correlating the data in this chapter with that in the next; we have not scrupled to neglect that task.

The subjects were asked on the IGRI forms to designate whom they saw as most influential with the Director, within the peer group, and with themselves. Those high on group influence as measured by the questionnaire (see Table D) were generally those high on behavioral "presence" and persuasion (Tables A--C). Those high on influence with "you" (Table D) are relatively low on Tables A and B, and elevated more on Table C--an effect which we attribute to the fact that their influence is more informal, intimate, and confined to the peer-group: This suggests <u>both</u> a division of leadership (as per Bales) between those who come to the fore when the group confronts tasks and external authorities and those who loom larger in the

emotional life of the group, and the emergence of "anti-law", that is, the thwarting of the exo-legal system by the endo-legal system.

Table D. Influence and Popularity as Measured by IGRI

Influential with Director	Influential with Peers	Influential with you	Best Liked
Martin	Martin	Martin	Jack
Sam	Sam	Pat	Pat
Lee	Lee	Sam	Ike
Otis	Hal	Jack	Ned
Gabe	Pat	Ray	Gabe
Pat	Ken	Ken	Sam
Ned	Ike	Hal	Martin
Hal	Ray	Lee	Ken
Ken	Otis	Gabe	Lee
Jack	Gabe	Otis	Ray
Ray	Jack	Ike	Otis
Ike	Ned	Ned	Hal

The "best liked" ratings (Table D, inferred from question, "Whose best friend would you prefer to meet?) show that the best-liked peers were generally less active in our formal sessions (Table B) and that only one of them, Ike, was highly persuasive in those sessions. (Ike's persuasiveness can be partly explained on a cultural basis.) On Table C, Jack and Pat are low, Ike and Ned are elevated: which of course leads us to hypothesize that those best liked in the primary group (the peer group, here) are those less active in task-oriented roles (i.e., their role is one of being liked, indulged, protected from work), whereas being task-oriented does not prevent the group member from being (secondarily) well-liked.

The sheer bulk of the Penthouse III protocol prohibits our presenting here an extended analysis of it in substance. What we offer are samples from our formal sessions--samples which to our minds capture the decisional techniques of these Ss and the contrast with Penthouse II.

Penthouse III was given two problems in the nature of simulations; all the other sessions (N=17) were given to deciding actual legal cases in which one or more dimension of psychic space was in issue. The first quasi-simulation (June 23) was to imagine being a space crew, about to depart for Mars, charged with devising a rule of expendability (". . . the crew has to have a rule of expendability in case it runs out of food, runs short of oxygen . . . there must be some procedure for deciding who gets done away with.") The Ss were divided into four groups of three each. One S restated the problem* to his group as, "We have to . . . determine who gets left behind if . . ."--thus removing the sting of homicide. He went on to say it was obvious the captain and chief scientist would be indispensable. The next speaker thought it would be necessary to designate which of the crew were "it" so they could get extra compensation and insurance. The third man agreed with the other two. The first declared that they were agreed, "there should be a prior ranking . . . Fine, so, then, that's our decision." The question had been adequately begged, and they went on to the next task.

The next group also concluded right off that the captain should be saved. They disputed briefly the fungibility of crewmen and scientists, then Otis proposed a formula:

> Otis: . . . go through three of the minor technicians, then start in on the crew . . .
>
> Ike: . . . the instructions said get rid of the crew, not the technicians.
>
> Jack: I think it just says anybody . . .
>
> Ike: No, . . .

Ike subsequently agreed with Otis; Jack favored taking <u>all</u> the crew before

---

*The task was presented in writing to assure comparability of results.

the scientists. The three tried to imagine whose jobs were least necessary. They discussed the possibility that someone might volunteer to die. Jack suggested drawing lots. Discussion shifted to the fairness of sacrificing young rather than old, married rather than single, etc. Ike announced his support for Jack's lot-drawing idea; Otis immediately said, "All right" and proceeded to the next task. Here we observe a kind of "lesser evil" technique of decision-making: a good-faith search of the (frustrating) alternatives and a final arrival at the "optimal" choice; this is an empirical instance of the rational decision-making model.

The third group made a similar start, vowing to "keep the captain and the chief scientist."

> Ned: . . . keep the ship going . . . . If that isn't sufficient to pare down the crew, then those that are expendable should . . . draw lots.

Hal recommended saving "the best" of the scientists, teaching the crew some of the scientific tasks and vice versa, and drawing lots among the crew and less essential scientists. Pat felt that the data they had was insufficient for a decision and that the captain probably wasn't as essential as the others thought: He "is needed to keep order." Ned declared that they were "all agreed" and the other two agreed they were. We assume that they meant they were agreed on a tacit principle or feeling of consensus which they could, were they called upon to apply it concretely, apply.

In the fourth group, Lee responded at length to the task, saying it "depends on how many people are to be jettisoned" and the scientists are most expendable "depending on how far the mission has progressed." He would get rid of the crewmen "least necessary for running the ship" first.

Someone: Oh, no.

Martin: . . . I agree with you [but] society has a much greater investment in a scientist, probably . . .

. . .

Gabe: Well, generally I would agree with both of you . . . but . . . . on the ground . . . before they started off have them decide individually how important it is to them . . .

Lee then advanced some distinctions having to do with the stage of the voyage at which the crisis occurs and ended up endorsing a utility rationale. Martin agreed, with qualifications. Gabe doubted that such decisions ought to be made by one person.

Martin: Do you think that it's efficient in a situation that might call for immediate action to have a group decision?

Gabe: Yes.

Martin: I can't agree . . .

Gabe: Obviously they had some kind of agreement before they went up.

Martin: Right, right.

. . .

Lee: . . . but if the danger is really great . . . you're going to just try . . . to keep the whole ship from being destroyed.

Gabe: In which case you will have time to decide.

Lee shifted emphasis to the advantages of having an agreement and applying it when the emergency arises (implying that the prior agreement applied only to emergencies, i.e., begging Gabe's problem). Lee said it is "not likely" to happen that the captain will have to exercise his authority and make an "immediate decision" to eliminate some of the crew. Gabe said there should be "a quick evaluation of the whole situation" to determine whether it is in the emergency category.

Martin: Now - uh - we have to come up with a rule . . .

Lee: Yeh, well, I detailed what I considered . . .
I don't think we should detail it too far . . .

Gabe and Lee continued to disagree as to the in-flight expendability decision. Martin came in on Lee's side.

Martin: . . . all right then here we have the difference . . .
those in favor of the captain making the decision . . .
say "Aye."

Lee: Aye

Martin: Aye

Gabe: Well, I lose but I still - I - uh - am just being
more democratic about it.

The principle espoused by Gabe is thereby used to defeat him. He protests that he is more democratic than thou, but the Lee-Martin gambit is unimpeachable. The early part of the decision shows Lee modifying his anti-scientist position to agree more with the pragmatic position of Martin and (presumably) Gabe; but in so doing, Lee is driven to emphasize discretion. He tries to limit the discretion to extreme emergencies, though in so doing it becomes obvious that here too he is supporting Martin's position, for the one traditionally designated to handle such discretion is the captain. At this point it is still an open question how Lee will go, since he could 1) limit the captain's decisional function to extreme emergencies or he could 2) stress the importance of that discretion and treat the non-emergency situation as essentially trivial. By deciding on the second course, Lee adopted Martin's general position. The two could then call Gabe's hand. The technique of hoisting Gabe on his own petard we refer to as stultification. The skillful application of this gambit across levels of argument and levels of generalization we refer to as analogic stultification.

It may sound cynical to remark now that only one of the four groups arrived at a substantive rule of expendability. It is true. The precise statement of the problem, listing the members of the expedition by function, had implied that the rule should say who was expendable and in what order. Short of that, an operable rule was needed from which one might reasonably ascertain the exact order. Only the group that favored lot-drawing enunciated a rule. That foreclosed most of the serious questions of interpretation (although even here one might wonder whether the captain too would draw lots, whether lots would be drawn in extremis or before blast-off, who would have the duty to enforce the decision, etc., etc.). The other "decisions" were hopelessly ambiguous from a legal standpoint.

The other quasi-simulation we conducted was based on a scenario with an American space ship approaching within 24 hours of Mars when (due to a sun storm) its contact with Earth is lost, but it intercepts a message from a Russian craft, just landed on Mars, that the Russian crew has claimed a certain area of the Martian surface for the USSR. The Russian claim is contrary to UN resolutions to which both the U. S. and the USSR are parties. The area claimed appears to contain rich uranium deposits. What will be the conduct of the American crew on landing?

> Otis: Well, . . . I'd be in favor of going down as close to the Russians as possible so that you would be claiming the same area . . .
>
> Sam: I suggest that we try to reopen communications with Earth again and . . . contact the Russians . . . send a delegation over to the Russians to try and confirm whether or not this report is accurate or not . . .
>
> . . .
>
> Ike (captain): . . . I don't think it would even be necessary for us to bother with Russians. After all, our purpose . . . is scientific.

Sam, changing position, agreed with Ike's declaration. Otis disagreed and warned against letting the Russian claim go unchallenged. The discussion went back and forth for over an hour, the main question being whether the Ss should ignore or communicate with the Russian team. We interrupted the discussion to announce that radio contact with Earth had resumed and right away two messages are received, one from the President of the United States, directing the captain to seize the Russian claim immediately, using all available and necessary force, the other to the chief scientist from the President of the International Council of Scientific Unions, directing him to claim the entire planet for the United Nations and for Science. The second message (to the chief scientist) was practically ignored by the Ss, probably because the chief scientist (Martin) did not propose to follow it.

After a protracted discussion, the captain (Ike) decided to follow the President's order to the letter. A minority of the Ss objected stremuously, emphasizing that it was supposed to be a scientific mission, and proposing to pretend that the original message was unclear (thereby buying time, since the sending and receiving times are fairly long). The captain at last decided to send the scientists about their business under the chief scientist and to proceed against the Russian outpost with the military members of the crew. It is of interest that he made this modification in his original, absolute position, as a concession to the minority, and that he grounded his own arguments not on the merits of the dispute but by emphasizing over and over again the proper roles of each S. This is decision by formalism or competence (ad auctoritate).

The famous cannibalism case (Regina v. Dudley and Stephens) was presented these Ss en banc (see also the preceding chapter). The Ss were told to think of themselves as jurors except that Lee, the most anarchic one, was

appointed judge. The judge polled the jury and then declared his own opinion. Gabe found Dudley and Stephens guilty of murder because they had not consulted the cabin-boy before killing him. Ken held the same, then revised his decision to life in prison with a possibility of parole after fifteen years; he held it a premeditated act and said they were in "good mental states" (a fact projected by himself). Jack agreed about premeditation, yet felt the circumstances were extenuating; he "ha[d] no idea" what to sentence them ("what the normal sentence is").

Ned said he would find them guilty of murder except for a doubt about their sanity; he ordered a complete investigation into the sanity question and sentenced them to life with parole possible in seven years. Martin found all three "cannibals" equally guilty (of murder). Sam found the two guilty of murder but recommended leniency. Otis found the three guilty and sentenced them to five to twenty years, preferably the lesser term. Pat's decision was the same as Sam's, and he added a recommendation of charging Brooks, the third survivor, with manslaughter. Ray found Dudley, as the instigator, guilty of murder and Stephens of manslaughter; he recommended leniency because of temporary insanity. Hal convicted all three of manslaughter; he felt that it was not manly to kill a sick person and that they had not tried to save Parker. Ike found the two guilty of murder.

Lee, as judge, declared he would "go along because the vote is so overwhelming." That is, he pretended his peers had agreed on something and that he was merely endorsing their decision. He next remarked that <u>since</u> he agreed to "go along," he had a right to state the reasons he thought the defendants <u>not</u> guilty. He emphasized the starving and the effect that must have had on their thinking; they were "definitely desperate, which can

be a form of insanity." However, he found them guilty of murder, but because "most of you voted for leniency," he sentenced them to ten years in prison. Lee's primary technique was decision by pseudo-consensus: he declares an apparent consensus, juxtaposes his own views, and restates a revised (for a second time) consensus. The "vote," insofar as it had any unity, had actually been in the general area of Lee's position, albeit two Ss had said murder simply. It is also interesting that these two, whose judgment meant that the defendants would hang, did not allude to the consequences.

The stomach-pumping case (Rochin v. California, see also Chapter IV) was given the Penthouse III Ss in four groups of three each. We present the results from two of the groups. In the one group, Jack, representing the defendant, gave a lackluster and unconvinced defense. Ike, also in a role not to his taste, wondered out loud why the state thought it had adequate evidence to convict. The judge (Otis) took over for Ike and began to develop the State's case for him. Ike never did get around to it--a difficulty he also had in other sessions when asked to prosecute. Jack warmed to his role more, and undertook a long exchange with the judge. Otis became so immersed in the role of prosecutor that he forgot to announce his decision as judge. Ike dropped out of the picture altogether. Here was a decision by denial: The original problem was just plain removed from view.

The other group featured Hal as prosecutor, who also made some unnecessary concessions at the beginning. The defendant's lawyer, Ned, blithely assumed it was a Federal Court and the evidence inadmissible. Both refused to develop their positions further. The judge, Pat, was evidently laughing at their cavalier attitudes. Ned restated his argument thinly. By a curious mechanism, Hal's continued frivolity led them back into substantive debate.

Hal: I have no further comment. In this case it is rather obvious that the defense loses and the prosecutor wins.

. . . .

Ned: How can you prosecute with no evidence?

Hal: The evidence was there ... .

Ned: It was illegally obtained . . .

The debate reverted soon to banter. Pat joked about fining both attorneys for contempt. Pat announced his decision directly, basing it on formalistic grounds (illegally obtained evidence is not admissible); avoiding the matter of outraged decency on which Frankfurter, J., based the actual Supreme Court decision. It appears that Pat had to make the joke about contempt in order to get minimum attention and seriousness to complete his task; but the moral issue still did not seriously engage him. Nor, come to think of it, did it seriously engage the other two. Since it would be incredible to think that Rochin lacked substance enough to capture their interest, we hypothesize that their frivolity meant they were deeply alarmed at this graphic invasion of a person's psychic space. Too close to home.

Space does not permit us to analyze further the luxuriant evidence

on decision making in Penthouse III. The Protocol covers dozens of sessions and amounts to hundreds of pages and thousands of concrete decisions.

CHAPTER VI

THE SOCIOLOGICAL AND PSYCHOLOGICAL STRUCTURE OF A CONFINED MICROSOCIETY

Martin Stow

No attempt was made in these experiments to manipulate any of the psychological or sociological factors. This chapter examines the structure and dynamics of a confined microsociety by analyzing sociometric and psychometric data. The analysis is directed toward determining the characteristics of the society in terms of socio-psychological patterns. These patterns are both individual and group indices of personality and behavior.

Data from Penthouse I has not been included in this section of the report. Material from Penthouse II has been included for comparison with the findings from Penthouse III. The purpose of the socio-psychological studies has been not to test hypotheses but to generate them. Where consistent findings between Penthouse II and III have been found, hypotheses appear plausible. Statistical difficulties are omnipresent because of the limitation of the number of subjects. While acknowledging these limitations we have reasoned that in this type of experiment, which is concerned with both internal subject evaluations and external objective analyses, an increase in the subject population may result in a loss of valid information. It is data of the intense relationships within this limited microsociety that primarily concerns us at this time. Studies of statistical significance will follow subsequently.

The location of these experiments, a penthouse in Morgan Hall, the nutritional science building on the campus of the University of California

at Berkeley, made it possible to isolate the experimental area from the external social environs and to control the degree of social interaction possible between Ss and the general population. In the first two experiments a limited number of visitors were permitted; in the third experiment visitors were prohibited. Telephone communications and mail were allowed. The Ss could observe campus personnel from the distance of four stories but attempts to communicate verbally were restricted. External staff was stabilized and held constant; there were approximately twelve staff members regularly assigned to duty with whom the Ss had contact at various times throughout the day and night. A staff member was always on duty. Two exceptional situations occurred during Penthouse III, with which we are most concerned regarding control conditions. The press was permitted to interview and photograph Ss one morning, and a half-hour walk through the campus was allowed during the third week. It is interesting to note that a subsequent second walk, the organization and date of which was left up to the Ss, was never accomplished for lack of interest.

The length of the second experiment was twelve weeks; six subjects participated. Twelve Ss were utilized for the third experiment which lasted for six weeks. The same Ss began and completed the second experiment; one man was substituted the first day of the third experiment.

They were recruited through the University of California, although not all were University students. Questionnaires, personality inventories, a physical examination, and an interview were the techniques of screening and selection utilized. The twelve male Ss of Penthouse III ranged in age from 20 to 39, the average age was 24 years, six months. The group included one Negro and one man of Oriental-Polynesian descent. All but one subject was attending a college or university just prior to the experiment. Three had

no siblings, four were only sons, and two were eldest sons. Two had one sibling; four had two siblings; two, three siblings; and one, four siblings.

This experiment afforded an opportunity to compare various psychometric and socio-metric tests administered to a single sample population. The population is in no way assumed to be a random sampling of either a general population or a student population.

In Penthouse III, the psychological personality measurements used include the Minnesota Multiphasic Personality Inventory (administered once for screening and initial personality evaluation purposes), the California Personality Inventory (administered once during the fourth week of the experiment), the Adjective Check List (administered weekly for a total of six times), the Thematic Apperception Test (administered once during the fifth week) and the Omnibus Personality Inventory (administered once during the fourth week). The Strong Vocational Interest Blank was administered the second week of the experiment. Some of these measurements and other mental tests of aptitude and physio-sensory responses which were included in the experiment will not be reported in this paper.

The sociological measurements utilized include an Inter-Group Relations Attitude Inventory (administered respectively bi-weekly and weekly throughout the experiments II and III), and a Group Activity Inventory which classified individual activity at ten randomly chosen periods throughout the day.

General empirical observations were possible, as the present writer was also a member of the third experimental group. However, observational material has been kept as separate as possible from psychometric and sociometric data. Subjective interpretation is of little concern in the analysis of the sociometric data, although it is not possible to isolate the

influence of the interaction of the writer's presence in the experimental group. The scores of the various psychometric instruments are available for analysis as it would be difficult for the experimenter not to utilize empirical data in conjunction with inventories to evaluate individual subject personalities.

An extensive analysis and interpretation of the data will be concluded later with the aid of a computer. The final socio-psychological report envisions correlation of all data, both at the group and individual levels. At this time it is not possible to include all individual or correlated findings from these experiments. The material selected for presentation is most concerned with sociological aspects: group characteristics and behavior as evaluated through sociometric and psychometric devices and their interrelationships. Examination of the individual data has been touched upon but lightly.

The following material is a discussion of: (1) subject selection, the psychological patterns as determined by the MMPI for applicants and experiment subjects; (2) subject evaluation of subjects, rankings of identity and compatibility; (3) the relationship between sociometric rankings and personality patterns; (4) a longitudinal study of group activity which delineates forms of active and passive behavior; (5) a comparison of individual activity behavior with socio-metric rankings and personality patterns; and (6) socio-psychological data which appears to support socio-legal hypotheses of anti-law, psychic space and "cocooning". Recommendations for further experiments are also included.

Subject Selection as a Function of the Relationship between Sociometric Indices of Subject Compatibility

One of the practical questions to which this research addresses itself is: If, on the basis of psychometric data, a group of men is to be selected to participate in an experiment or situation of social isolation, what personality characteristics, as represented by psychological factor patterns, would be utilized as a basis for selection? Our approach to this question is through the application of sociometric techniques. It is assumed that there are psychological factor patterns which are associated with group members who are seen as positively affiliated with the group, and conversely, patterns for those who are viewed negatively. Our assumption is that there is a significant difference between these positive and negative patterns or, failing this, that certain discriminating trends are suggested as a basis for further research.

In Penthouse II, two types of socio-metric data were collected. The first type was a log or journal of empirical observations made upon a fairly constant basis by D. A. Strickland. This data has been incorporated into the report as Appendix A and will not be discussed here. The second type of data was obtained through the use of an Inter-Group Relational Inventory, a common type of socio-metric instrument. The information from this instrument was not subjected to statistical examination at a sophisticated level because it was recognized that the size of the experimental group, six Ss, was too limited to permit the projected application of findings with any degree of reliability. However, it is believed that the information derived from these inventories has value for the purpose of further research and, therefore, it is reported.

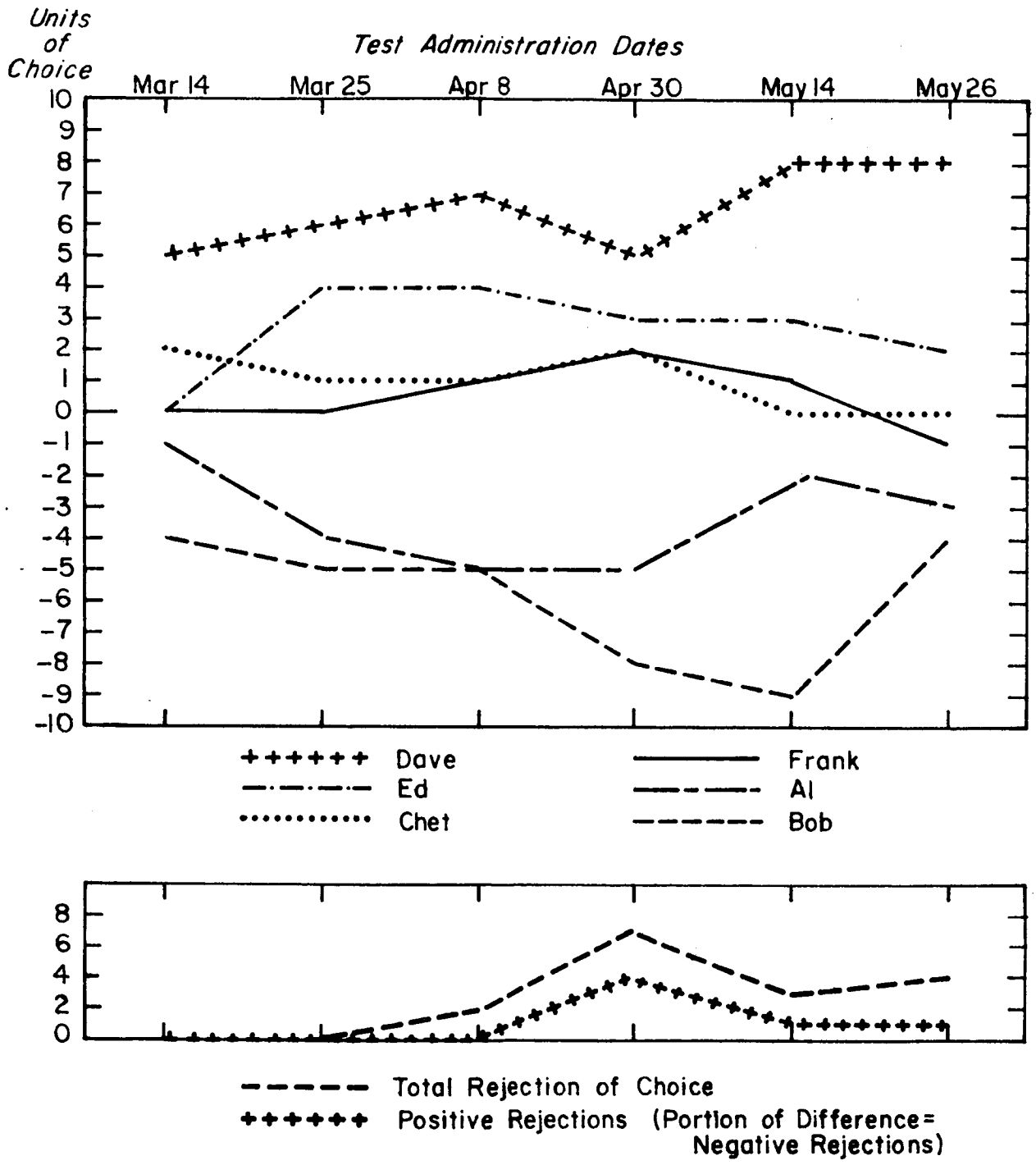
A sample of the inventory form used is appended as Appendix D to this report. Part way through the experiment certain modifications to the form were made. However, only data common to all the inventories has been included in the following information unless specifically indicated.

The IGRI was administered to the Ss of Penthouse II six times, approximately once every two weeks by Miss Ross. This permitted a longitudinal analysis of changes in inter-group relations.

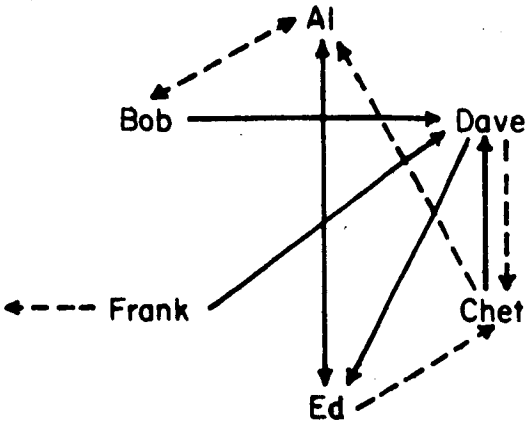
Figure 1 shows the scores and rank orders of the Ss of Penthouse II longitudinally on a bi-weekly basis, and a graph indicating the Ss' rejection of choice (i.e., refusal to reveal their feelings about group relations at the moment). The rank placements are determined by adjusting the scores for an individual on the collective indices of a) similarity, b) friend-under-stress, and c) work-partner. These three indices are weighted equally as positive social characteristics. Figure 2 is a diagram of a sociometric pattern for one bi-weekly inventory during Penthouse II. The columns beneath the pattern indicate the number of positive associations for each S (the ranking, on the basis of the number of times chosen, of who was most-to-least selected for each index) and the ranking of those least desired. The adjusted ranking is derived by combining the two columns and averaging those individuals' scores which are both negative and positive. The units of the ranking are simply the number of individual choices. No attempt is made to determine the qualitative or quantitative aspects of the choice.

It is apparent that the rankings have remained fairly constant for the duration of the experiment. A compilation of all inventory data indicates an overall ranking as follows:

Penthouse II. Composite Socio-metric Ranking According to Inter-Group Relations Inventory

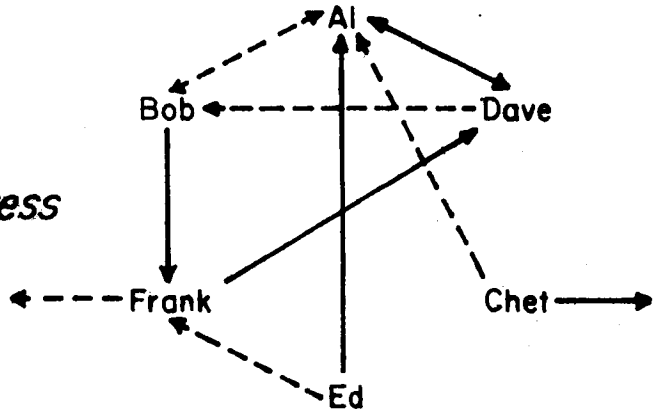


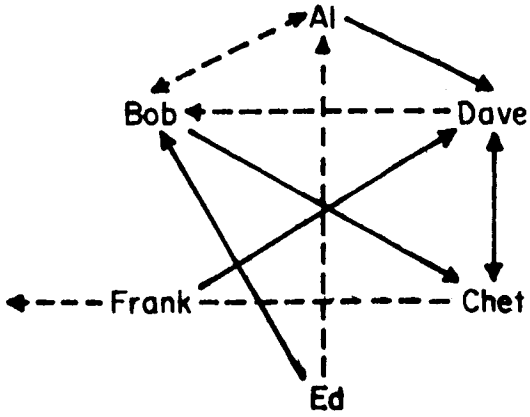
Penthouse II. May 26 Socio-grams for Three Factors (The composite rating is comprised of these three factors)



Similarity

Friend under Stress





Work Partner

	Pos. Choices	Neg. Choices	Number Rejected Choices	Adjusted Ranking	
Al	3	6	—	Dave	+8
Dave	8	0	—	Ed	+2
Chet	2	2	1	Chet	0
Ed	2	0	—	Frank	-1
Frank	1	2	3	Al	-3
Bob	1	5	—	Bob	-4

Ranked Subjects	According to Adjusted Average of Total Number of Units
Dave	6.5
Ed	2.7
Chet	1.0
Frank	.5
Al	-3.3
Bob	-5.8

In accordance with our initial question we would be interested in establishing whether or not a particular psycho-metric pattern exists which would separate the Ss by a specified group, perhaps either the top half from the lower half, or the positive Ss from the negative. Although these experiments lack a control group with which to make comparisons, it is possible to compare the inventory profiles to general norms and make comparisons between groups of experimental Ss.

Among the tests administered to the Ss of Penthouse II were the Minnesota Multiphasic Personality Inventory, the California Personality Inventory and the Adjective Check List. Profiles for these are shown in Figures 3, 4, and 5. Average scores for the six Ss who grouped positively and negatively on the socio-metric ranking, respectively four and two Ss. Few significant variances among the scores for these groups are to be noted.

The MMPI profile of the Penthouse II is characterized by its similarity to a college male norm with the slight elevations among some of the factors. Figure 6 shows (1) this profile for Penthouse II in comparison with, (2) an average group score for thirty applicants for Penthouse III and (3) an average group score for eleven of the applicants chosen as Ss

Profile and Case Summary

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

Penthouse II. Collective Group Scores for MMPI Administered First Week

M
Male

Name _____

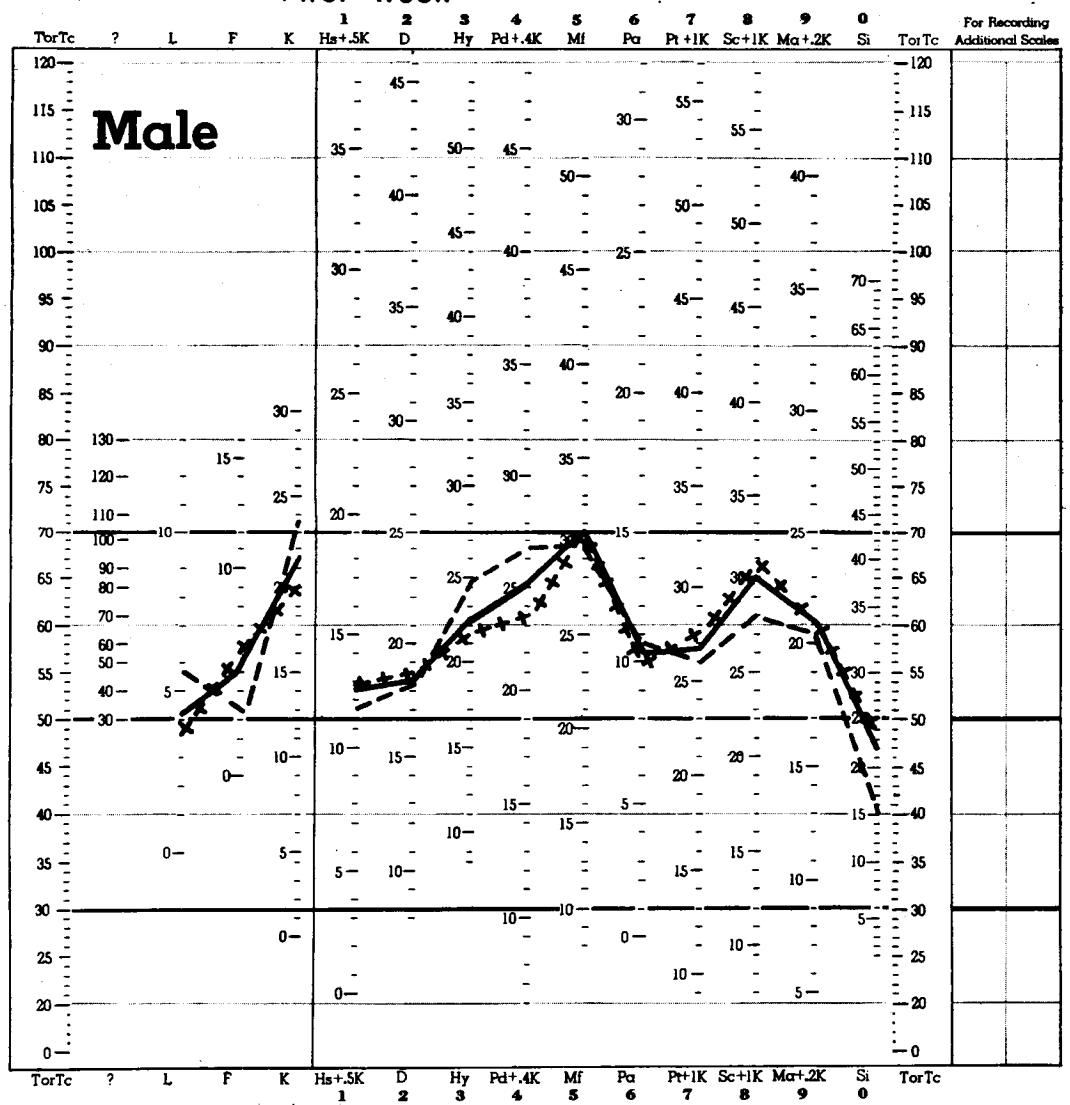
Address _____

Occupation _____ Date Tested _____

Education _____ Age _____

Marital Status _____ Referred by _____

NOTES



Fractions of K			
K	.5	.4	.3
30	15	12	6
29	15	12	6
28	14	11	6
27	14	11	5
26	13	10	5
25	13	10	5
24	12	10	5
23	12	9	5
22	11	9	4
21	11	8	4
20	10	8	4
19	10	8	4
18	9	7	4
17	9	7	3
16	8	6	3
15	8	6	3
14	7	6	3
13	7	5	3
12	6	5	2
11	6	4	2
10	5	4	2
9	5	4	2
8	4	3	2
7	4	3	1
6	3	2	1
5	3	2	1
4	2	2	1
3	2	2	1
2	1	1	0
1	1	1	0
0	0	0	0

——— Average Scores for Six Subjects

++++ Average Scores for Socio-metric Positives (4)

– – – – Average Scores for Socio-metric Negatives (2)

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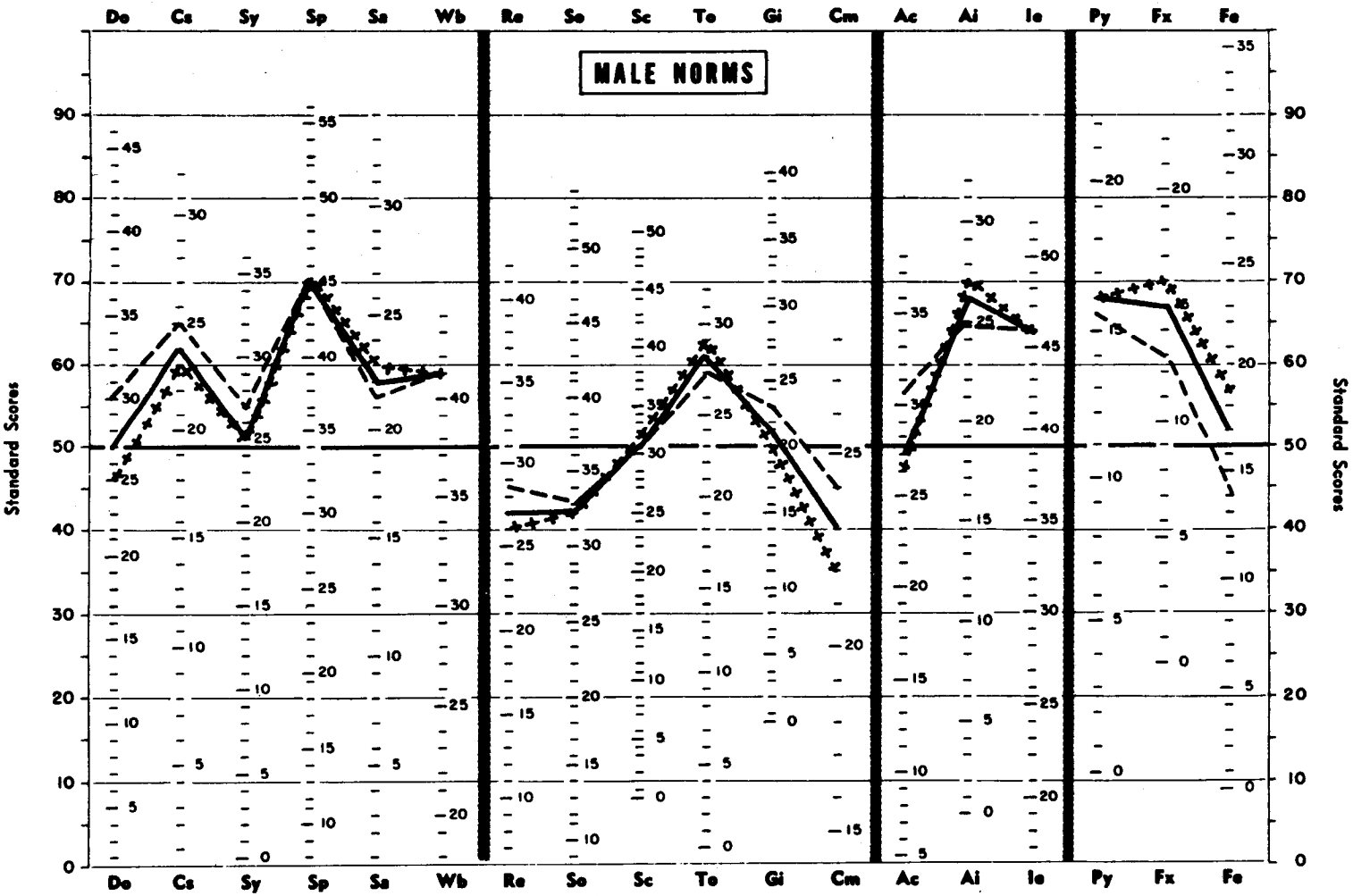
PROFILE SHEET FOR THE *California Psychological Inventory*: MALE

Penthouse II. Collective Group Scores for CPI Administered First Week

Notes:



Average Score for Six Subjects

++++ Average Score for Socio-metric Positives (4)

---- Average Score for Socio-metric Negatives (2)

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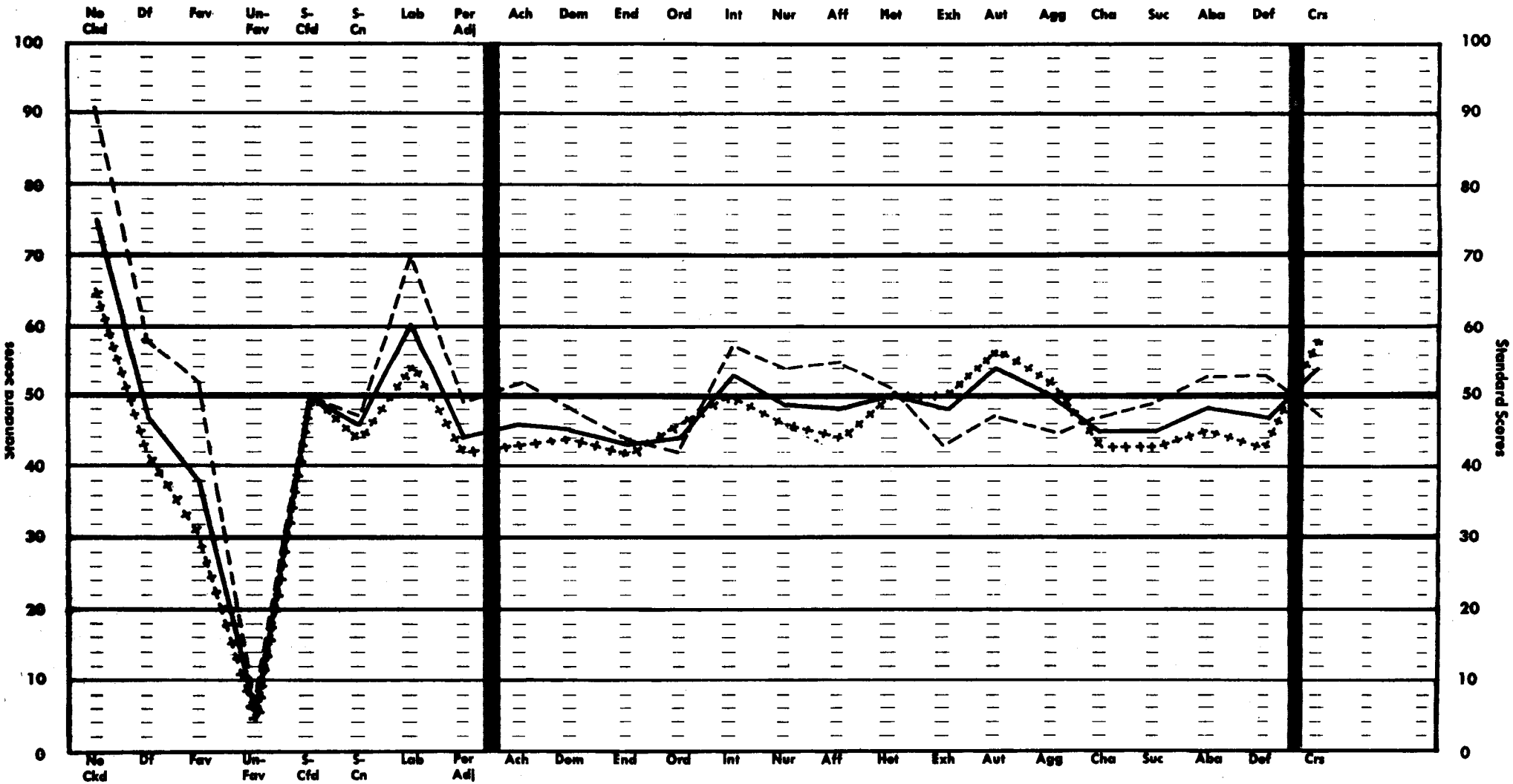
PROFILE SHEET FOR THE ADJECTIVE CHECK LIST

Penthouse II. Experiment No. 2, Collective Group Scores for ACL Administered First Week



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Profile and Case Summary

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

Penthouse II and III. Collective Scores on MMPI-Subjects and Applicants

M Male

Name _____

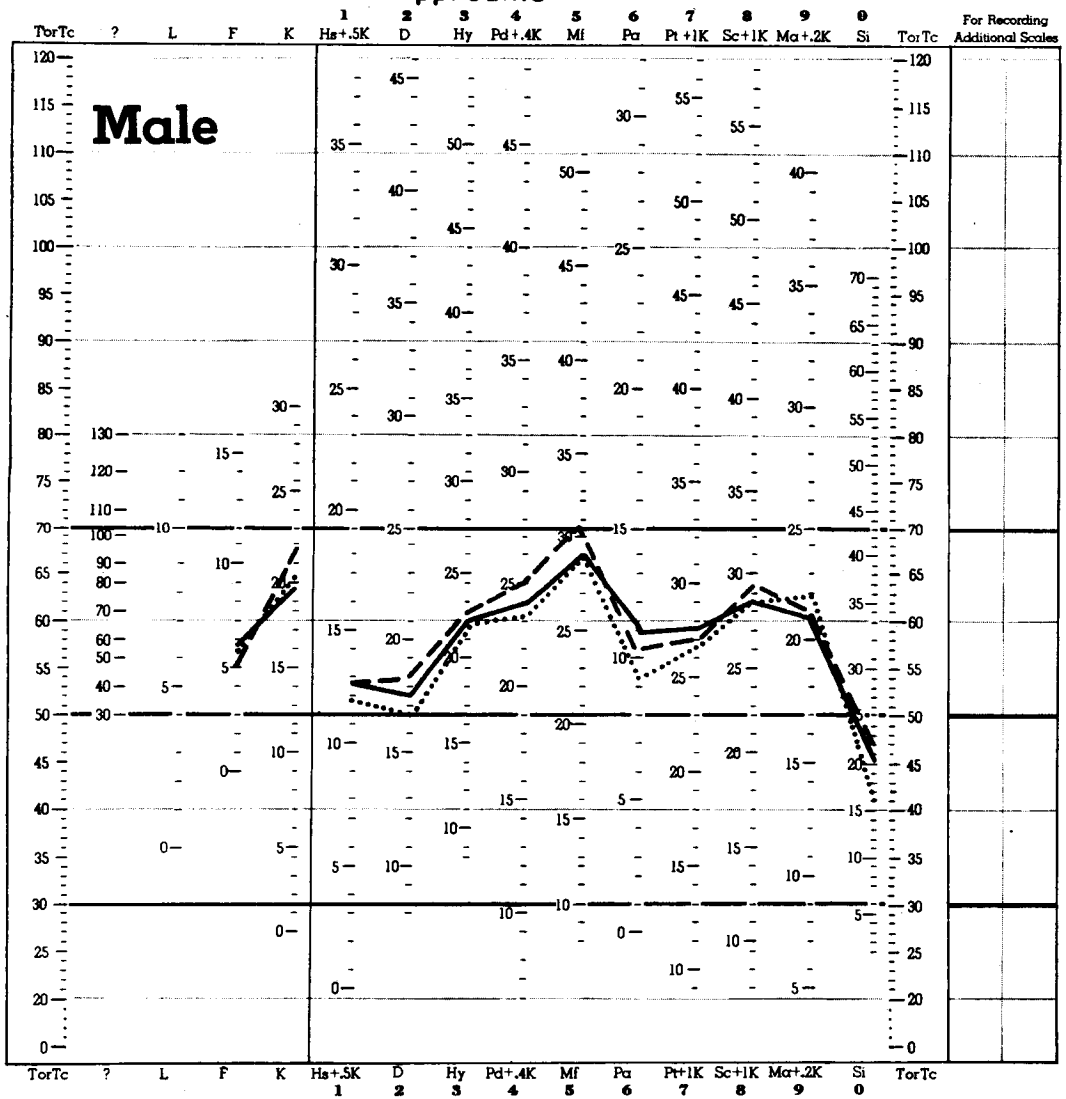
Address _____

Occupation _____ Date Tested _____

Education _____ Age _____

Marital Status _____ Referred by _____

NOTES



K	.5	.4	.2
30	15	12	6
29	15	12	6
28	14	11	6
27	14	11	5
26	13	10	5
25	13	10	5
24	12	10	5
23	12	9	5
22	11	9	4
21	11	8	4
20	10	8	4
19	10	8	4
18	9	7	4
17	9	7	3
16	8	6	3
15	8	6	3
14	7	6	3
13	7	5	3
12	6	5	2
11	6	4	2
10	5	4	2
9	5	4	2
8	4	3	2
7	4	3	1
6	3	2	1
5	3	2	1
4	2	2	1
3	2	2	1
2	1	1	0
1	1	1	0
0	0	0	0

Fractions of K

- - - - Penthouse II Subjects

——— Penthouse III Applicants

····· Penthouse III Subjects

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for Penthouse III. The close resemblance between the scores of Ss in Penthouse II and applicants and Ss for Penthouse III should be noted. There appears to be an affinity of MMPI personality patterns among those who apply for this type of experiment.

Data from Penthouse II would seem to indicate that on the basis of socio-metric evaluations by experiment Ss it is not possible to extract distinct personality patterns or significant factor variations if total mean scores for those evaluated as positive are compared with those for Ss evaluated as negative. Utilizing the scores of all subjects "washes out" pattern distinction. One alternative is to select extremes and make comparisons utilizing these scores.

The scores on the MMPI for the two extreme ranked Ss, those evaluated as highest and lowest on rankings related to similarity and affiliation, are compared in Figure 7. The group mean is also indicated. Some differences are indicated among the factors between the two Ss, particularly in the scores associated with neurosis and psychopathic deviancy. Applying this technique to the CPI also produced indications of factor trends for negatives and positives (Figure 8).

It was decided to apply this type of analysis to the data from Penthouse III to ascertain if the increased size of the sample would affect the results in the same direction as that indicated by Penthouse II. As there were twelve Ss in this experiment the extreme groups for comparison were doubled to two Ss each. Selection of these groups was based upon composite ranking composed of identity and compatibility evaluations made in the last week of the experiment. It was assumed that this allowed the maximum degree of intra-subject familiarity upon which to base evaluations.

Profile and Case Summary

The Minnesota Multiphasic Personality Inventory

Starke R. Hathaway and J. Charnley McKinley

Penthouse II. Comparison of Group's, Extreme Positive Subject's and Extreme Negative Subject's MMPI Profiles

M Male

Name _____

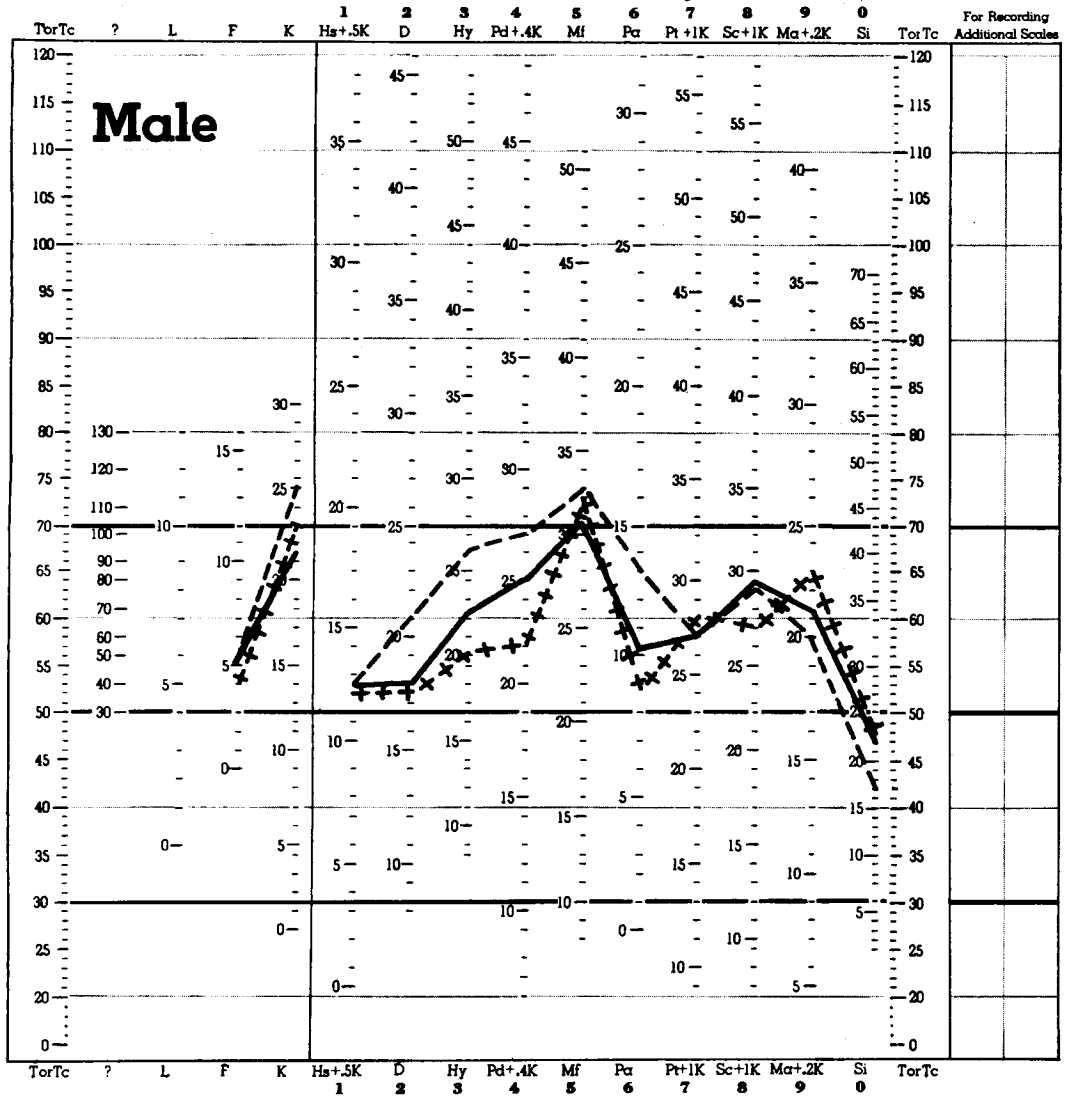
Address _____

Occupation _____ Date Tested _____

Education _____ Age _____

Marital Status _____ Referred by _____

NOTES



Fractions of K			
K	.5	.4	.2
30	15	12	6
29	15	12	6
28	14	11	6
27	14	11	5
26	13	10	5
25	13	10	5
24	12	10	5
23	12	9	5
22	11	9	4
21	11	8	4
20	10	8	4
19	10	8	4
18	9	7	4
17	9	7	3
16	8	6	3
15	8	6	3
14	7	6	3
13	7	5	3
12	6	5	2
11	6	4	2
10	5	4	2
9	5	4	2
8	4	3	2
7	4	3	1
6	3	2	1
5	3	2	1
4	2	2	1
3	2	2	1
2	1	1	0
1	1	1	0
0	0	0	0

Signature _____ Date _____

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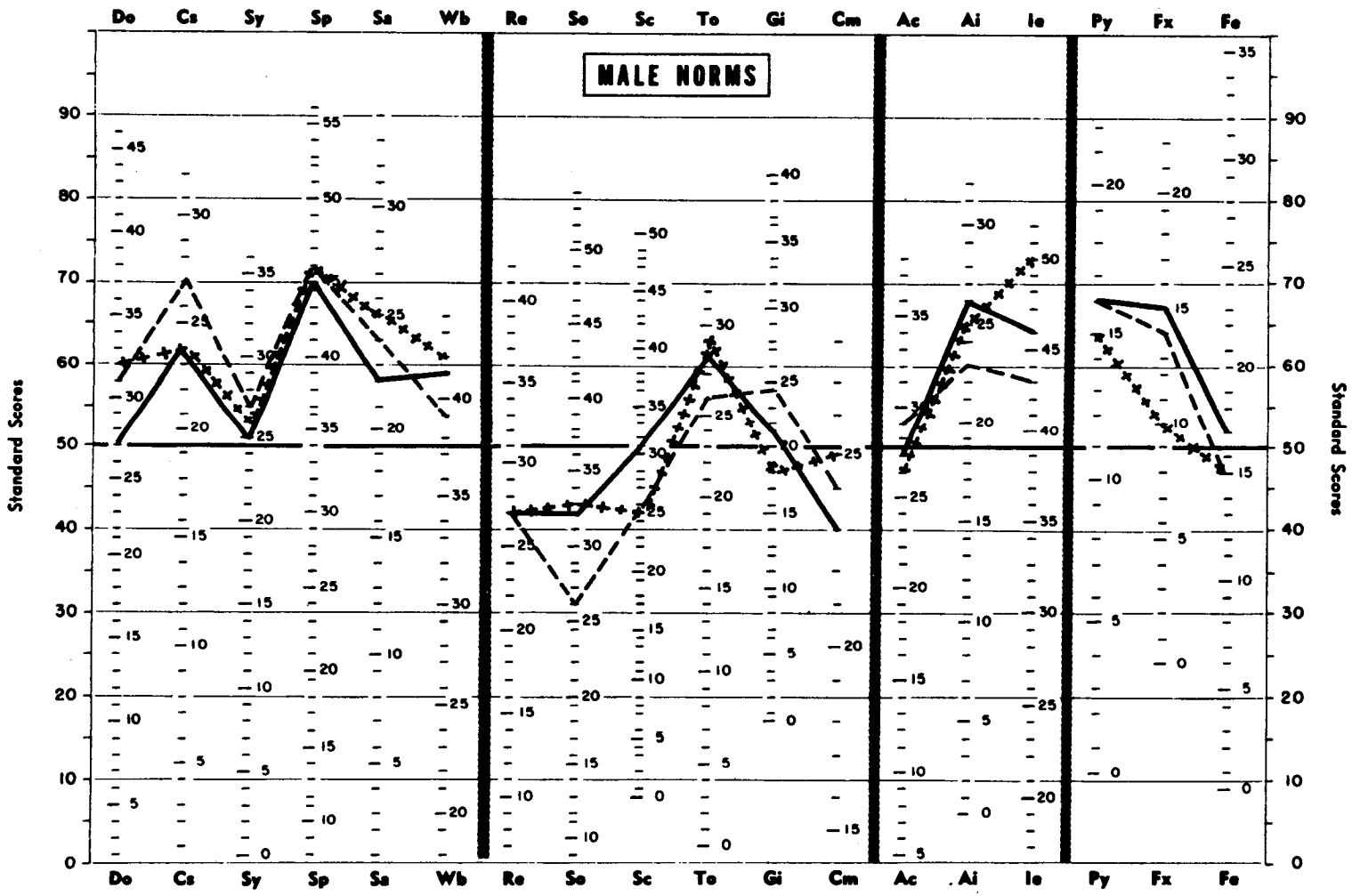
PROFILE SHEET FOR THE *California Psychological Inventory*: MALE

Date Tested _____

Penthouse II. Comparison of Group's, Extreme Positive Subject's and Extreme Negative Subject's CPI Profiles

Notes:



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Figures 9, 10, 11, and 12 show the Penthouse III positive and negative Ss' sociometric indices applied to the MMPI, CPI, ACL, and OPI. The group mean is indicated by the heavy black line; the two socio-positive subjects' scores are shown by a dotted line, and the socio-negative by a broken line.

The difference between the scores for the positive and negative Ss varies among the factors in the separate measurement instruments. If we arbitrarily set one standard deviation as an indication of significant difference between the positive and negative subjects' scores we can uniformly exclude a number of factors that do not appear to be affected by personality differences in the context in which they are used here. (On all profiles the raw scores have been converted to standard scores which permits comparisons among the profile factors.) Factors with scores differentiated by one standard deviation or more can be tentatively designated as significant. On the MMPI this includes the F, Pd, Sc, and Ma factors which indicate, for example, the negative Ss' significant endorsement of items dealing with "peculiar thoughts and beliefs . . . disregard for social customs and mores . . . bizarre or unusual thoughts or behavior" and an indication of "over-activity, emotional excitement, and flight of ideas."[1] Differentiation in the CPI is found in the factors associated with Social Control (Sc), and, in clusters with less significant differentiation than one standard deviation, measures of achievement potential and intellectual efficiency. The ACL indicates several factors that have one standard deviation between the closest positive and negative scores. The positive Ss score higher on the use of favorable adjectives in describing

---

[1]Interpretive data for these factors are to be found in their respective manuals.

Profile and Case Summary

The Minnesota Multiphasic Personality Inventory

Penthouse III. Comparison of Group's, Extreme Two Positive Subjects' and Extreme Two Negative Subjects' MMPI Profiles

M
Male

Name _____

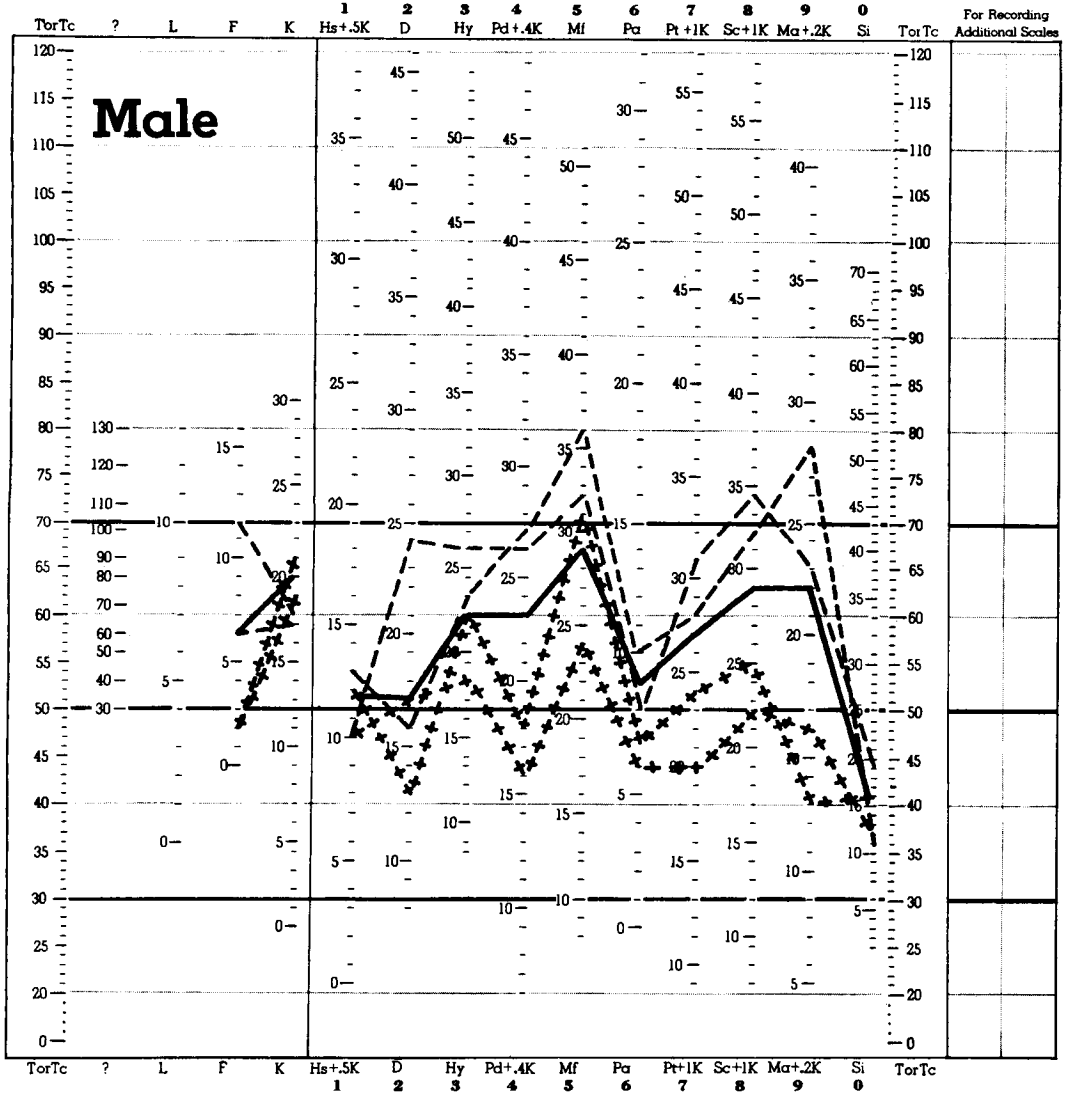
Address _____

Occupation _____ Date Tested _____

Education _____ Age _____

Marital Status _____ Referred by _____

NOTES



Fractions of K			
K	.5	.4	.2
30	15	12	6
29	15	12	6
28	14	11	6
27	14	11	5
26	13	10	5
25	13	10	5
24	12	10	5
23	12	9	5
22	11	9	4
21	11	8	4
20	10	8	4
19	10	8	4
18	9	7	4
17	9	7	3
16	8	6	3
15	8	6	3
14	7	6	3
13	7	5	3
12	6	5	2
11	6	4	2
10	5	4	2
9	5	4	2
8	4	3	2
7	4	3	1
6	3	2	1
5	3	2	1
4	2	2	1
3	2	2	1
2	1	1	0
1	1	1	0
0	0	0	0

——— Group Average

+ + + + Positive Subjects

– – – – Negative Subjects

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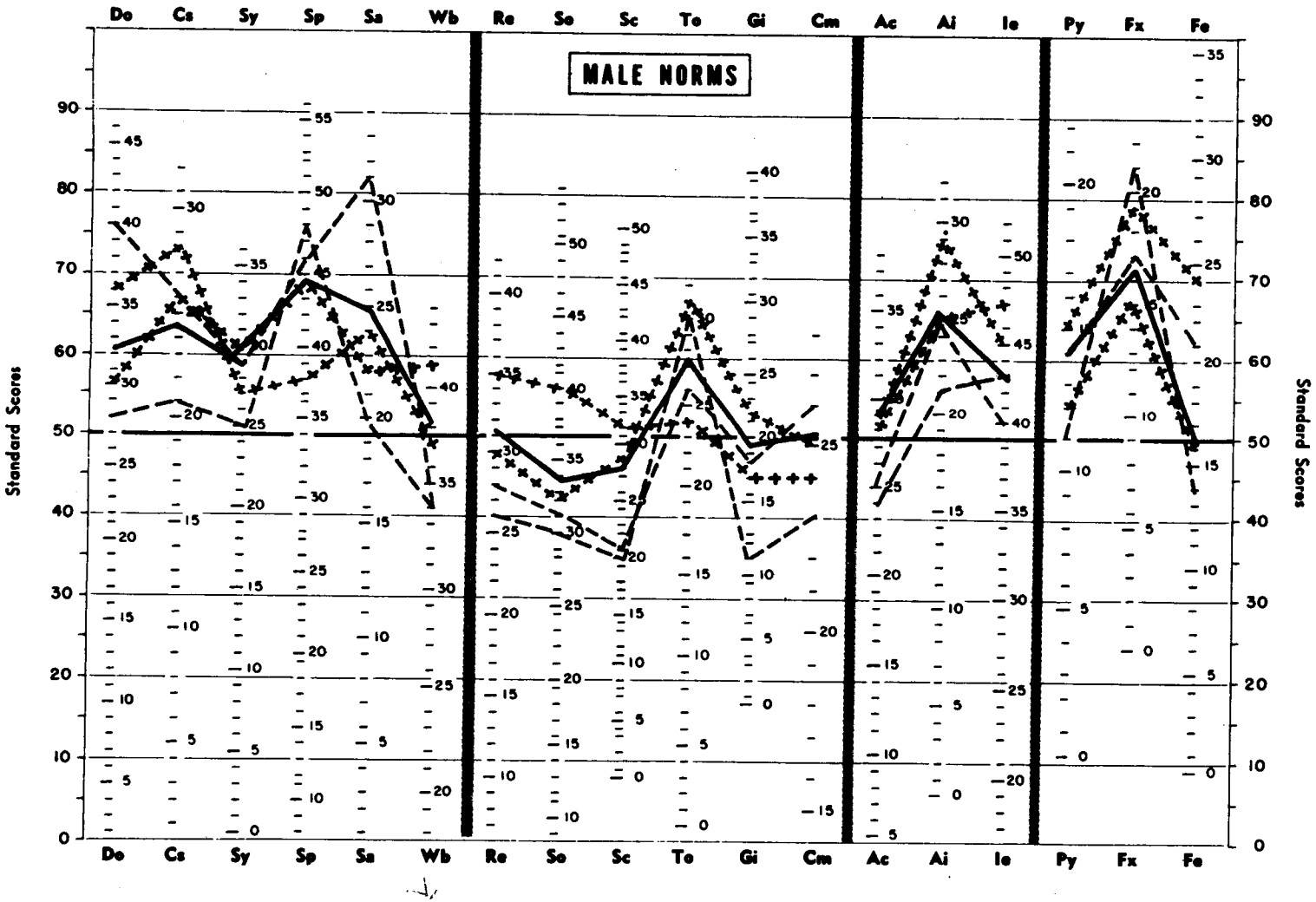
PROFILE SHEET FOR THE *California Psychological Inventory*: MALE

ate Tested _____

Notes:

Penthouse III. Comparison of Group's, Extreme Two Positive Subjects' and Extreme Two Negative Subjects' CPI Profiles



Group Average

++++ Positive Subjects

---- Negative Subjects

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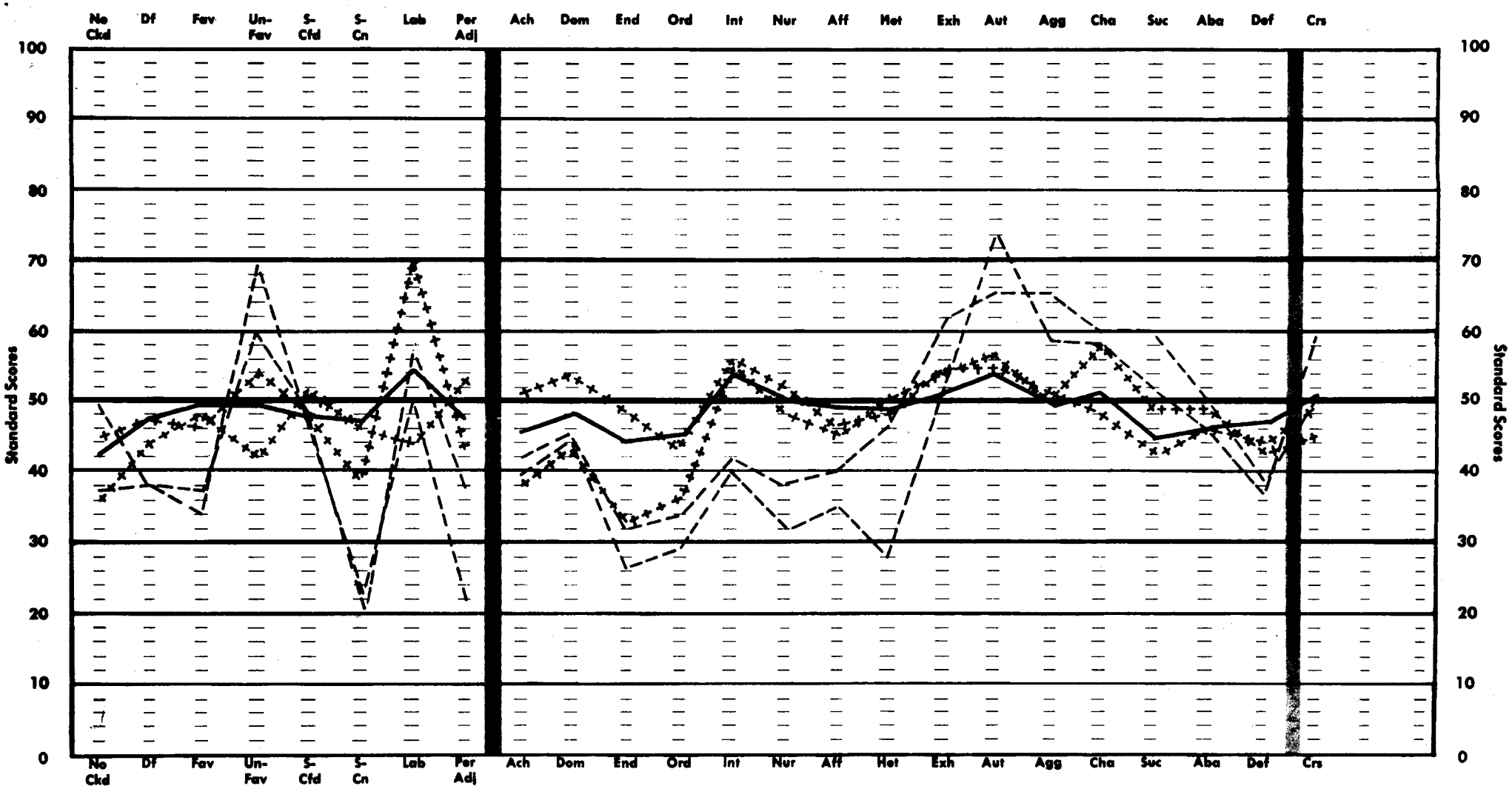
PROFILE SHEET FOR THE ADJECTIVE CHECK LIST

Penthouse III. Comparison of Group's, Extreme Two Positive Subjects' and Extreme Two Negative Subjects' ACL Profile



T

Raw

Norm Table

Group Average

Positive Subjects

Negative Subjects

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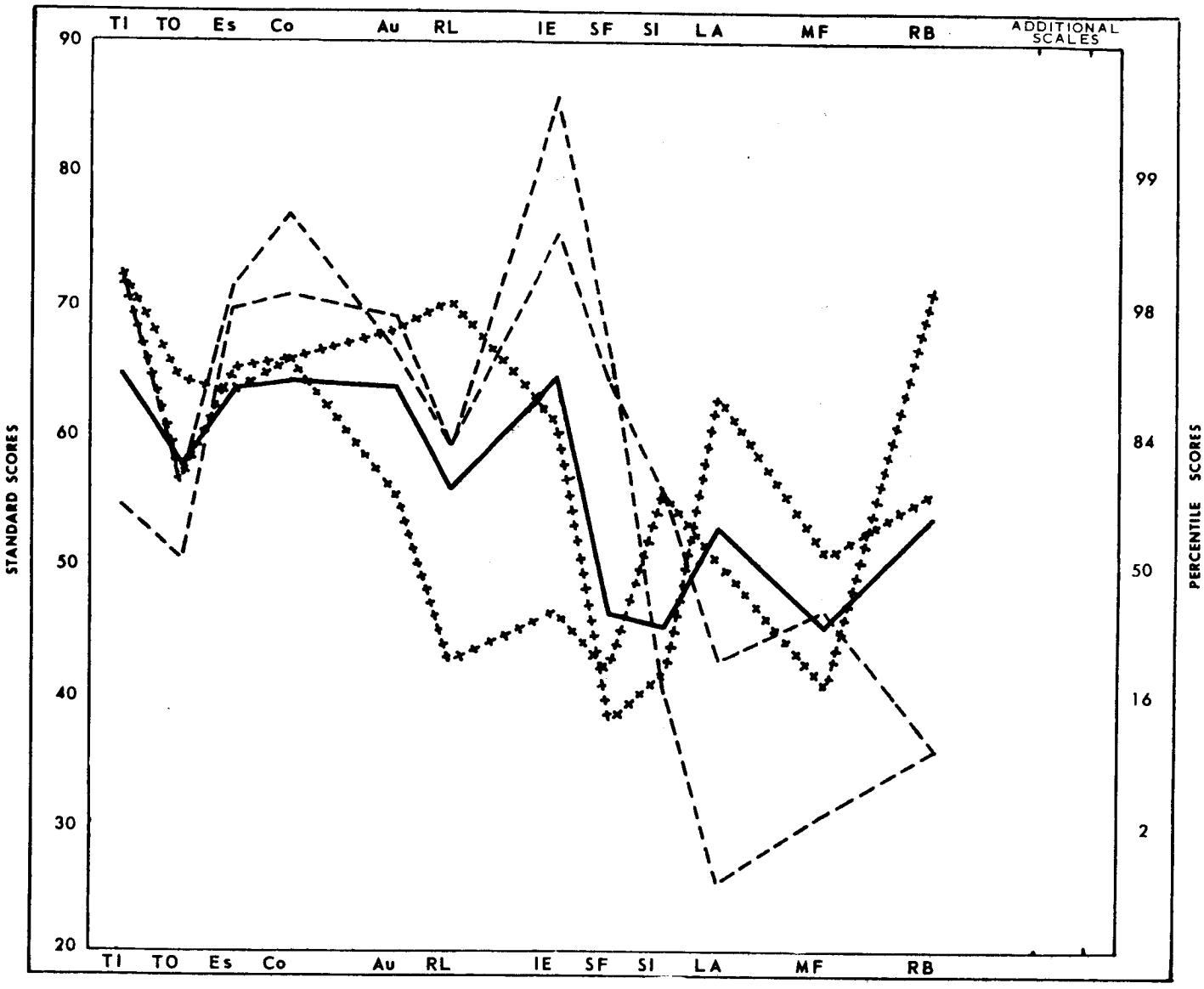
OMNIBUS PERSONALITY INVENTORY

Penthouse III. Comparison of Group's, Extreme Two Positive Subjects' and Extreme Two Negative Subjects' OPI Profiles



Group Average

++++ Positive Subjects

– – – – Negative Subjects

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themselves, intraception, and nurturance. Although less than one SD difference between the positive and negative scores, the negative Ss group considerably higher on autonomy and aggression. A comparison of the average negative scores with the positive scores emphasizes these differences in addition to significant differences within the factors of self-control, personal adjustment, endurance, and succorance. Lastly, the OPI factors which differentiate significantly are those of Impulse Expression, Schizoid Functioning, Response Bias, and less than significant but positively and negatively clustered, Complexity and Lack of Anxiety.

It is possible that in the selection process other factors would be significant for including or excluding a specific individual. For example, a high Depression score on the MMPI would not be desirable, although this factor does not show up as differentiating positives from negatives. Or, if selection is to be on a basis other than affiliative compatibility, such as the previously suggested leadership qualities, it might be necessary to accept, for example, high scores on the OPI's Autonomy and Impulse Expression factors, factors which in this study have been shown to be non-differentiating and negatively differentiating, respectively.

Figure 13 compares the mean scores on the MMPI of the positive Ss with the negative Ss of both Penthouse II and III. Although we have stated that this selection procedure is applicable to a particular group, and not the general population, we are able to make this approximate comparison because experimental group II and III have almost identical group patterns, as indicated in Figures 6 and 7. There is sufficient communality between the groups for us to suggest that a personality pattern

Profile and Case Summary

The Minnesota Multiphasic Personality Inventory

M
Male

Name _____

Address _____

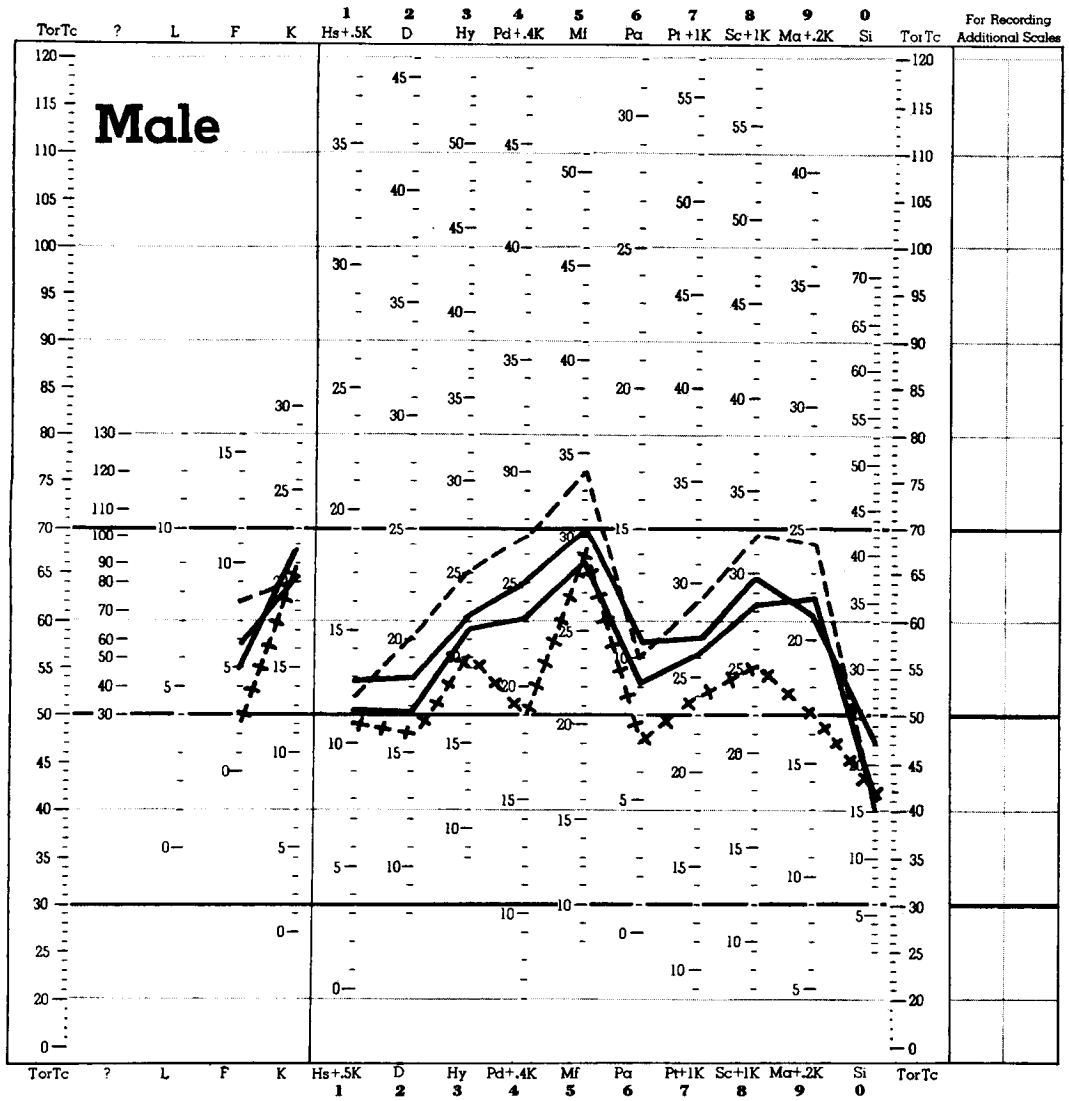
Occupation _____ Date Tested _____

Education _____ Age _____

Marital Status _____ Referred by _____

NOTES

Penthouse II and III. Comparison of Combined Groups', Combined Extreme Positive Subjects' and Combined Extreme Negative Subjects' MMPI Profiles



Fractions of K			
K	.5	.4	.3
30	15	12	6
29	15	12	6
28	14	11	6
27	14	11	5
26	13	10	5
25	13	10	5
24	12	10	5
23	12	9	5
22	11	9	4
21	11	8	4
20	10	8	4
19	10	8	4
18	9	7	4
17	9	7	3
16	8	6	3
15	8	6	3
14	7	6	3
13	7	5	3
12	6	5	2
11	6	4	2
10	5	4	2
9	5	4	2
8	4	3	2
7	4	3	1
6	3	2	1
5	3	2	1
4	2	2	1
3	2	2	1
2	1	1	0
1	1	1	0
0	0	0	0

——— Experiments II and III Group Means

++++ Combined Positive Subjects Scores

– – – – Combined Negative Subjects Scores

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seen as positive in one group would be evaluated similarly in the other, and that this would hold true for the negative pattern also.

A comparison of the Penthouse II positive and negative Ss' MMPI scores in Figure 7 did not indicate a significant (1 SD or more) difference between factors, except for the Pd. However, the F and Sc factor scores are in the direction anticipated from Penthouse III findings. The combined scores for Penthouse II and III establishes significant factor variations for scales F, Pd, Sc and Ma. These are the same factors which show significant differences on the MMPI for Penthouse III. The differences in factoral significance between Penthouse II and III is probably due to the small sample size in Penthouse II; however, as the sample doubled from group II to group III the anticipated direction of distinction has held constant and, in the combined and Penthouse III instances, differences occurred. This suggests that we should be able to hypothesize a constant significant difference in personality patterns along these factoral dimensions.

Another means of establishing factor significance is to apply statistical techniques to the analyses of the data. The results of the application of these techniques is contained in the chart, Figure 14. This permitted a more extensive analysis of the data than was possible using the previous empirical method for judging factor significance.

This chart indicates T tests for significant differences between positive and negative groups of Penthouse III among the factors of the ACL, CPI, MMPI, OPI, Interaction with Individual Subjects, Categories of Activity and Overall Rankings on the IGRA for the last individual weekly evaluation (44th day) and the composite evaluations (signified by 99th day). Three groups of different sizes have been selected for comparison:

Figure 14

DATA SET 1 STOW'S FOLLY
PROBLEM 1 TOP TWO**BOTTOM TWO

T TESTS

		VARIABLE	SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
ACL	1	V0001	...	0.8963	2	
	2	V0002	.05 A	5.5000	2	Df
	3	V0003	.10 A	2.9693	2	Fav
	4	V0004	...	-2.4558	2	
	5	V0005	...	-0.7845	2	
	6	V0006	...	1.6592	2	
	7	V0007	...	1.3546	2	
	8	V0008	...	2.0524	2	
	9	V0009	...	0.1491	2	
	10	V0010	...	-1.6977	2	
	11	V0011	...	1.4667	2	
	12	V0012	...	1.5179	2	
	13	V0013	.10 A	4.0132	2	Int
	14	V0014	.10 A	3.5794	2	Nur
	15	V0015	...	2.3311	2	
	16	V0016	...	0.9536	2	
	17	V0017	...	-1.1644	2	
	18	V0018	...	-2.2866	2	
	19	V0019	...	-2.9155	2	
	20	V0020	...	-1.1043	2	
	21	V0021	...	-2.0140	2	
	22	V0022	...	1.1094	2	
	23	V0023	...	1.6125	2	
	24	V0024	...	-1.6296	2	
	25	V0025	...	-0.1491	2	
CPI	26	V0026	...	1.2999	2	
	27	V0027	...	-0.2236	2	
	28	V0028	...	-1.5110	2	
	29	V0029	...	-0.4472	2	
	30	V0030	...	2.5000	2	
	31	V0031	...	2.0426	2	
	32	V0032	...	1.3644	2	
	33	V0033	.05 A	6.3246	2	Sc
	34	V0034	...	0.	2	
	35	V0035	...	1.1625	2	
	36	V0036	...	0.	2	
	37	V0037	.05 A	7.0000	2	Ac
	38	V0038	...	1.4142	2	
	39	V0039	...	2.4962	2	
	40	V0040	...	0.4714	2	
	41	V0041	...	-0.7071	2	
	42	V0042	...	0.4704	2	
	43	V0043	...	-2.3333	2	
MMPI	44	V0044	...	2.2361	2	
	45	V0045	...	-0.2774	2	

DATA SET 1 STOW'S FOLLY
PROBLEM 1 TOP TWO**BOTTOM TWO

T TESTS

	VARIABLE		SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
	46	V0046	...	-1.1180	2	
	47	V0047	...	-1.8000	2	
	48	V0048	.05 B	-8.4971	2	Pd
	49	V0049	...	-1.3416	2	
	50	V0050	...	-2.2361	2	
	51	V0051	.10 B	-3.0000	2	Pt
	52	V0052	.05 B	-5.2697	2	Sc
	53	V0053	.10 B	-3.7730	2	Ma
	54	V0054	...	-0.2236	2	
OPI	55	V0055	...	0.4159	2	
	56	V0056	.10 A	3.7947	2	TO
	57	V0057	...	-1.8605	2	
	58	V0058	...	-1.8383	2	
	59	V0059	...	0.7071	2	
	60	V0060	...	2.5000	2	
	61	V0061	.10 B	-3.3427	2	IE
	62	V0062	.01 B	-19.6919	2	SF
	63	V0063	...	-0.4743	2	
	64	V0064	.10 A	3.3489	2	LA
	65	V0065	...	1.5455	2	
	66	V0066	.10 A	4.2000	2	RB
Interactions	67	V0067	...	2.5186	2	
	68	V0068	.05 A	7.4000	2	Hal
	69	V0069	...	-2.0000	2	
	70	V0070	...	1.3646	2	
	71	V0071	...	2.2182	2	
	72	V0072	...	-0.2575	2	
	73	V0073	...	0.8831	2	
	74	V0074	...	1.8901	2	
	75	V0075	...	1.7440	2	
	76	V0076	...	2.8644	2	
	77	V0077	...	1.4545	2	
	78	V0078	.10 A	4.2018	2	Sam
GAI	79	V0079	...	1.8767	2	
	80	V0080	...	-1.8328	2	
	81	V0081	...	-1.8084	2	
	82	V0082	...	-2.0608	2	
	83	V0083	...	1.4142	2	
	84	V0084	...	0.5039	2	
IGRAT 44th Day	85	V0085	.10 A	4.0249	2	Similarity
	86	V0086	.05 A	4.4272	2	Friend
	87	V0087	...	2.0000	2	
	88	V0088	...	1.8207	2	
	89	V0089	.01 A	11.0000	2	Frnd's Frnd.
	90	V0090	...	1.6971	2	

DATA SET 1 STOW'S FOLLY
PROBLEM 1 TOP TWO**BOTTOM TWO

T TESTS

	VARIABLE	SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
91	V0091	...	-0.3254	2	
92	V0092	.05 A	5.8244	2	Persnl. Influ.
93	V0093	...	-1.9379	2	
94	V0094	.10 B	-3.4300	2	Diff
95	V0095	.05 A	6.0908	2	Overall Rank
96	V0096	.05 A	5.5000	2	Similarity
99th Day 97	V0097	.10 A	3.3478	2	Friend
98	V0098	...	2.2743	2	
99	V0099	...	2.4254	2	
100	V0100	.05 A	5.6000	2	Frnd's Frnd.
101	V0101	...	1.8198	2	
102	V0102	...	-0.1940	2	
103	V0103	.05 A	5.1796	2	Persnl. Influ.
104	V0104	...	-1.9379	2	
105	V0105	.05 B	-4.6082	2	Diff.(Overall)
106	V0106	.05 A	4.4987	2	Overall Ranking

NUMBER AND PERCENT OF ITEMS SIGNIFICANT ...

.10 LEVEL		.05 LEVEL	
29	27.3585	16	15.0943

DATA SET 1 STOW'S FOLLY
PROBLEM 2 TOP THREE**BOTTOM THREE

T TESTS

	VARIABLE		SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
ACL	1	V0001	...	0.6767	4	
	2	V0002	.05 A	2.8750	4	Df
	3	V0003	...	1.8824	4	
	4	V0004	...	-0.9608	4	
	5	V0005	...	-1.1442	4	
	6	V0006	...	1.6506	4	
	7	V0007	...	1.4252	4	
	8	V0008	...	1.0607	4	
	9	V0009	...	-0.3953	4	
	10	V0010	...	-1.0544	4	
	11	V0011	...	0.7350	4	
	12	V0012	...	1.5367	4	
	13	V0013	...	1.6842	4	
	14	V0014	...	1.8045	4	
	15	V0015	.10 A	2.2711	4	Aff
	16	V0016	...	1.1053	4	
	17	V0017	...	-1.6116	4	
	18	V0018	.10 B	-2.1453	4	Aut
	19	V0019	.10 B	-2.4292	4	Agg
	20	V0020	...	-0.9918	4	
	21	V0021	...	-1.2500	4	
	22	V0022	...	1.3019	4	
	23	V0023	.10 A	2.2831	4	Def
	24	V0024	...	-0.9707	4	
	25	V0025	...	0.4243	4	
CPI	26	V0026	...	1.6803	4	
	27	V0027	...	-0.5855	4	
	28	V0028	...	-0.8386	4	
	29	V0029	...	-0.5855	4	
	30	V0030	...	0.9707	4	
	31	V0031	.05 A	3.0571	4	Re
	32	V0032	.10 A	2.6968	4	So
	33	V0033	...	1.8766	4	
	34	V0034	...	0.8356	4	
	35	V0035	...	2.0000	4	
	36	V0036	...	0.3162	4	
	37	V0037	.10 A	2.1381	4	Ac
	38	V0038	.10 A	2.1320	4	Ai
	39	V0039	...	1.9917	4	
	40	V0040	...	1.0000	4	
	41	V0041	...	0.4629	4	
	42	V0042	...	0.9578	4	
	43	V0043	.05 B	-3.5496	4	F
MMPI	44	V0044	...	1.9757	4	
	45	V0045	...	-0.2000	4	

DATA SET 1 STOW'S FOLLY
PROBLEM 2 TOP THREE**BOTTOM THREE

T TESTS

	VARIABLE		SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
	46	VC046	...	-0.5644	4	
	47	VC047	...	-0.2157	4	
	48	VC048	.10 B	-2.6833	4	Pd
	49	VC049	...	-0.7093	4	
	50	VC050	...	-1.2127	4	
	51	VC051	...	-1.9868	4	
	52	VC052	.05 B	-3.4358	4	Sc
	53	VC053	.05 B	-3.3046	4	Ma
	54	VC054	...	-1.1000	4	
OPI	55	VC055	...	1.3147	4	
	56	VC056	.10 A	2.2627	4	TO
	57	VC057	...	-1.0000	4	
	58	VC058	...	-0.2917	4	
	59	VC059	...	1.0410	4	
	60	VC060	.05 A	3.1429	4	RL
	61	VC061	...	-1.9093	4	
	62	VC062	.05 B	-3.7059	4	SF
	63	VC063	...	-1.0644	4	
	64	VC064	.05 A	3.3545	4	LA
	65	VC065	...	1.0675	4	
	66	VC066	...	1.0493	4	
Interactions	67	VC067	.05 A	3.6831	4	Gabe
	68	VC068	...	1.3478	4	
	69	VC069	...	-0.2236	4	
	70	VC070	...	1.6323	4	
	71	VC071	...	1.6821	4	
	72	VC072	...	-0.6459	4	
	73	VC073	...	0.9744	4	
	74	VC074	...	1.9669	4	Otis
	75	VC075	...	1.2884	4	
	76	VC076	...	1.4084	4	
	77	VC077	.10 A	2.4591	4	Martin
	78	VC078	.05 A	3.8616	4	Sam
GAI	79	VC079	...	1.9166	4	
	80	VC080	...	-2.0055	4	
	81	VC081	...	-1.6702	4	
	82	VC082	...	-1.7321	4	
	83	VC083	...	1.4142	4	
	84	VC084	...	0.	4	
IGRAI 44th Day	85	VC085	.05 A	4.2426	4	Similarity
	86	VC086	.01 A	5.1962	4	Friend
	87	VC087	.05 A	3.6380	4	Work Part
	88	VC088	...	2.0980	4	
	89	VC089	.05 A	3.6181	4	Frnd's Frnd.
	90	VC090	.05 A	2.8167	4	Marg's Influ.

DATA SET 1 STOW'S FOLLY
PROBLEM 2 TOP THREE**BOTTOM THREE

T TESTS

	VARIABLE		SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
91	V0091		...	0.6576	4	
92	V0092		.01 A	5.9696	4	Persnl. Influ.
93	V0093		...	-2.0486	4	
94	V0094		.01 B	-5.6569	4	Diff.
95	V0095		.01 A	5.3806	4	Overall Ranking
96	V0096		.01 A	4.7294	4	Similarity
97	V0097	99th Day	.01 A	4.6248	4	Friend
98	V0098		.05 A	3.3359	4	Work Part
99	V0099		.05 A	3.1331	4	Stability
100	V0100		.10 A	2.5069	4	Frnd's Frnd.
101	V0101		.10 A	2.3691	4	Marg's Influ.
102	V0102		...	0.9671	4	
103	V0103		.01 A	7.4730	4	Persnl. Influ.
104	V0104		...	-2.0486	4	
105	V0105		.01 B	-6.4718	4	Diff(Overall)
106	V0106		.01 A	6.3831	4	Overall ranking

NUMBER AND PERCENT OF ITEMS SIGNIFICANT ...

.10 LEVEL		.05 LEVEL	
37	34.9057	25	23.5849

DATA SET 1 STOW'S FOLLY
PROBLEM 3 TOP SIX**BOTTOM SIX

T TESTS

		VARIABLE	SIGNIF LEVEL		T-RATIO	DEGREES FREEDOM	
ACL	1	V0001	...		0.7074	10	
	2	V0002	...		1.0008	10	
	3	V0003	...		1.1493	10	
	4	V0004	...		-0.8687	10	
	5	V0005	...		0.6163	10	
	6	V0006	...		0.7630	10	
	7	V0007	.10	A	1.9333	10	Lab
	8	V0008	...		0.9141	10	
	9	V0009	...		0.5947	10	
	10	V0010	...		0.1768	10	
	11	V0011	...		0.3613	10	
	12	V0012	...		0.9479	10	
	13	V0013	...		1.3578	10	
	14	V0014	...		0.7349	10	
	15	V0015	...		1.1494	10	
	16	V0016	...		0.4841	10	
	17	V0017	...		-0.8513	10	
	18	V0018	...		-0.8684	10	
	19	V0019	...		-0.5469	10	
	20	V0020	...		-0.1277	10	
	21	V0021	...		-1.5966	10	
	22	V0022	...		-0.4533	10	
	23	V0023	...		0.5458	10	
	24	V0024	...		-0.7834	10	
	25	V0025	...		0.0890	10	
CPI	26	V0026	...		1.6791	10	
	27	V0027	...		-0.4064	10	
	28	V0028	...		-0.5423	10	
	29	V0029	...		-0.2774	10	
	30	V0030	...		0.6864	10	
	31	V0031	...		1.7482	10	
	32	V0032	.05	A	2.7879	10	So
	33	V0033	...		0.7559	10	
	34	V0034	...		0.8987	10	
	35	V0035	...		0.7176	10	
	36	V0036	...		-0.9045	10	
	37	V0037	...		0.1921	10	
	38	V0038	.01	A	3.4232	10	Ai
	39	V0039	...		1.6833	10	
	40	V0040	...		0.9535	10	
	41	V0041	...		1.7819	10	
	42	V0042	...		1.3152	10	
	43	V0043	.05	B	-2.3017	10	F
MMPI	44	V0044	...		1.6192	10	
	45	V0045	...		0.9207	10	

DATA SET 1 STOW'S FOLLY
PROBLEM 3 TOP SIX**BOTTOM SIX

T TESTS

		VARIABLE	SIGNIF LEVEL	T-RATIO	DEGREES FREEDOM	
	46	V0046	...	-0.6949	10	
	47	V0047	...	0.5766	10	
	48	V0048	.05 B	-2.4704	10	Pd
	49	V0049	...	0.1760	10	
	50	V0050	...	0.1085	10	
	51	V0051	...	-0.8476	10	
	52	V0052	...	-1.4129	10	
	53	V0053	.05 B	-2.6860	10	Ma
	54	V0054	.10 B	-1.9680	10	SI
OPI	55	V0055	.05 A	2.3892	10	TI
	56	V0056	...	1.3046	10	
	57	V0057	...	-0.1907	10	
	58	V0058	...	0.6155	10	
	59	V0059	...	1.1999	10	
	60	V0060	...	-0.2000	10	
	61	V0061	.10 B	-1.8738	10	IE
	62	V0062	.10 B	-2.0274	10	SF
	63	V0063	...	0.0468	10	
	64	V0064	.10 A	2.1695	10	LA
	65	V0065	...	0.4240	10	
	66	V0066	...	0.8950	10	
Interactions	67	V0067	.05 A	2.8151	10	Gabe
	68	V0068	...	1.3909	10	
	69	V0069	...	-1.6444	10	
	70	V0070	...	1.5422	10	
	71	V0071	...	1.3739	10	
	72	V0072	...	-1.0521	10	
	73	V0073	...	1.3306	10	
	74	V0074	.01 A	3.4935	10	Otis
	75	V0075	...	1.4603	10	
	76	V0076	...	1.5171	10	
	77	V0077	.05 A	2.3822	10	Martin
	78	V0078	...	1.5013	10	
	79	V0079	.10 A	2.0841	10	Gp Active
GAI	80	V0080	...	-0.8056	10	
	81	V0081	...	-1.6887	10	
	82	V0082	.01 B	-3.6154	10	Isol Passive
	83	V0083	...	-0.4417	10	
	84	V0084	...	-1.5624	10	
44th Day	85	V0085	.01 A	3.3806	10	Similarity
	86	V0086	.05 A	3.1009	10	Friend
	87	V0087	.01 A	4.5286	10	Work Part
	88	V0088	.05 A	2.7083	10	Stability
	89	V0089	.05 A	2.5226	10	Frnd's Frnd.
	90	V0090	.05 A	2.9594	10	Marg's Infl

DATA SET 1 STOW'S FOLLY
PROBLEM 3 TOP SIX**BOTTOM SIX

T TESTS

	VARIABLE		SIGNIF LEVEL		T-RATIO	DEGREES FREEDOM	
	91	V0091	...		1.1396	10	
	92	V0092	.01	A	3.4110	10	Persnl. Influ.
	93	V0093	...		-1.6380	10	
	94	V0094	.01	B	-3.7203	10	Diff.
	95	V0095	.01	A	4.1435	10	Overall ranking
	96	V0096	.01	A	3.7435	10	Similarity
99th Day	97	V0097	.05	A	2.6355	10	Friend
	98	V0098	.01	A	3.8301	10	Work Part
	99	V0099	.05	A	3.0875	10	Stability
	100	V0100	.05	A	3.0859	10	Frnd's Frnd.
	101	V0101	.05	A	2.4450	10	Marg's Influ.
	102	V0102	...		1.4624	10	
	103	V0103	.01	A	3.2330	10	Persnl Influ.
	104	V0104	...		-1.6380	10	
	105	V0105	.01	B	-3.8035	10	Diff.
	106	V0106	.01	A	4.7326	10	Overall ranking

NUMBER AND PERCENT OF ITEMS SIGNIFICANT ...

.10 LEVEL		.05 LEVEL	
34	32.0755	28	26.4151

(1) the two most positive and the two most negatively ranked Ss; (2) the three most positive and the three most negatively ranked Ss; and (3) the six most positive and the six most negatively ranked Ss.

It will be noted that the factors vary in significance among the three comparison groups and between this statistical method and the previous empirical technique. Statistical significance is expressed in terms of the significance level of probability (.10, .05 and .01 in increasing order of probability). Which factors or levels of probability utilized is dependent upon the degree of accuracy required. As the comparative groups increase in size the number of significant factors increases also. It cannot be assumed that the same factors are not as applicable to the smallest groups as to the largest. The variation is probably due primarily to the limitations on the size of the sample.

It can be assumed that the most valid factors are those which appear as significant for all three groups in order of probability. For example, the MMPI Pd factor is significant for all three groups at either the .10 or .05 level, and OPI SF factor is significant throughout all three levels. This would appear to confirm the earlier empirical judgments concerning these factors. However, other less conclusive factors may be utilized in conjunction with these to increase the reliability of the instruments insofar as their limitations are recognized.

Group Activity Inventory - Penthouse III

As a longitudinal measurement of group activity, a random sampling of each subject's activity was recorded daily. The day, from 8:00 a.m. until 11:00 p.m., was divided into fifteen minute periods. These periods were numbered consecutively and a random selection of ten periods chosen daily using a list of random numbers. At these specified times a survey was made throughout the experimental area to determine each individual's activity. A sample of the form is attached as Appendix E. Activity was categorized as follows:

Grouped		Isolated				
Active	Passive	Active	Passive	Staff	Telephone	Duty
Conversation Cards	Reading with others TV (if with others in room) HI-FI	Reading alone Writing Hobbies Drums	Sunbathing Sleeping Withdrawn	(Conversation with staff members; telephoning outside)		Eating Ergometer All tests Bathing Treadmill Scheduled active excluding Flatus exp.

Some activities could be classed as either grouped or isolated and active or passive depending upon the condition. Reading in a group was grouped passive as it was a form of resistance against group communications; reading alone was isolated active as it appears as a resistance against solitary inactivity.

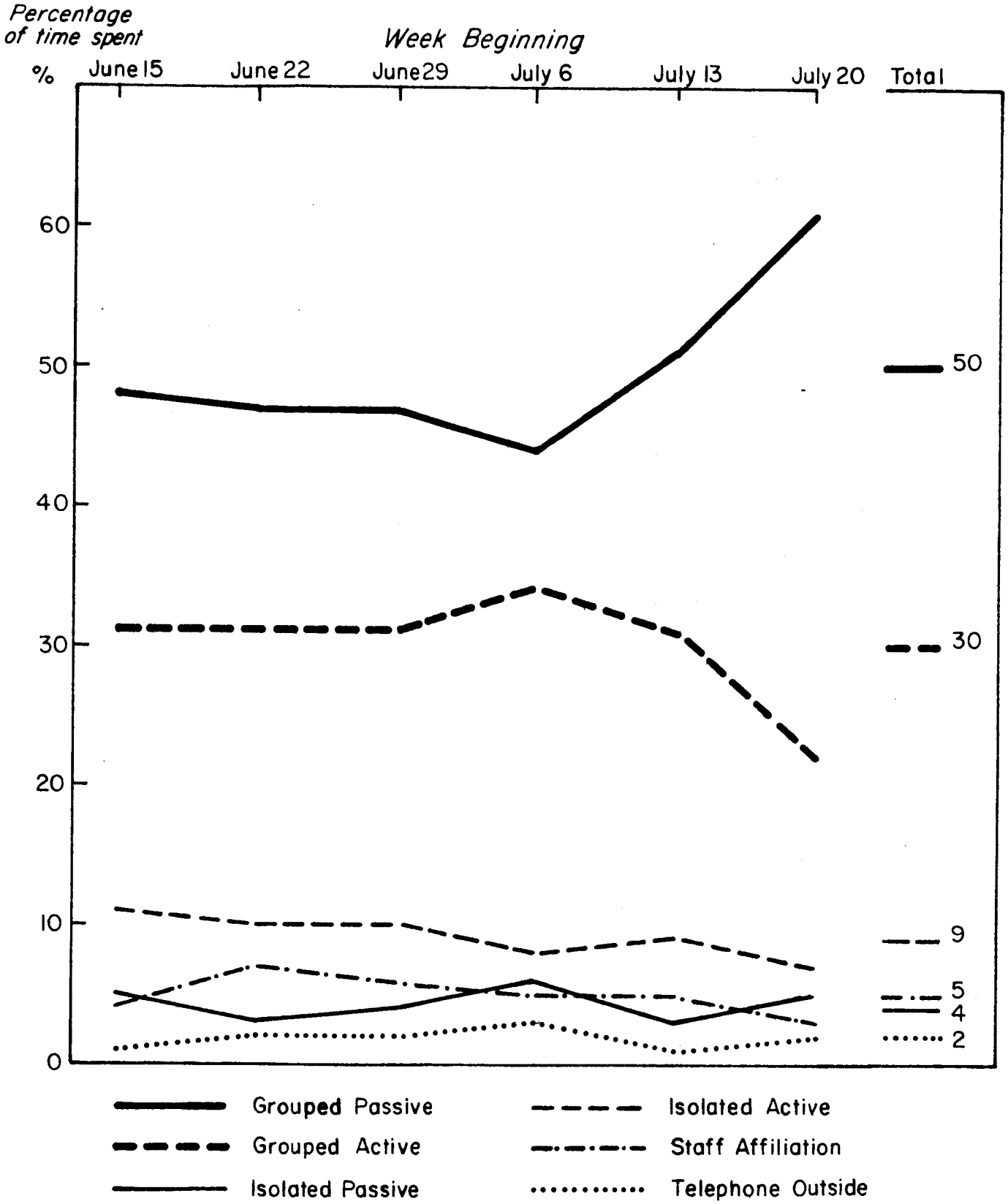
The purpose of this inventory was to measure the percentage of time spent in each of these activity forms, individually and collectively, and the degree of change which might occur during the course of the experiment. In the final results Duty was isolated from the remainder of the activities as the individual had no control over this item and it varied

from week to week.

The collective data for the total experiment group is contained in Figure 15. The information is presented by week for the six-week period. The percentage is for the week beginning with the date indicated; there were approximately seventy inventories per week. For the initial three weeks the activities remain constant with the exception of an increase in staff affiliation during the first week. A slight increase in grouped activity occurs in the third week accompanied by a slight decrease in isolated activity and grouped passivity. Then, in the fourth week, while isolated, staff, and telephone activities remain constant, there begins a steady increase in grouped passivity with a concomitant decrease in grouped activity. This continues throughout the remainder of the experiment. As indicated, conversation among subjects and intergroup games are the primary grouped activities. It is in these activities that the decline occurred. It should be noted that as a collective category the grouped function did not change, only the form of the grouped activity became more passive in nature. Individual Ss did not attempt to isolate themselves physically, but rather mentally. It is true that the limited space would also limit the extent of physical isolation possible; however, this would be a normal condition in any such isolated situation and would not account for the specific change in the grouped activity. Also, what isolated passivity there was remained constant rather than increasing at the expense of isolated activity.

In summary, it appears that while grouped and isolated activities remain constant in such a socially isolated group, inter-personal grouped activities begin to decrease rapidly after a certain period--in this case half-way through the experiment. Affiliation needs appear to remain

Penthouse III. Composite Activity Indices According to the Group Activity Inventory



constant, but not active communication needs.

The changes in activity among the Ss of this experiment are probably due to a number of factors. However, it appears that these factors are related to grouped activity. The decrease in conversational and recreational interaction suggests the possibility that the motivations stimulating these activities decrease although the need for group affiliation remains constant. The lack of new intra-relational stimuli could account for the decline in interaction. The stimuli offered by new relationships has been exhausted (in this experiment of six weeks duration) by the end of the third week. The third week ended with a slight increase in grouped activity and then the decrease begins, first slowly and then, by the beginning of the fifth week, with greater acceleration. The latter may be accounted for by the expectation of experiment termination but the argument for the opposite effect (greater grouped activity) is as strong.

It was during this period (the fourth week) that organized opposition to part of the experiment occurred. This would seem to suggest greater conversational activity, but the opposite was the case. This fact, in turn, suggests an anxiety factor. The increase in anxiety as a function of social isolation may be responsible for individual withdrawal within the grouped setting.

An analysis of the individual S's data on the Group Activity Inventory does not suggest a positive correlation between categories of activity for the Ss in general. Individual deviations from the average group score for categories indicate that the Ss with the highest socio-positive and socio-negative indices are those who vary greatest from the group means. This would seem to suggest that positive and negative affiliates display behavior which is less predictive based upon group norms.

If we examine the direction of this variance from the average for the group, however, we find that the socio-extremes behave in an opposing manner. Within the category of Grouped Activity the extremes behave as we might expect upon the basis of socio-metric evaluations. Pat indicates the greatest percentage of total time spent in Grouped Activity, Lee shows the least. This, of course, is positively correlated with their affiliational acceptance and rejection. These oppositions hold true also for the categories of Grouped Passive and Isolated Active in the expected direction. Lee is highest in Grouped Passive and Isolated Active, while Pat is lowest. The implication is that one necessary quality of positive affiliation is Grouped Activity. This holds true in general for the socio-positives as a group; they were above the group average for Grouped Activity. In this micro-society, the individual who appeared most active in isolation, Lee, was most rejected by the group.

It is necessary to reiterate that this is a micro-society composed of peers. It is not possible to anticipate the effect if a social stratification were imposed upon the group. To the extent that we assume that affiliation is anxiety reducing, we hypothesize that a high degree of presence within the group is its necessary antecedent. This supports studies which suggest that effective leadership occurs in an isolated, anxiety-increasing condition. The positive peer S is active within the peer group which is a condition of equality, and this is distinct from the opposing leadership condition.

To the extent that we accept various types of individuals' influence upon the group as an indication of leadership, overt or covert, potential or actual, the three Ss of Penthouse III who are ranked highest in influence are among those most isolated from the group. This ranking, however, is

also positively correlated with age of ranked S.

We might expect that Ss would spend the greatest amount of their Grouped Activity time with those whom they view as most similar and compatible. Figure 16 shows the degree of time spent by each S in interrelationship with the other Ss within the Grouped Activity time. (As each S varied in the amount of Grouped Activity time, the percentages shown do not total to 100 percent; however, this study is interested only in relative rankings and this is provided by the data.)

There is no tight, positive correlation between the individual Ss' greatest and least identification choice and Grouped Activity interaction time spent with that subject. However, of the Ss' 24 greatest and least association times, in 10 out of 12 instances the person with whom the greatest amount of time was spent is either the first ranked similarity choice (4 cases) or within two rankings of that choice; in 11 out of 12 instances the least amount of time was spent with either the last ranked similarity choice (2 cases) or within two rankings of that choice. To a significant extent the Ss spent the greatest amount of their Grouped Activity time with those whom they viewed as most similar to themselves and the least amount of time with those viewed as least similar. There is also a strong association between the amount of Grouped Activity time spent with a S and his ranking as a preferred friend or work partner. The amount of time spent with an individual is related to a S's preference for his friendship and, only slightly less, his desirability as a working partner.

To the extent possible, Ss in this type of microsociety attempt to limit their interaction with those with whom they do not identify most positively or are least compatible. It follows that this group would be

Figure 16

GROUP ACTIVE - GA_I

INTERACTION TOTALS FOR ENTIRE EXPERIMENT

	Gabe	Hal	Ike	Jack	Ken	Lee	Ned	Otis	Pat	Ray	Martin	Sam
Gabe	**	15	13	27	24	5	13	5	29	18	14	24
	**	18.52	16.05	33.33	29.63	6.17	16.05	6.17	35.80	22.22	17.28	29.63
Hal	15	**	13	49	46	27	20	8	52	31	13	18
	12.93	**	11.21	42.24	39.66	23.28	17.24	6.90	44.83	26.72	11.21	15.52
Ike	13	13	**	6	7	8	8	7	6	7	4	7
	22.81	22.81	**	10.53	12.28	14.04	14.04	12.28	10.53	12.28	7.02	12.28
Jack	27	49	6	**	55	2	26	13	63	32	25	22
	25.47	46.23	5.66	**	51.89	1.89	24.53	12.26	59.43	30.19	23.58	20.75
Ken	24	46	7	55	**	5	22	15	90	36	18	19
	17.78	34.07	5.19	40.74	**	3.70	16.30	11.11	66.67	26.67	13.33	14.07
Lee	5	27	8	2	5	**	8	5	9	9	6	5
	10.87	58.70	17.39	4.35	10.87	**	17.39	10.87	19.57	19.57	13.04	10.87
Ned	13	20	8	26	22	8	**	20	53	37	17	16
	11.30	17.39	6.96	22.61	19.13	6.96	**	17.39	46.09	32.17	14.78	13.91
Otis	5	8	7	13	15	5	20	**	21	11	9	10
	8.33	13.33	11.67	21.67	25.00	8.33	33.33	**	35.00	18.33	15.00	16.67
Pat	29	52	6	63	90	9	53	21	**	47	10	16
	17.79	31.90	3.68	38.65	55.21	5.52	32.52	12.88	**	28.83	6.13	9.82
Ray	18	31	7	32	36	9	37	11	47	**	6	7
	20.22	34.83	7.87	35.96	40.45	10.11	41.57	12.36	52.81	**	6.74	7.87
Martin	14	13	4	25	18	6	17	9	10	6	**	15
	20.29	18.84	5.80	36.23	26.09	8.70	24.64	13.04	14.49	8.70	**	21.74
Sam	24	18	7	22	19	5	16	10	16	7	15	**
	29.63	22.22	8.64	27.16	23.46	6.17	19.75	12.35	19.75	8.64	18.52	**

AVERAGE PERCENT INTERACTION WITH EACH MAN

17.91	29.00	9.18	28.55	30.27	8.64	23.45	11.45	36.91	21.36	13.36	15.91

isolated from a substantial degree of Grouped Activity. This is confirmed by comparing the subject evaluative data from the IGRA and the amount of grouped activity interaction for the Ss indicated by the Group Activity Inventory. Generally, those Ss viewed most negatively have the least amount of interaction with other Ss.

The psychological significance of this is affected by variation in physical space. As this space decreases the individual subject is less able to isolate himself from those he views negatively as either dissimilar or non-compatible. We might hypothesize that group anxiety is partially a function of the degree to which the other Ss are viewed as similar and compatible. In these experiments we have required a ranking that forces an acceptance or rejection. The intensity of this is not known. Further study is necessary to establish a significant and predictable correlation between group anxiety, however measured, and associative factors.

Socio-psychological Data in Support of Socio-legal Hypotheses and Assumptions

If we address ourselves to the group, rather than to the individual Ss; that is, if we examine the "average" experimental man as defined by the material which we have collected from measurements and observations, we can make certain statements about a collective personality pattern and particular patterns of behavior. It has been stated previously that our experimental groups indicate a typical, but intensified, college male pattern. This in itself implies certain distinguishing characteristics when compared to the norm for males in the general population. This group has more intellectual ability and motivation; it has greater social presence and aggressiveness; however, this is coupled with an uneasy psychological balance which is impelled toward change.

When we contrast this pattern of personality and anticipated behavior with the structured requirements of the experiment, and assuming a cognizant volunteer to such an experiment, we are rational in accepting and supporting the socio-legal hypotheses of anti-law. It could be expected that the personality which we have described would not acquiesce to the rules of the experiment without overt or covert opposition or compensating behavior. That the individual is aware of what he is getting into is another question.

Although the groups recognized a priority of rule compliance, even those requirements with the highest priority were challenged. Those of low priority were drastically modified or ignored. It might be asked if this was not simply normal resentment of rules of the type displayed in any structured social situation as, for example, the military. This is probably both a qualitative and quantitative question, difficult to answer in terms of statistical significance because of the absence of exact control comparisons. Empirical observations as well as psychometric data suggest that not only was the opposition of greater intensity but it indicated a wider scope of qualitative diversity. The personality pattern indicates psychological deviousness and this was translated into the particular type of behavior which we are suggesting. The behavior of the Ss in Penthouse II was extreme in this regard. Although confined to less objectionable practices, the behavior of the Ss in Penthouse III was as qualitatively diverse.

What is the effect of the control of this antithetic motivation, within the experimental isolation, upon the individual subject? Here we must move from a group to an individual consideration, although we have in mind group phenomena. We assume that the individual attitude is not solely "anti-law" in the group sense but in the individual as well. He desires to

maintain his individuality; he achieves via independence. Consequently, he has to view himself and be viewed as independent. This is difficult in confinement, which has the effect of intensifying the need for independence. The maintenance of psychic space becomes of primary importance.

A measurement of psychic space is not easy to obtain. In this experimental setting it might be translated physically into time spent in isolated activity or group passivity. Both require an individual defense against, or a reaction formation to, the demands of the environment. The isolation from external stimuli in both instances is a maintenance of psychic independence. In the grouped situation it is easier to interact than to remain passive; in the isolated condition it is easier to withdraw than to remain active. In the one case, the individual is countering anticipated invasion, while in the other independent activity acts as a defense against possible invasion.

During Penthouse III approximately 59 percent of the time was spent in these two categories, grouped passive and isolated activity. Again we are at a loss for control comparisons but considering the space conditions that made physical isolation almost impossible, and a lack of constant inter-personal communications improbable, this is a significant portion of active independence maintenance. It should be noted that in the last half of Penthouse III this independence within the group increased considerably.

The maintenance of psychic space has been considered here as active withdrawal, primarily as a means of assuring independence. Not even the need for affiliation counteracts this assumption. Psychic space has to be defined in terms of a group structure, it has no meaning out of this context. The Ss of these experiments indicate a high need and ability for social interaction but, to a great extent, it is the increased probability of

interaction which allows a greater instance of independent behavior. There is no gratification in acting independently by one's self; who is there to appreciate the ingenuity displayed in maintaining one's independence?

There is also the state of passive isolation or cocooning. The Ss of Penthouse III spent approximately 4 percent of their time in isolated passivity (this, of course, excludes the hours of sleep between 11:00 p.m. and 7:00 a.m.). The activity designated as "isolated passivity" was primarily sleeping and withdrawal. An average of 36 minutes per day was spent by each S in absolute psychological isolation, or slightly over seven hours per day for the group. It is interesting to note that this tendency remained relatively constant throughout the duration of the experiment. While it is possible to support withdrawal behavior by reference to the elevated schizoid factor in the inventory data, we are again faced with the necessity of comparison data which is not available at the present time.

The Experiment III IGRI measures three influence factors: influence with Dr. Margen, the project Director, influence with peers (other Ss) and personal influence.

The following table compares the degree of Grouped Activity with the ranking of peer influence and personal influence.

Degree of grouped activity	Peer Influence	Personal Influence
Pat	Martin	Martin
Ken	Sam	Pat
Hal	Lee	Jack
Jack	Pat	Sam
Ned	Hal	Hal
Ray	Ray	Ned
Gabe	Jack	Lee
Sam	Ken	Ken
Martin	Ned	Ike
Otis	Ike	Ray
Ike	Gabe	Otis
Lee	Otis	Gabe

The overall data for each of these influence factors for the total experimental period indicate that the identical Ss are seen as influential (in the highest quartile) with Dr. Margen and personally but in the case of peer influence the S with the lowest ranking overall evaluation is ranked third in the top quartile by the second week of the experiment and subsequently. In the other two influential factors this S ranks in the lower quartiles. While there appears to be a positive correlation between types of influence, this relationship is not as constant between the level of activity and influence. Factors other than group activity affect S evaluations of influence.

This suggests that some group opposition is being expressed. Ss are generally of the opinion that their peers have greater opposition to the established experiment structure than they attribute to themselves. This may be the way in which opposition is "safely" expressed by the individual S. We might expect that a difference exists between the evaluation of individuals by their peers, or fellow Ss, and by staff members. Along certain dimensions it is possible that group opposition to the staff or the experiment might be expressed in terms of rejection of those Ss who are seen as more influential with or acceptable to the staff. If this is true we have a measure of anti-law. A comparison of staff and S evaluations indicates:

1. Exact agreement between staff and S evaluation as to most influential S.

2. One ranking difference only between staff and S evaluation of least influential S (Ss' evaluation based upon Personal Influence rating).

3. Seven to ten rankings differences between staff and S evaluation of least influential Ss based, respectively, on Ss' Influence on Dr. Margen

and Peer Influence.

4. Generally, within the first and fourth quartiles of Ss' evaluations of Personal Influence there is a significant agreement with the staff. The one exception in the highest quartile is the S who received the highest overall rating by the Ss.

Again, we see that any opposition by the Ss is seen as group and not individual opposition. The individual Ss see others as opposing, not themselves, based on a comparison of Peer and Personal Influence with staff influence ratings.

Among the factors other than influence there is greater divergence between the Ss' and the staff members' evaluations. Here it is necessary to draw rough similarities between S personality factors ranked by the staff and the Ss' evaluations expressed by the sociometric instruments. By comparing the two positive and two negative Ss with the staff evaluations we find:

1. The S evaluated the highest by the group received no top rating by the staff, in either positive or negative attributes, although he was viewed quite favorably (second in Intelligence, third in Maturity, fourth in Independence and Normalcy of Behavior).

2. The S evaluated the lowest by the group was rated by the staff as the most Aggressive and the least Influential and Mature.

3. The S second highest in group acceptance rated by the staff as the most Normal Behavior and the least Aggressive and Anxious. (In an evaluation not reported elsewhere in this study, this S was also rated by the Ss as the most Calm.)

4. The S second lowest in acceptance was ranked by the staff as the most Anxious and the least in Normalcy of Behavior, Independence and Helpfulness.

Generally, we can assume that there is no conflict between subject and staff evaluations. Positive Ss are evaluated as possessing positive characteristics by the staff and negative Ss as manifesting negative behavior. To the extent that the Ss did not equate Influence and Compatibility as we might attribute to the staff's evaluation (based upon a ranking of positive characteristics), we can assume that Ss' independence of evaluation existed but not to the extent of opposition to staff. This assumes that the Ss were aware of the Staff's evaluations. To the degree that the Ss were precisely cognizant of which S was most influential with Dr. Margen, as an indication of this awareness, we can assume that the Ss were generally knowledgeable of staff opinions. Since no opposition was indicated in this instance, there is no reason to believe that it existed elsewhere.

The one area of notable inconsistency between staff and Ss evaluations occurs in the individual S's assumption that the other Ss were more willing to be influenced by the S who was ranked as the least compatible. This may indicate a latent hostility within the group which was overtly displayed during the fourth week of the experiment when opposition initiated by S evaluated as most negative (least compatible) and to certain aspects of the experiment was expressed in a petition supported by nine of the twelve Ss.

Recommendations

1. Determination of specific purpose for psychological and sociological research. The studies in these areas so far have been for the purpose of generating working hypotheses and general directions for research. A variety of instruments and methods have been utilized, some with greater success than others. It is now necessary to evaluate these implements in

terms of specific goals to be obtained. A significant amount of psychometric data has been collected for subject selection purposes. The ideal experiment would be to formulate hypotheses on the basis of this data and test their validations.

2. Establishment of psychological and sociological controls. The example of selection hypotheses and many others require that some control groups be maintained for comparison purposes. Statistical significance cannot be achieved without these controls and the nature of the experiment is such that comparison between the subject group and the responses of a sample of the normal population outside the experimental structure and conditions is unsatisfactory. Control groups do not need to be administered concurrently, but it is necessary that exact conditions be maintained except for the variables. For example, if a particular personality pattern for subject selection is chosen, the control group can be run subsequently but the diet cannot be modified or other structure or conditions changed.

3. Establishment of realistic psychological and sociological parameters. The nutritional and, in general, the physiological problems have been of paramount importance in the first three experiments. This means that, where necessary, socio-psychological research has had to give way to physiological. We can assume that this emphasis, even under the most ideal conditions, has had a significant psychological effect that would vary were the experimental situation shifted toward a more realistic condition. As we are attempting to work along the whole spectrum, from physiological through psychological and sociological to legal structures, each sector must eventually be correlated with all the others. However, it is necessary that some experimental regime be devised in order to provide

independent control groups whose investigation may serve not only as control but also to allow access to the vast body of experimental data and results compiled by the separate sciences. This will require an experimental model in which all sectors of the spectrum are equally represented.

4. The experimental group must form a total personnel structure. The present experimental conditions permit an internal and external personnel structure - the Ss and the staff. Much is being lost in the interaction between the two because the staff is allowed external compensations, which they in turn transmit to the Ss. Although staff authority exists it is not intensely related to the Ss and there are long periods when it is overtly absent, a condition not likely in an authentic situation. Also, the lack of some form of occupational structure within the subject group creates difficulties in establishing a stable social structure. Abnormal tensions are created in attempting to maintain a structure which is undefined. This is interesting from the standpoint of group structure or group dynamics, or even group therapy, but it is not realistically and pragmatically oriented as would appear to be the overall purpose in these experiments.

5. The experimental group should be formed according to function. The Ss for Penthouse I through III have been chosen primarily on physiological grounds. Attention has not been paid to Ss' occupation, except by consulting staff members. If we assume an efficient space application, and thus a practical experimental situation, we would expect each member of the group to have an assigned function. This in the case, for example, of a predominance of engineers and scientists would probably produce quite a different group personality pattern and group activity structure, although our selection hypotheses should still hold valid.

THE ADJECTIVE CHECK LIST

Df--------Defensiveness

Fav-------Number of favorable adjectives checked

Unfav-----Number of unfavorable adjectives checked

S-Cfd-----Self-confidence

S-Cn------Self-control

Lab-------Lability

Per Adj---Personal Adjustment

Ach-------Achievement

Dom-------Dominance

End-------Endurance

Ord-------Order

Int-------Intraception

Nur-------Nurturance

Aff-------Affiliation

Het-------Heterosexuality

Exh-------Exhibitions

Aut-------Autonomy

Agg-------Aggression

Cha-------Change

Suc-------Succorance

Aba-------Abasement

Def-------Deference

Crs-------Counseling Readiness

CALIFORNIA PSYCHOLOGICAL INVENTORY

Do----Dominance

Cs----Capacity for status

Sy----Sociability

Sp----Social presence

Sa----Self-acceptance

Wb----Sense of well-being

Re----Responsibility

So----Socialization

Sc----Self-control

To----Tolerance

Gi----Good impression

Cm----Communality

Ac----Achievement via conformance

Ai----Achievement via independence

Ie----Intellectual efficiency

Py----Psychological-mindedness

Fx----Flexibility

Fe----Femininity

MINNESOTA PERSONALITY INVENTORY

F----Validity Score

K----The K Score - Correction factor

Hs---Hypochondriasis Scale

D---Depression Scale

Hy---Hysteria Scale

Pd---Psychopathic Deviate Scale

Mf---Interest Scale

Pa---Paranoia Scale

Pt---Psychasthenia Scale

Sc---Schizophrenia Scale

Ma---Hypomania Scale

Si---Social I.E. Scale

OMNIBUS PERSONALITY INVENTORY

TI----Thinking Introversion

TO----Theoretical Orientation

Es----Estheticism

Co----Complexity

Au----Autonomy

DS----Developmental Status

IE----Impulse Expression

SF----Schizoid Functioning

SI----Social Introversion

RL----Religious Liberalism

SM----Social Maturity

MF----Masculinity-Femininity

RS----Repression and Suppression

NA----Nonauthoritarianism

LA----Lack of Anxiety

CK----Couch-Kenniston

Chapter VII

CLUSTER ANALYSIS OF LEGAL ATTITUDES QUESTIONNAIRE

Suellen Huntington Lanstein

I. Introduction

A. The Subjects

Because part of the interest in the questionnaire was addressed to the problem of whether or not it would distinguish basic attitudes toward legal problems held by people of different backgrounds, four groups of subjects were employed. Groups I and II were all subjects in the second and third, respectively, set of experiments conducted by Space Sciences Laboratory and all had passed the physical screening. Group I subjects were male college students between 21 and 28 years of age. Group II subjects ranged in age from 20 to 39 years, and, in education, from a high school drop-out to two doctoral candidates. Group II had agreed to participate in a program of discussion of legal problems, Group I had not. All six members of Group I were willing to respond to the questionnaire; one member of Group II refused, leaving eleven subjects in the group.

Group III contained 24 second year law students at the University of Florida Law School. This group provided a basis for comparing attitudes toward the problems expressed in the questionnaire. Because of their common educational background, the law students were expected to

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*I am most grateful to Professor Thomas Cowan for providing me the opportunity and the encouragement to complete the preliminary study.

be more closely acquainted with legal principles and more cohesive in their jurisprudential attitudes.

Group IV contained 27 individuals. No criterion was used in their selection except variety; professors, graduate and undergraduate students, non-professional employees, and their spouses were included. All were connected with the University of California at Berkeley. This group was conceived as a control group providing a baseline of somewhat normal opinion with which to compare the other groups.

B. The Questionnaire[1]

The original questionnaire contained 135 questions written to elicit answers representing different attitudes toward eight categories of legal-philosophical problems; fifteen questions were eliminated later as meaningless or as repetitive of other questions retained in the questionnaire. The responses were restricted to "yes," "no," and "don't know"; the subjects were given no further aid in determining their responses.

The final scoring of the answers employed a weighting system. In accord with the basic dimension of the test, the answer which was most supportive of "law" was assigned a weight of 1, the least supportive answer a weight of 5. The "don't know" response was evaluated in terms of its possible uses. When it was considered, by the legal investigators, to be used to express "indifference, confusion, or no opinion," it was assigned a weight of 3; when it was considered to express reluctance to give a strong, but socially undesirable, answer, it was assigned a weight of 2 if the unexpressed opinion was supportive of law and a

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[1]The Questionnaire, weighted score values, and mean scores are in Appendix 1.

weight of 4 if unsupportive or antagonistic to law. The effect of this scaling is to conceptualize the "yes" and "no" answers as representing opposite poles of opinion or attitude toward the problems posed, arbitrarily assigning the "don't know" answers the middle points of the continuum. This system of scoring[2] enabled the later application of correlational techniques of analysis to the data.

Preliminary Results. The distribution of answers by the subjects among the answer categories can be seen in Table 1. For all subjects the mean percentage of "yes" answers was 44, of "no" answers 40 percent, and 17 percent of all answers were in the "don't know" alternative. The pattern of answers for all subjects is definitely not random. Group IV approaches the overall distribution most clearly, and has the widest spread or range of answers.

TABLE 1

Mean and Range of Percentage Frequency Distribution of the 120 Possible Answers for the Four Subject Groups[3]

	RESPONSE ALTERNATIVES					
	YES		NO		DON'T KNOW	
Group	Mean	Range	Mean	Range	Mean	Range
I	36	10.4-55.6	40	21.5-61.5	24	0.7-68.1
II	48	34.1-67.4	35	17.8-53.3	17	0.7-44.4
III	46	25.9-63.0	42	25.2-54.8	11	1.5-25.2
IV	44	14.8-68.9	41	15.6-84.4	15	0.7-54.8
TOTAL All Subjects	44	10.4-68.9	40	15.6-84.4	17	0.7-68.1

[2]A more detailed discussion of the scaling is included in Appendix 2.

[3]Complete data for each subject can be found in Appendix 3.

Group I has the lowest percentage of "yes" responses (36%) and the highest percentage of "don't know" responses (24%); Group III has the lowest percentage of "don't know" responses (11%). Although Group I's pattern of answers is closest to random, it is mainly attributable to one subject (#101) who gave 68% "don't know" answers, and another subject (#103) who gave 47 percent "don't know" answers. Group III's low percentage of "don't know" answers is a result of highly similar answer patterns within the group as shown by the narrow range of answers in this group, and by the fact that the lowest percentage of "don't know" answers for a subject is not in this group. The wide range of answers and the closeness of the mean of Group IV to the overall mean support its selection as a control group.

The range of percentage frequency distribution of answers in the three response alternatives can be seen in Table 2. Group IV again approaches the overall mean in range of responses to the questions. Group I had the most subjects (67%) responding "don't know" to any one question, Group II was next (55%), Group II followed (46%), and Group IV had the least "don't know" responses to any one question (41%) as well as the most restricted, but negligibly so, range of responses indicating more disagreement among the members of the group.

The use of the "don't know" response is of interest because of its repercussions when the questions are rescaled. The subjects and the questions which have a high frequency of "don't know" responses will be the least reliably measured and will contribute the most error to the analysis. In particular, Group I subjects will add error to later correlations among both questions and subjects; Group IV will inject error into the correlations among its subjects. Group III will be the most

TABLE 2

Range in Percentage Frequency of the Subjects' Answers By Response Alternative[4]

GROUP	RESPONSE ALTERNATIVES Yes	No	Don't Know
I	100-0	100-0	67-0
II	100-0	100-0	55-0
All Penthouse Subjects	88-0	100-0	47-0
III	100-0	100-0	46-0
IV	93-4	93-0	41-0
TOTAL All Subjects	91-3	93-3	37-3

reliably measured by the questionnaire. Additionally, the amount of error introduced varies from question to question and from subject to subject. This error is uncontrolled and must be kept in mind when considering the final results.

II. DIMENSIONAL ANALYSIS[5]

A. General Purpose and Method

The general method selected for exploring the relationships among the questions and among the subjects was dimensional analysis.

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[4]Complete data for each question can be found in Appendix 4.

[5]Dimensional Analysis is a genetic term subsuming the myriad forms of factor analysis, cluster analysis, and their future progeny. Two introductions to the subject popular with psychologists are Factor Analysis: An Introduction and Manual for the Psychologist and Social Scientist by R. B. Cattell and Psychometric Methods (Chapter XIV) by J. P. Guilford. Another approach is that of the British psychologist Cyril Burt in The Factors of the Mind: An Introduction to Factor Analysis in Psychology. A mathematic approach is taken by H. H. Harman in Modern Factor Analysis, which discusses and evaluates many of the variants of dimensional analysis.

The specific method selected was cluster analysis[6] which provides techniques for pursuit of the goals of this exploratory study. First, cluster analysis allows for the examination of the statistical properties of the questions developed to examine the categories of legal-philosophical questions. The reliability and validity of the questions, and the correlations among them, can be evaluated. Second, this technique can be used to find a minimal set of questions which are most independent of one another and that best predict the scores of the subjects on all the questions. Finally, it is also possible to locate groups of subjects who have similar scores on the sets of variables.

Domain sampling theory, the basis of cluster analysis, views a cluster of variables as being measures of a single domain of behavior. The variables (questions) are a sample drawn from an indefinitely large behavioral domain. The reliability coefficient indicates the extent to which scores on the variables in a cluster reflect the score the individual would obtain if he were tested on the entire domain of behaviors. The importance of reliability, besides indicating the extent of error introduced by a particular measure, rests on its ability to limit the

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[6]Cluster analysis was developed as a logically, mathematically, and theoretically sounder alternative to factor analysis by R. C. Tryon of the Psychology Department of the University of California at Berkeley. As BC TRY Project CAP, cluster analysis has been programmed for the IBM 7094 computer; the users' manual contains, in detail, the theoretical and mathematical formulations. A briefer explanation can be read in Professor Tryon's symposium paper, General Dimensions of Individual Differences: Cluster Analysis vs. Multiple Factor Analysis. Specific problems and uses of cluster analysis are discussed in Mr. Tryon's articles listed in the bibliography.

possible correlation obtained between scores[7] and between obtained scores and the cluster domain. It is essential that reliabilities be high in order to avoid introducing these complications, which limit the value of the results, into the analysis.

In cluster analysis, validity of a cluster is defined as the correlation of the observed cluster score with the theoretical cluster domain score composed of an indefinitely large number of variables. Low validity has several sources: first, the variables selected to sample a particular domain are not doing so, possibly because the domain is poorly defined or the questions are not strictly derived from the domain as defined; second, the measurement of the variables is unreliable; and third, the variables, while not highly correlated with the extended domain or with one another, are known to be good measures of the behaviors or attitudes under examination. This last can only be established through external criteria.

Five steps are required to find, or to evaluate, the sets or clusters of variables and to obtain groups or clusters of individuals

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[7]The actual limit of correlation by reliability is given by the following formula:

$$r_{xy} = r_{x_\infty y_\infty}\sqrt{r_{xx}r_{yy}}$$

where

r_{xy} = the validity coefficient

$r_{x_\infty y_\infty}$ = the correlation between observed domain scores and scores which would be obtained on the entire extended domain

r_{xx} = the reliability of the observed domain scores

r_{yy} = the reliability of the entire extended domain scores.

who have similar profiles on the variable clusters. These steps[8] are outlined below along with the variations appropriate to the two goals of 1) using an empirical cluster analysis to find the minimal set of independent questions which accounts for the variance of the answers and best predicts the subjects' scores, and 2) evaluating the sets of questions derived from the eight rationally predefined categories.

1. The Paired Comparison of the Variables. In this step the correlation coefficient[9] of each pair of variables is computed. The obtained correlation coefficients enter a square matrix (in this case, 120 x 120) in which the general properties among the variables are sought.

2. The Grouping of Variables into General Clusters of Variables. In the rational case the variables to be clustered have been defined in advance as the questions derived to examine each category. In the empirical case, the matrix is scanned for those variables which order the subjects in the same general way. Ideally, the pattern of correlations of each variable in a cluster is congruent or collinear with the other variables in the cluster so that the variables which enter a cluster order the subjects in the same way and a cluster score is the best single measure of this order. Reliability and validity is estimated for the rationally predefined clusters and for the empirical clusters.

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[8]For a list of the component programs corresponding to these steps and brief notes on their function, see Appendix 5.

[9]The function of the correlation coefficient is to describe the degree to which the two variables order the objects or individuals in the same way or the degree to which individuals obtain similar scores on the variables. This relationship is described by an index number between ±1.0. A correlation coefficient of zero indicates no similarity of ordering of individuals by that pair of variables; +1 denotes exactly the same ordering while -1 indicates precisely reversed ordering of the individuals.

3. Describing the Nature of the General Clusters of Variables. In the case of the rationally predefined categories, the variables can be examined in terms of their relationship to the domain they are intended to sample, and in terms of the interrelationships among the categories--especially 1) the degree to which the categories overlap thus yielding similar information, and 2) the suitability of the questions in a given category to that area. In the empirical case, the objective of this step is to economize the kinds of variation exhibited by the clusters by selecting the minimal number of most independent (least correlated) clusters which are necessary and sufficient to describe all the general kinds of variation observed. After completion of this step, examination of the variables composing the clusters provides the material for conceptualizing the nature of these phenotypic groupings. No assumptions about the "underlying nature" or "cause" of these particular groupings are made by the analysis. The analysis is, after all, only a statistical grouping. The causal relationships are left to the speculation of the investigator.

The remaining steps locate the most general differentiated types of individuals in terms of the clusters of variables derived from the preceding steps; and are identical in the empirical and the rational case.

4. The Paired Comparison of the Subjects. Theoretically, this step requires the comparison of the profile of cluster scores of each subject with every other subject. However, the clusters of variables can be conceptualized as spatial dimensions upon which the location of each individual can be computed or plotted thereby saving considerable time. Individuals found together or near one another in this hypothetical

space have identical profiles when together, and similar profiles when proximate, in terms of both the pattern of the profile and the magnitude of the scores.

5. Describing the Nature of the General Types of Subjects. This step is the same as step 3 except that we are selecting clusters of types of people rather than variables. The profile clusters have the special property of bounding and encompassing all the other profiles so that any other profile can be reproduced as a linear composite of these primary groupings. Description of the clusters of individuals is again left to the investigator.

B. Preliminary Results and Evaluation of the Empirically-Derived Cluster of Variables

Reliability. The reliabilities of the cluster scores derived from the empirically selected defining variables range from .7721 to .6278 for the six clusters (see Table 3). The cluster scores are, therefore, moderately accurate measures of the behavior of the subject on questions about that area. Reliability also limits the maximum correlations obtainable between the variables, and, while the correlations obtained are such that predictions between the variables would be of low accuracy (see Table 3), the correlations do approach the maximum values set by the reliabilities. Only one of the defining variables, in Cluster II, might be detracting from the reliability of the measurements. In general, the cluster scores obtained are moderately accurate measures of the subjects' behavior in terms of the domain sampled, and the domain itself consists of moderately related variables.

Table 3. Reliability, Validity and Cluster Scores for the Defining Variables of the Six Empirically-Selected Clusters of Variables[10]

Categories	Number of Definers	Reliability of the Cluster Scores	Percent of Definers Detracting from Reliability	Range of Correlation	Range of Communality	Range of Correlation with the Cluster Domain (Cluster Scores)	Domain Validity of the Cluster Scores
1. Strongly "pro-law," order, property, codification, and authoritarian	4	.7621	0	.5243-.3460	.7504-.3329	.8147-.5376	.8730
2. Freedom congeries--affirmative concept of freedom	3	.7456	33.3	.5882-.3064	.7509-.2212	.8583-.4471	.8635
3. Strongly "anti-law"	3	.7721	0	.5237-.5021	.5484-.5460	.7315-.7014	.8787
4. Property	2	.6405	0	.4606-.4432	.5100-.4752	-.6852 to +.6593	.8003
5. Freedom congeries--negative concept of freedom	2	.6278	0	.4450-.4406	.4793-.4706	.6687-.6621	.7923
6. Group interests	2	.7374	0	.5598-.5598	.6014	.7482 to -.7482	.8587

[10] The information summarized in Table 3 is listed in full in Appendix 6.

Table 3 (cont'd)

Category	Defining Question	Content
1. "Pre-law"	37	The smallest group ought to have governing rules.
	9	Sympathize with law enforcers.
	81	Youth lacks authoritative guidance.
	55	Obedient to all laws.
2. Affirmative Freedom Concept	117	Freedom of speech is a basic right.
	89	Should guarantee free opinion and communication by political force.
	75	Legislatures should change law more than courts.
3. "Anti-law"	49	Politics is trickery.
	15	No binding laws in space colonies.
	114	Political institutions affront human dignity.
4. Property	3	Valuables from other planets should be brought to earth.
	54	Should exploit precious objects found in space.
5. Negative Freedom Concept	50	Dislike imposing own proper conduct on others.
	12	Law should provide maximum freedom in society.
6. Group Interests	29	Law, politics, and morality are group phenomena.
	10	Morality is a group phenomenon.

Validity. The domain validity of the cluster scores ranges from .8787 to .7923. These are moderately high values, and, assuming that the reliability of an indefinitely extended cluster equals one, these values approach the limits set by the reliability of the defining variables. The correlations among the defining variables of each cluster are of moderate value indicating that the questions do order the individuals similarly and are pertinent to similar subject matter thus justifying grouping these particular variables together.

Cluster Domain and Cluster Domain Sources. The ranges of the correlations of the defining variables with the cluster domains is defensibly high (see Table 3); all the defining variables of a cluster are highly to moderately related to the domain with which they are concerned. The clusters themselves are almost completely unrelated to one another; no correlation between cluster domains exceeds .1874, and one-half (7/15) of the possible intercorrelations among the clusters are 0.0.

The generality or communality of the defining variables is fairly high overall (see Table 3). Only a few of the defining variables are highly specific (in Clusters I and II), and none are completely so.[11]

Interpretation of the Defining Variable Clusters and of the Expanded Clusters. The basis of the selection of the defining variables has been discussed in a preceding section. A complete list of the defining variables and of all the variables included in the expanded clusters can be found in Appendix 8. Only variables which, theoretically, cannot detract from the reliability of the expanded clusters, and which

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[11] Forty-four variables were eliminated from the empirical cluster analysis because their communalities were below .20. They are listed in Appendix 7.

have a correlation of at least .50 with the cluster domain will be discussed. In terms of the scores of the individuals responding to the questionnaire, a subject can be expected to have 1) similar scores on positively correlated variables, in fact, the higher the correlations the more similar the scores, and 2) opposite scores on variables which are negatively correlated. For example, if a subject has a score of one on variable x which is highly correlated (.90) with variable y, he can be expected to have a score of or near one on variable y; on variable z which is highly negatively correlated (-.90) with x and y, he can be expected to have a score of or near five. If the correlations approach zero, no statements can be made about the expected scores on one variable from knowing the scores on another.

CLUSTER I. Four questions (37, 9, 81, 55) define this cluster; they are correlated + .8147 to + .5376 with the domain with no negative correlations. The questions affirm a need for, sympathy with, and willingness to abide by, rules and authority. Seven additional questions (32, 90, 79, 72, 52, 76, 103) are correlated + .6080 to .5043 with the cluster domain. These questions reiterate the need for rules, authority and leadership, stability, and obedience while adding a note of hostility toward civil disobedience. Persons obtaining low scores on this cluster can be expected to be extremely supportive of the received social system (regardless of its merits), impatient of attempts to change of the social order which do not reinforce the existing authorities, and slightly nostalgic for the "good, old, authoritarian days." This is the second most reliably and validly measured cluster.

CLUSTER II. Three questions (117, 89, 75) correlate + .8582 to + .4471, with no negative correlations, to define this category. Their

content affirms free speech, opinion, and communication as a basic right. The third question (75) which detracts from the reliability of the cluster, suggests that legislatures should play a more prominent role in law-making than the courts. Two other questions (85, 35) are correlated + .50 with the cluster domain. One affirms the Bill of Rights; the other would not enforce a contract from which hardship would ensue. Low scores on this cluster would suggest a strong orientation toward political freedom for individuals which is upheld by law and tempered with humanity.

CLUSTER III. Three questions (49, 15, 114) correlate + .7315 to + .7014 with the cluster domain to define this cluster. No additional questions meet the requirements for discussion. The questions are concerned with the evil nature of political institutions and the superfluity of law. Low scores indicate disagreement with such assertions. This cluster is the most reliably and validly measured.

CLUSTER IV. Two questions which are negatively correlated with the cluster domain define this cluster; Question 3 is correlated -.6852, Question 54, + .6593. One would exploit resources found in space "for the benefit of humanity," the other would leave them there. A third question (120) is correlated .5106 with the cluster domain: "Rules don't bother me if they are not enforced." Scores are cumulative so that high scores would reflect an absence of exploitative interest in extraterrestrial exploration; low scores would indicate a certain avariciousness of attitude toward the spatial frontier. This is the second least reliable and validly measured of the clusters.

CLUSTER V. A couplet (50, 12) which is correlated + .6687 and + .6621 with the cluster domain defines this cluster. The questions are concerned with disapproval of external imposition of behavioral standards,

and with the law as a means to provide "the maximum amount of freedom" for everyone. One other question (26) is correlated -.5590 with the cluster domain, and concerns itself with the imposition of behavioral standards. Low scores on this couplet would tend to imply a strong desire for personal individualistic freedom guaranteed by law. This is the least reliably and validly measured of the six clusters.

CLUSTER VI. This cluster is defined by a couplet (29, 10) which is correlated $\pm$ .7482 with the cluster domain. The positively correlated question asserts morality as a group phenomenon; the negatively correlated question places morality on an individual basis. By reflecting the negatively correlated variable, low scores would indicate a belief in the social nature of morality; high scores suggest morality viewed as an individual phenomenon distinct from group or social phenomena. No variables added to the expanded cluster met the criteria for discussion.

Profile Scores on the Empirically Defined Clusters of Variables. The profile scores, and the subsequently derived profile types, are based on simple transformations of the subject's score on all the variables defining the simple, unextended clusters. If the variables which are negatively correlated with the cluster domain were negatively weighted in calculating the composite scores, the effect would be to cancel the contribution to the composite score of an equally weighted, positively correlated variable thus narrowing the range of scores obtained on the composite scores. This pitfall is avoided by reflecting (reversing the sign of) the negatively correlated variables so that their weights are cumulative in the composite scoring.

Graphs of the defining members of the five profile groups and of members of the extended profile groups are included in Appendix 10; a

graph of their means in standard score form can be seen in Table 5.[12]

RELIABILITY. The reliabilities of the cluster scores of the defining subjects of the profile groups ranges from .9966 to .9457 even though at least fifty percent of the subjects defining or exemplifying the profile types are detracting from the reliability (see Table 4). This is probably a function of the small size of the subject group. Except for Profile Group 3, the correlations among the scores of the defining individuals approach the limits set by the reliabilities.

VALIDITY AND CLUSTER DOMAIN SCORES. The domain validity is quite high (see Table 4) indicating that an extended group of similar subjects would obtain similar scores. The correlations among the scores of the subjects defining the profile groups and the range of correlations of the scores of the defining subjects with the cluster domain are also high, except for Profile Group 3, indicating that these individuals have similar scores on the clusters of variables and are ordered similarly by each of the variable clusters. Of course, the individuals added when the profile groups are expanded will vary more widely. The correlations of the cluster domain scores with one another range from .7002 to -.0261. Profile Group 5 is the most independent of the profile groups; its highest correlation (+.4733) is with Group 1. Profile Group 4 is independent of the other groups except for Group 2 with which

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[12] If the score distribution approximates a normal curve, roughly 68 percent of the subjects can be expected to obtain standard scores between 40 and 60; 14 percent will have scores between 30 and 40, and between 60 and 70; 2 percent will have scores between 20 and 30, and between 70 and 80; there are no subjects with scores beyond these limits. The mean score has been set at 50, the standard deviation at 10.

Table 4. Reliability, Validity and Cluster Scores for the Defining Individuals of the 5 Groups with Similar Profiles on the Six Empirically-Defined Categories[13]

Clusters or Profile Types	Number of Definers	Reliability of Cluster Scores	Percent of Definers Detracting from Reliability	Range of Correlation	Range of Communality	Range of Correlation with the Cluster Domains (Cluster Scores)	Domain Validity
1	4	.9966	50.0	.9817-.9601	.9971-.9738	.9955-.9735	.9983
2	8	.9954	87.5	.8966-.8[illegible]	.9726-.9432	.9[illegible]-.[illegible]679	.9[illegible]
3	4	.9547	75.0	.6969-.4[illegible]43	1.0472-.7278	.8[illegible]-.[illegible]693	.9[illegible]
4	5	.9932	60.0	.9200-.8[illegible]	.9834-.9651	.9811-.[illegible]055	.9952
5	4	.9846	75.0	.8088-.7173	.9966-.9100	.9731-.[illegible]848	.9923

[13] The information summarized in Table 4 is given in full in Appendix 9.

it correlates +.7002. Profile Group 1 is moderately correlated (+.5409 to +.3431) with all the other profile groups.

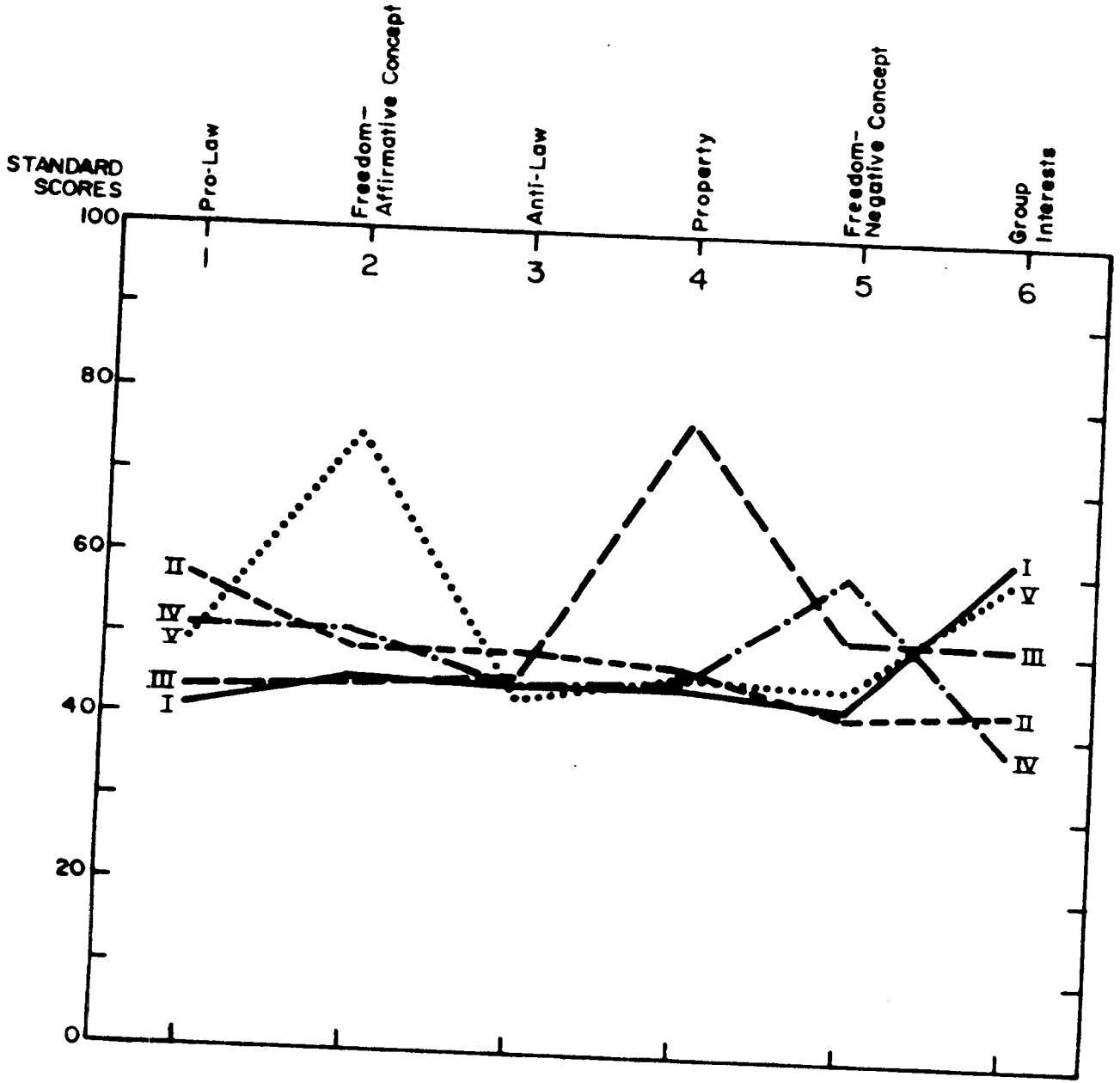
PROFILE GROUP 1. The defining members of this profile group have a mean score somewhat lower than, but within one standard deviation of, the mean for all subjects on variable clusters I through V; they have a mean score slightly more than one standard deviation from the mean on variable cluster VI. On variable clusters I through V, 68 percent of the population in a normal distribution could be expected to have scores this close to the mean.

These individuals tend to be the most supportive of rules and authority of the profile groups. They also show a relatively strong orientation toward legally guaranteed individual political freedom, do not view law and political institutions as inherently evil, and do view law as a guarantor of personal freedom. Simultaneously, they give strongest support to the distinction between individual morality on the one hand, and law and politics on the other.

All subjects defining this profile type are law students and the extended profile group which includes 21 subjects includes one-half of the law students. No other group of subjects is strongly represented.

PROFILE GROUP 2. The defining members of this profile group have mean scores ranging within one standard deviation of the mean on all six clusters of variables. In a normal distribution, 68 percent of the population could be expected to have similar scores. Their mean scores are the highest of the profile groups on Variable Cluster I, and the lowest on Variable Cluster V.

These subjects tend to be least supportive of, and most hostile to, the existing society and legally guaranteed individual freedoms.



5. Means of the Five Profile Types on Six Empirically-Defined Categories

They are, however, normally supportive of political freedoms and political institutions.

All of the subject groups are proportionally represented among the individuals defining this profile type. In the extended profile group the law students are under-represented and the first group of Penthouse subjects are over-represented.

PROFILE GROUP 3. All the mean scores of this group are within one standard deviation of the mean, except for their scores on Variable Cluster IV which is 2 1/2 standard deviations above the mean. Only two percent of the population would be expected to diverge so markedly. The members of this group are similar to Group 1 in their support of rules and authority, their strong orientation toward individual political freedom, and their respect for law and political institutions. They differ in that they do not see law as a guarantor of personal individualistic freedom. Their most marked difference from the other profile groups is their consistent opposition to extra-terrestrial exploitation.

Three of the four persons defining this type are from the miscellaneous group of subjects; the other is a law student. Only two other subjects make up the extended group, one law student and one miscellaneous individual.

PROFILE GROUP 4. The mean scores of the subjects defining this profile type are at the mean for Variable Clusters I and II, within one standard deviation below the mean on Variable Clusters III and IV, within one standard deviation above the mean on Variable Cluster V, and just beyond one standard deviation below the mean on Variable Cluster VI. Their mean score on V is the profile groups' highest on

that cluster of variables.

These subjects would be normally supportive of rules and authority, and of political freedoms. They do not consider law and political institutions to be unnecessary evils, and more than any other profile group, they are not desirous of legal guarantees for personalistic freedom, perhaps because, more than any other group, they view morality as a group process.

The subjects defining this type are from the second group of Penthouse subjects and from the miscellaneous group. The extended profile group of fourteen members includes four members from Subject Group II, five law students, and five miscellaneous persons. No one from the first group of Penthouse subjects was included.

PROFILE GROUP 5. These subjects have the highest mean score, over two deviations above the mean, on Variable Cluster II and the lowest mean score on Variable Cluster III. Except for Variable Clusters II and VI, their mean scores are within one standard deviation below the mean.

The outstanding characteristics of this profile type are 1) an extreme unwillingness to guarantee political freedom, and 2) their apparent preference for laws and political institutions. They appear to be normally supportive of the existing social system and authorities, and to show some regard for personalistic, individualistic freedom while defining morality as an individual problem.

This group has four defining members and four members added in the extended group. Two of the definers are from the Penthouse and two are law students. Three members of the extended group are from the Penthouse, two from the first group.

C. Preliminary Results and Evaluation of a Rationally Predefined Set of Categories of Variables

A set of categories derived from the history of jurisprudence were formulated by Professor Thomas Cowan, one of the legal investigators, for the purpose of determining the relevancy of the cluster analysis of the questionnaire to this jurisprudential matter. The categories were:

1. Group Interests versus Individual Interests,
2. Equity versus Law,
3. Anti-Order versus Order,
4. Anti-Property versus Property,
5. Innovation versus Precedent,
6. Natural Law versus Positivism,
7. Ad hoc Adjustment versus Codification, and
8. Democratic Decision versus Authoritarianism.

A ninth category, having no long-range jurisprudential interest, collected variables expressing opinions on the subject of Space, some of which were included to distract the subjects from the essential legalistic nature of the questionnaire.

Inherent difficulties in the testability of such a set of categories are apparent. They are highly sophisticated since they represent an attempted reduction of the manifold aspects of jurisprudential thought over centuries of western culture. Additionally, each jurisprudential category contains what appears to be a pair of polar opposites. In fact, this is not so. Each member of a pair is dialectically related in a very complex fashion with its correlative. Moreover, there is an extremely complex intuitively felt correlation or interrelation

between the first members of all the pairs and between the second members of all the pairs. Despite this heterogeneity it was felt desirable to subject the questions developed to prove this set of categories to dimensional analysis because it does happen that, again intuitively, the first members of each set represent what we have called a tendency toward "law," and the second members of the sets show a tendency to the dialectical antithesis we have called "anti-law."

Reliability. The reliabilities of the cluster scores derived from the defining variables of the nine *a priori* categories from .5725 to .7769 (see Table 6). The moderate reliabilities of these cluster scores indicate that they are only moderately accurate measures of the individual's "true" behavior as it would be observed if a more extensive sample were taken. One cause of these low reliabilities is that variables are included among the definers whose correlation with the cluster domain is below the minimal value theoretically necessary to optimize reliability. From 20 to 57 percent of the defining variables may be detracting from the reliability of the measurement of the respondents' scores on the cluster or behavior domains (see Table 6).

Validity. The domain validity of the cluster scores ranges from .7446 to .8767 (see Table 6). Although other of the previously discussed factors affecting validity may be involved, the limitation set by the reliability of the variables is sufficient to account for these low[14] validities. The correlations among the variables defining the categories is very low for all categories. In Category 6, for example, all of the defining questions are independent of one another, and in all categories this is true of some of the questions. This would

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[14] Acceptable validity coefficient would be in the .90's.

Table 6. Reliability, Validity and Cluster Scores for the Defining Variables of the Eight Rationally-Predefined Categories and the Category of Space Questions[15]

Categories	No. of Defining Variables	Reliability of the Cluster Scores	Percent Detracting from Reliability	Range of Correlation	Range of Communality	Range of Correlation with Cluster Domain (Cluster Scores)	Domain Validity of Cluster Scores
1. Group interests vs. individual interests	16	.6731	25	.1456-.0216	.5776-.2056	.5190- .0071*	.8204
2. Equity vs. Law	7	.6655	57	.3203-.0951	.8902-.1875	-.8001- .2374	.8158
3. Anti-Order vs. Order	19	.7769	26	.1993-.0121	.7295-.0832	.6048- .0348	.8767
4. Anti-Property vs. Property	5	.5821	20	.2270-.0567	.5958-.1970	-.5781- .1443	.7630
5. Innovation vs. Precedent	14	.6926	29	.1768-.0123	.5509-.1421	.5506 to -.0384	.8322
6. Natural Law vs. Positivism	15	.5725	33	.0142-.0070	.7117-.1347	.4351-.0293*	.7446
7. *Ad hoc* Adjustment vs Codification	11	.6923	27	.2305-.0137	.8283-.1310	-.6724- .0400	.8321
8. Democratic Decision vs. Authoritarianism	16	.6616	31	.1404-.0169	.6278-.2388	.4954 to -.0595	.8134
9. Space Questions	16	.7168	31	.1883-.0181	.6419-.1970	.6292-.0604	.8467

*A variable, not among the definers, had a correlation with the cluster domain higher than that of the highest defining variable.

[15] [illegible]

Table 6 (cont'd)

Category	Defining Question	Content (Cluster Scores above .4000)
1. Group-Individual Interests-	68	U.S. should not appropriate space territory, if Russia does.
	94D	Society exists only for individual members.
	9	Sympathize with law enforcers.
	32	Law stabilizes society and should change only for marked improvement.
	86	Democracy assumes economic competition.
2. Equity-law	85D	Contracts should be enforced even if hardship results.
	33D	Sympathize with stealing because hungry.
	120	Unenforced rules don't bother me.
	39	Law enforcers become brutalized.
	116	Likes competition.
	36	Sometimes an individual is more important than the human race.
	47D	Would hold other party to a contract.
3. AntiOrder-Order	49D	Politics is trickery.
	103	Patriotism is nobler than self-lover.
	9D	Sympathize with law enforcers.
	55D	Obedient to all laws.
	79D	Tax-cheating is as serious as any other criminal offense.
	15D	No binding law in space colonies.
	76D	Should know and obey laws.
	2	Human decisions are acts of ultimate loneliness.
4. AntiProperty-Property	3D	Valuables from other planets should be brought to earth.
	41	Law can't solve spiritual problems.
	54D	Should exploit precious objects found in space.
	68D	U.S. should appropriate space territory, if Russia does.
	14	Abortion should be punished by law.
	48	Social reality is not more important than individual reality.
5. Innovation-Precedent	97D	Courts should respect precedent.
	74D	Routine saves time.
	57D	Legal forms are efficient.
	60D	Dislike legal forms.
	23D	Precedent should be followed.
	72	Believe in right to civil disobedience.

"D" indicates that the question is one of the original definers of the category.

[illegible] [illegible]

[illegible]

[illegible]	[illegible]	Schools should have mild [illegible]
	[illegible]	Justice is the highest [illegible]
	[illegible]	Politics is the art of the possible.
	[illegible]	Justice is not social [illegible].
[illegible]	[illegible]	Rules for groups are not [illegible].
[illegible]	[illegible]	Individual should cultivate [illegible].
[illegible]	[illegible]	How should use scientific [illegible] to [illegible] efficiency?
	[illegible]	Not all groups need leaders.
	[illegible]	Man is not the [illegible] of [illegible].
	[illegible]	Gold-plating law is advisable [illegible].
	[illegible]	Members should not bind [illegible]
	[illegible]	The court should be banned in [illegible].
	[illegible]	Accepting necessity is not [illegible].
	[illegible]	Youth does not lack [illegible]
	[illegible]	Space colonies are failures if they [illegible].
[illegible]	[illegible]	Dislike others imposing standards of conduct.
[illegible]	[illegible]	Differences in groups should be [illegible] not [illegible] formally.
	[illegible]	Majority should not dominate absolutely.
	[illegible]	Dislike leader-followers group [illegible].

not be a serious criticism but that we have only intuitive rationale for these groupings of questions into categories.

Cluster Domains and Cluster Domain Scores. The range of correlations of the defining variables with their cluster domains is indefensibly wide (see Table 6). Some defining variables in every category but 2 and 4 are independent of the domains they are intended to define; others are more highly correlated with categories not their own.[16] As a result, some categories are moderately correlated (.5668 for Categories 3 and 5), while others are independent (.0113 for Categories 2 and 9). Over one-fourth of the possible correlations between categories are above 23; one-third are below .1. Independence of attitudinal variables is not expected, but hopefully the interrelationships among attitudes are a function of the attitudes and the individuals who hold them, not an imposition of the measuring instrument.

The generality or communality of many of the defining variables is very low (see Table 6). This means that the variable or question is extremely specific and has little relationship to the other variables in the category. Such variables, in fact, have very little relationship to any other variables, and, while they can be reliably measured, are relatively isolated elements.

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[16]More than 80 variables were listed in two categories. Since 119 variables were used as definers of the categories, at least 79 variables are more highly correlated with other categories than the one they were defining. On the other hand, 40 variables, one-third of the total, were accurately assigned to catagories, and some of these were very highly correlated with the cluster domains. This is not an insignificant achievement.

Interpretation of the Expanded Variable Clusters. Without evidence that these questions, as presently grouped, are measuring the attitudinal areas as defined, and knowing that many variables appeared to be highly related to categories other than those with which they were intuitively grouped, it is of interest to examine what variables group with the defining variables when the clusters are expanded. Only variables which cannot detract from the reliability of the expanded clusters and have a correlation of at least 30 with the expanded clusters and the clusters will be considered. These variables are listed in Appendix 12. By reflecting the negatively correlated variables in each cluster the scores can be cumulated, and interpretations of the meanings of the scores attempted.

CLUSTER I. Sixteen variables correlated ± .5648 to .3192 with the cluster domain. These were 10, 20, 34, 38, 83, 94, and 104 of the definers, and 7, 9, 32, 40, 61, 68, 71, 86, and 89 from other categories. The questions which are positively correlated with the cluster domain (94, 9, 32, 86, 89, 7, 71, 61, 83, and 38) are concerned with concepts of individualism and of law which maintains stability while treating each person as an individual and which provides civil rights, democratic political processes, and economic competition. Opposed to this (68, 10, 20, 34, 104, 40) is the approval of cliques, power politics, and relativized morality. Low scores would indicate agreement with the former, high scores with the latter.

CLUSTER II. Eleven questions correlated ± .8001 to .3884 with the cluster domain. The positively correlated questions were 33 and 47 of the definers, and 120, 39, 36, and 115 from other categories; negatively correlated were 85 and 78 definers, and 116, 117, and 75 from

other categories. The positively associated questions and the low scores would enforce contracts under adverse circumstances, support law enforcement, and react negatively to the nonenforcement of rules. The negatively associated questions and high scores also favor the enforcement of contracts under adverse circumstances, and include a miscellany of attitudes opposing civil rights as well as more frequent changes of law by the legislature than the courts, and denying a tendency to withdraw from competition.

CLUSTER III. Seventeen questions correlated +.6048 to +.3121 with the cluster domain; there were no negative correlations. The questions were 49, 9, 55, 79, 15, 96, 28, 73, 114, 106, and 27 of the domain, and 103, 2, 109, 6, 71, and 99 from other categories. Associated with low scores in this cluster is an affirmation of the need for and willingness to obey, law rather than all the conditions mentioned in the questions. Justice and participation are affirmed as virtues; and duties disparaging to law and political institutions are denied. This category is the most reliable measured by its defining variables, and the cluster scores lead on it are the most valid.

CLUSTER IV. Seven questions correlated with the cluster domain between +.3783 to +.3135. The questions were 3, 22, 54, 68 of the domain and 14, 41, and 48 from other categories. 41, 54, and 68 were positively correlated with the cluster domain; 3, 14, 22, and 48 were negatively correlated with the domain. Two themes are conjoined in opposition here: on one side, the right of human beings to exploit space for themselves and the importance of social reality over individual reality are affirmed by individuals with low scores; on the other side, man's collective right to exploit space's resources is

denied, and either the law's power to uplift the soul is affirmed or that "the human soul is destined for a wish" is denied by those with high scores. This category has the second least reliable group of definers of the eight legal-philosophic categories and yields the second least valid domain scores.

CLUSTER V. Eleven questions correlated +.5506 to +.3245 with the cluster domain; there were no negative correlations. These questions were 97, 74, 57, 60, 23, 21, 4, 108, and 82 of the definers, and 70 and 72 from other categories. Low scores would indicate support, at every opportunity, for precedent, routine, the law as it stands, and "legal forms," and deny and disparage arguments or events which oppose the received social order. This is the second most valid and reliable category when only its definers are considered.

CLUSTER VI. Ten questions correlated ±.4906 to .3196 with the cluster domain. These were 90, 110, 72, 59, and 103 of the definers, and 30, 66, 69, 101, and 106 from other categories. All but 101 and 59 were positively correlated with the cluster domain. Low scores on these questions would indicate affirmation of the values and virtues of justice, patriotism, cooperation, and the need for punishment of civil disobedience. High scores would indicate agreement with statements affirming that justice is social vengeance and that scientific techniques should be used to make law more efficient. This is the least valid and least reliable category when only its defining variables are considered.

CLUSTER VII. Seventeen questions correlated ±.6724 to ±.3099 with the cluster domain. Questions 96, 6, and 84 of the definers, and 59, 42, and 10 from other categories were positively correlated with the

cluster domain; questions 37, 95, 43, and 61 of the definers and 52, 64, 63, 81, 19, 80, and 53 from other categories were negatively correlated with the cluster domain. The positively correlated questions and low-scoring subjects deny the possibility of a society governed by love rather than by law, indicate a desire for using technology to increase the efficiency of law enforcement and place the burden of morality on the individual. High-scoring individuals give extensive support to codified rules and authoritarian leadership for groups and "young people," but limits law to a political rather than moral function. This is the second most valid and reliably defined of the eight legal-philosophical categories.

CLUSTER VIII. Ten questions correlated $\pm.4952$ to $\pm.3220$ with the cluster domain. The positively correlated questions were 26, 100, 1, 87, 52, and 39 of the definers and 118, and 67 from other categories; only two questions, 12, and 108, were negatively correlated, neither were definers. The questions positively associated with the cluster domain and yielding low scores affirm a need for group leadership and formal channels for the adjustment of grievances. A willingness to allow the majority to rule without the protection of minority rights including their own, and a denial of the value of tolerance and morality as the bases of law and social progress are also associated. The negatively associated questions which yield high scores on this cluster deny law the function of providing individual freedom in society and approve capital punishment.

CLUSTER IX: Fourteen questions correlated $\pm.6292$ to $\pm.3121$ with the cluster domain. The positively correlated questions were 46, 58, 16, 73, 19, and 43 from the definers and 24, 45, and 22 from other

categories. The questions associated with the cluster domain and with low scores indicate a desire for codified, pre-arranged, peaceful use of space governed by the United Nations. Closely associated with these attitudes are condemnations of extra-terrestrial exploitation and of authoritarian leaders. Negatively correlated questions and high scores assert that the United States should indulge in extra-terrestrial territorial expansion if Russia does, and agree that law is, and should be, a social contract reflecting "social reality" but leaving morality to the individual. Both "competition and monopoly" are viewed as "deplorable ideals."

Profile Scores on the Rationally Predefined Categories. The profile scores and the profile types are again based on simple transformations of the subject's total score on all the variables selected to define the category. A graph of the means of the profile types can be seen in Table 8; graphs of the defining members of the profile types and of members of the extended profile groups are included in Appendix 14. The differential characteristics of the profiles are noted briefly, but because the profile scores are based completely on the *a priori* definers, the interpretation of these exceedingly complex sets of questions is left to their author, T. A. Cowan.

RELIABILITY. The reliabilities of the composite scores of the individuals selected to define the profile groups are quite high (from .9686 to .9123) even though some of the defining individuals may be lowering the reliability (see Table 7).

VALIDITY AND CLUSTER DOMAIN SCORES. The domain validity is high indicating that an extended group of similar subjects would obtain similar scores (see Table 7). The range of correlations of the scores

Table 7. Reliability, Validity and Cluster Scores for the Defining Members of the Five Groups of Individuals with Similar Profiles of Scores on the Nine Rationally-Defined Categories[17]

Individual Clusters	No. of Definers	Reliability of the Cluster Scores	Percent of Definers Detracting from Reliability	Range of Correlation	Range of Communality	Range of Correlation of Scores with the Cluster Domains (Cluster Scores)	Domain Validity of the Cluster Scores
1	5	.9597	0.0	.8483-.7336	.9372-.7628	.9597-.8299	.9796
2	4	.9553	25.0	.8365-.7205	.9419-.7509	.9399-.8096	.9774
3	4	.9686	50.0	.8327-.6893	1.0072-.8475	.9579-.7929	.9842
4	4	.9123	75.0	.4993-.3437	.8992-.7321	.7781-.5356	.9551
5	4	.9150	25.0	.5880-.5330	.8700-.6961	.7816-.7085	.9565

[17]The data summarized in Table 7 is given in full in Appendix 13.

of the defining subjects with the cluster domain (cluster scores) indicates that, except for Profile Group 4, all the individuals defining the profile groups can be expected to have similar scores on the variables in a given category. The range of correlation among the scores of defining subjects indicates that those in Profile Groups 1, 2, and 3 are ordered quite similarly by the variables in the categories, but this is only moderately true in Profile Group 5, and much less so in Profile Group 4. As other individuals are added to the profile groups they will vary more widely even though they are most similar to the group to which they are added.

The range of correlation among the cluster domain scores (.4883 to -.2602) indicates that the profile groups are not completely independent. Profile Group 1 correlates .3238 with Profile Group 3 and .4883 with Profile Group 5. In fact, Group 5 shows a small correlation with all the profile groups; Profile Group 4 is most independent, its highest correlation, .1259, is with Group 5.

PROFILE GROUP 1. The defining members of this group have the lowest mean score on Category III. On Categories I, II, IV, V, VI their mean score is within one standard deviation below the mean; on Categories VII and VIII their mean score is slightly above the mean. The subjects defining this type are two law students, two persons from the second Penthouse group, and one miscellaneous person. The extended profile group includes a third of the Penthouse II subjects, a third of the miscellaneous group, half the law students, and only one person from Penthouse I. The inclusiveness of the type would seem to indicate that it might have substantial generality.

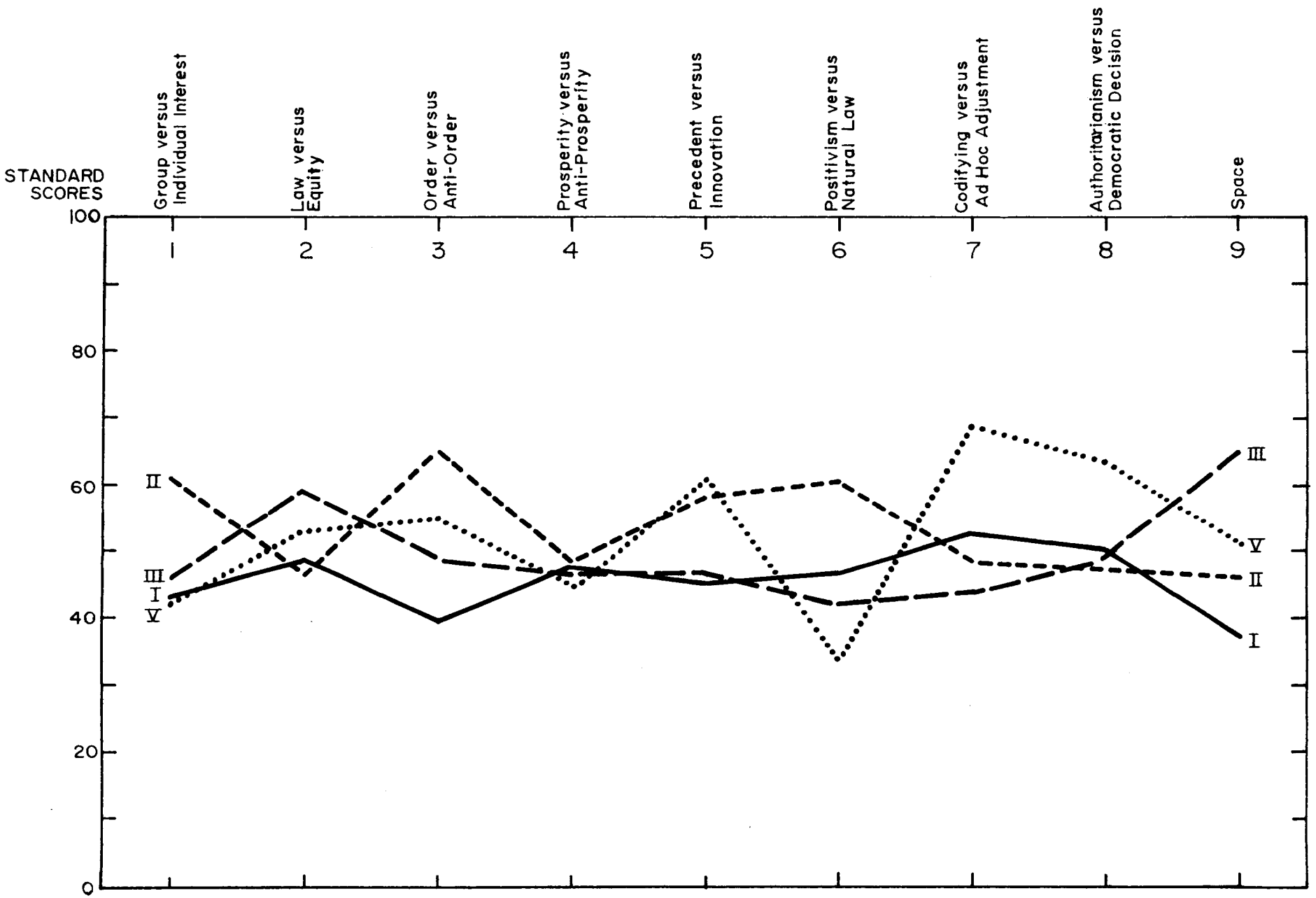


TABLE 8. Means of Profile Types on Pre-defined Categories (IV is omitted)

PROFILE GROUP 2. This group has a sharply peaked and valleyed mean profile. On three categories, I, III, and VI, the mean scores are both more than a standard deviation above the mean and the highest scores of any group. On Categories II and VIII, although the scores are within one standard deviation of the mean for all subjects, they are the lowest scores among the profile types. On Category IV their mean score is just below the mean, but the highest of the profile types.

The defining members of this group are equally divided between Penthouse I subjects and the miscellaneous group. The extended group includes two-thirds of the Penthouse I subjects and almost one-third of the miscellaneous group. Only one law student was included.

PROFILE GROUP 3. The mean score of this group is within one standard deviation of the mean on all the categories. Its highest score is on Category II and its lowest on Category VII. It sets the outer limits for both these categories. Three of the four defining individuals are law students, the fourth is from the miscellaneous group. The extended group contains seven law students, four miscellaneous persons, two members of the second Penthouse group, and no one from the first Penthouse group.

PROFILE GROUP 4. The mean profile for this group has been omitted because the defining members were extremely divergent in both the height and the shape of the profiles.

PROFILE GROUP 5. This group's mean profile is within one standard deviation of the mean on Categories I through IV, although it marks the lowest scores on I and IV. On Categories V, VII, and VIII it is more than one standard deviation above the mean, and in fact, approaches the second standard deviation on Category VII. In Category VI, this group is approximately one and one-half standard deviations below the

mean. Members of all subject groups except Penthouse I define and compose this group.

III. General Evaluation and Suggestions

First of all, for a psychologist, questionnaire and test construction is a long, tedious, time-consuming process. The construction of a single reliable and valid scale has earned many a graduate student his doctorate. This study is a good beginning, and for exploratory purposes, a useful test though not, perhaps, for precisely its intended purposes.

The first major problem is that many of the questions do not elicit reliable responses. If tested again, the responses of the same people might be quite different. This blame can be placed on the questions; many of them are ambiguous and others are phrased in such a way that it is difficult to give an answer to the whole question without reservation or resort to the "don't know" response. The fault does not lie in having too few questions, although there are too few questions in each category. The scarcity of questions pertinent to a single domain also affects the reliability of the measurement of opinion or attitude in that domain, in that, up to a point, reliability can be increased by the addition of pertinent questions, i.e., questions which are highly correlated with the domain. Another effect of the lack of reliability is that the members of a profile group, in both the height or intensity and in the pattern of their profiles, show wide variability; they are not really closely similar cohesive groups.

On a more cheerful note, the predefined categories and the empirically derived clusters of variables do show some correspondence.

Category I contains the defining variables of Cluster VI. Category III contains the three defining variables of Cluster III, and two of the four defining variables of Cluster I plus several of the members of this cluster when it is expanded to include similar variables. Category IV contains the definers of Cluster IV. Category VIII contains one of the definers of Cluster V and several members of the expanded cluster. Categories II and VI are composed primarily of isolated questions and members of extended clusters, but contain no cluster definers. Categories V and VII are a hodgepodge.

In terms of the composition of the profile groups on the empirical clusters only the law students form a cohesive group. The second group of Penthouse subjects and the miscellaneous group are scattered across the five profile types although the miscellaneous group defines Group 3. The first group of Penthouse subjects are absent from Profile Group 3 and are most visible in Profiles 2 and 5, both of which indicate a certain degree of hostility toward society in general or toward political freedom. One of the more interesting possibilities here is to compare these scores with the other psychological data which has been collected in the Penthouse.

To use the questionnaire in the future, questions and variable Clusters IV and VI might be deleted with sufficient faith in intuitive guesses at the values of the questions in the predefined categories, those categories could be divided into two negatively correlated opposing groups of variables, dropping in the process all the unreliable and/or unrelated questions. With sufficient time, the categories could be enlarged and the clusters expanded to include additional questions of known reliability and validity. An alternative procedure would be to

attempt a Guttman scaling in which judges would order the statements according to the degree of the attitude expressed by them.

APPENDICES TO CHAPTER VII

APPENDIX I

PENTHOUSE LEGAL QUESTIONNAIRE II, WEIGHTED SCORES, AND MEAN SCORES

(The * denotes questions contained in the original questionnaire, but eliminated before analysis.)

		Weighted Scores			Mean Scores
		Yes	Don't Know	No	
1.	I believe strongly that the majority should not impose its will on the minority.	5	3	1	3.1471
2.	Every human decision is an act of ultimate loneliness.	5	3	1	1.7353
3.	If precious metals are discovered on any other planets of the solar system, they should be left there.	1	4	5	4.5735
4.	It is inefficient to object to routine just because it is routine.	1	4	5	2.5000
5.	Laws that do not reflect social realities ought to be discarded immediately	5	2	1	2.7647
6.	If people could follow the ideal of loving one another, there would be no need for laws.	5	2	1	1.7941
7.	Truly fundamental law never changes.	1	4	5	3.4853
8.	I believe strongly in majority rule.	1	4	5	3.3824
9.	I sympathize with the difficult tasks that law enforcers have to perform.	1	4	5	2.2500
10.	Morality is essentially a group phenomenon.	5	2	1	3.1912
11.	Laws are merely conventional agreement among citizens.	5	2	1	2.8529

Appendix 1 - cont.

	Weighted Scores			Mean Scores
	Yes	Don't Know	No	
12. The proper function of law is to allow everyone the maximum amount of freedom in society.	1	2	5	2.2206
13. There is an unconscious set of laws governing all human societies.	1	3	5	2.0294
14. There should be no laws prohibiting or punishing abortion.	5	2	1	3.1029
15. A space colony should adopt no binding laws whatever.	1	2	5	1.4118
16. A space colony should be governed by laws drawn up by the United Nations.	1	4	5	3.5735
17. Justice is more important than health.	1	4	5	3.8382
18. Both competition and its opposite monopoly are deplorable ideals.	5	3	1	1.7647
* I dislike the situation in politics in which one man represents another.				
19. The purposes for which space is used should be detailed by international agreements. Since no one knows what peaceful purposes are, there should be a sustained effort to set these forth in clear and concise language.	1	4	5	2.000
* A space colony should adopt no binding laws whatever.				
20. Everyone should be able to explore space at will.	5	4	1	3.4559
21. Precedent should be suspect; life demands the constant creation of new forms.	5	2	1	3.3235
22. No extra-terrestrial exploitation whatever should be permitted.	1	4	5	4.5000
23. Precedent should be followed in law as well as in life.	1	2	5	3.5882
24. A group leader should always defer to the sentiments of his followers.	1	2	5	4.3235

Appendix 1 - cont.

	Weighted Scores			Mean Scores
	Yes	Don't Know	No	
25. The criminal law should be made a branch of medicine.	5	2	1	2.1176
26. I dislike other people's imposing their ideas of proper conduct on me.	5	2	1	4.1324
27. Law disregards the true facts of a case more often than not.	5	2	1	1.8382
28. Laws are generally behind the times.	5	2	1	3.5735
29. Law and politics are group phenomena but morality is essentially an individual matter.	5	3	1	3.0882
30. The passing of mild corrective corporal punishment from the educational process is regrettable.	1	2	5	3.0294
31. In a collision between truth and feeling, law should be on the side of feeling.	5	3	1	1.7941
32. Law represents a stabilizing influence in society and laws should not be changed unless a decided improvement will result.	1	4	5	2.3088
33. I would not condemn too seriously a poor man who stole from hunger.	5	2	1	4.3824
34. Living in a small group calls for a larger measure of self discipline than living in a large group.	5	3	1	3.7353
35. The Bill of Rights of the United States Constitution ought to be adopted by space colonies.	1	4	5	3.5147
36. There are occasions upon which a single individual is more important than the whole human race.	5	2	1	1.8088
37. No matter how small the group, if it exists for an appreciable time, it ought to have rules for governing it.	1	4	5	2.5294
38. As society becomes more collective, the quantum of law increases.	1	2	5	1.4559

Appendix 1 - cont.

	Weighted Scores			Mean Scores
	Yes	Don't Know	No	
39. Though unfortunate, it is a fact that law enforcers become brutalized.	5	2	1	2.7353
40. Politics is a game of power.	5	2	1	4.0441
* The United Nations should have the right to charter corporations for the exploitation of the resources of space.				
41. Law can do nothing for the fate of the human soul which is destined for anguish.	5	2	1	2.1765
42. Since space is for peaceful purposes only, military conscription should be forever barred on all space territory.	1	2	5	3.2059
43. All nations should bind themselves not to use space for any but peaceful purposes.	1	4	5	1.6765
44. While I may not approve of it, I tend to reward my friends and ignore my enemies in the disposition of any favors that I have to distribute.	5	2	1	4.3235
45. Psychiatric examination should be compulsory for everyone charged as a juvenile delinquent.	1	4	5	2.8824
46. No private parties but only national governments should have the right to use space.	1	4	5	3.9412
47. I would tend to hold a man to his contract once he has agreed to it.	1	2	5	2.0294
48. Social reality is more important than individual reality.	1	3	5	3.7647
49. Politics is essentially trickery.	5	2	1	1.9559
50. I dislike imposing my ideas of proper conduct on other people.	1	4	5	2.3088
51. Precedent is all right for law but it ought not to be followed in art.	1	3	5	3.2059
52. Every group needs a leader in order to get its work done.	1	4	5	2.8676

Appendix 1 - cont.

	Weighted Scores			Mean Scores
	Yes	Don't Know	No	
53. The way to cope with juvenile delinquency is to give every potential social deviate an opportunity for psychiatric or psychoanalytic help.	1	2	5	2.4559
54. Precious objects found on other planets should be exploited for the benefit of humanity.	1	4	5	1.7059
55. I try very conscientiously to obey all the laws I know about.	1	4	5	3.3971
56. Disobedience of one law leads to disobedience of another.	1	2	5	3.8824
* As the quantum of law increases, society becomes less rather than more nearly free.				
57. Legal forms save time and promote efficiency.	1	4	5	2.8824
58. There should be established a space police force by the United Nations.	1	3	5	3.0000
59. Law should avail itself of scientific techniques in order to become more efficient.	5	2	1	4.0147
60. I dislike legal forms.	5	2	1	2.2059
61. Special governing rules are demanded for all special societies.	1	4	5	2.4559
62. Law is in no sense a science.	5	2	1	1.6324
63. Freedom is the recognition and acceptance of necessity.	1	4	5	3.6176
64. War is the direct antithesis of law.	1	2	5	3.9412
65. The basis of law and its ultimate justification is religion.	1	4	5	4.2941
66. One should go a long way to act co-operatively in any group in which he finds it necessary to live.	1	2	5	1.6176
67. The only true basis for all law is morality.	5	2	1	2.3382

Appendix 1 - cont.

		Scaled Scores			Mean Scores
		Yes	Don't Know	No	
	I believe one should reward his friends and withhold reward from his enemies.				
	While the instinct to devise special rules appears in all special societies this tendency is to be opposed by rational people.				
68.	If Russia appropriates a part of an extra-terrestrial body such as the moon or a planet, then the United States should do the same.	5	4	1	2.6765
69.	Where a group is small, differences should be adjusted on an informal basis.	1	2	5	1.7206
70.	A scientific study of laws already on the books would probably result in most of them being discarded.	5	2	1	2.5588
71.	Politics is the duty of every citizen.	1	4	5	2.3235
72.	I believe a person has the right to engage in civil disobedience if his conscience so directs him.	5	2	1	3.6324
73.	Only the barest minimum of laws should be devised for the governance of space colonization.	5	2	1	3.2647
74.	Routine is a great time saver.	1	4	5	2.8824
75.	Humanity as a whole is more important than the single individual.				
76.	The legislature should change laws more willingly and more often than courts.	1	2	5	2.3971
77.	There is a strong moral obligation to discover the laws of one's country and to obey them.	1	4	5	2.7059
78.	I try to avoid routine work.	5	3	1	2.0882
79.	It is not the function of law to discover the truth but to make a decent adjustment of human conflict.	1	2	5	2.7794

Appendix 1 - cont.

	Weighted Scores Yes	Don't Know	No	Mean Scores
79. To cheat on the income tax laws is as bad in principle as to break any other serious criminal law.	1	2	5	2.6471
80. Law exists solely to teach men political morality; any other activity detracts from its main function.	1	4	5	4.2059
81. Young people suffer from lack of authoritative guidance from the culture.	1	4	5	3.4412
* Everyone should know the basic laws of the society in which he lives.				
82. It is impossible to obey all the laws on the books, so each man depends on his own conscience as to what laws he ought to obey.	5	2	1	3.1765
83. I believe the law should strive to treat everyone as an individual.	1	2	5	1.5000
84. If space colonies need rules of law to govern them they are failures and should be disbanded.	5	2	1	1.1912
85. I believe that a judge should not enforce a contract if real hardship is likely to result.	1	2	5	2.8676
* A constitution ought to be more enduring than a statute law.				
86. The democratic ideal presupposes competition in economic life.	1	2	5	2.7206
87. The notion that a group should be divided into leader and followers is distasteful to me.	5	2	1	1.7206
* Space should be reserved for peaceful uses only.				
* No military uses of space whatever should be permitted.				
88. Law is force.	5	2	1	2.9265
* Humanity is more important than any single human being.				

Appendix 1 - cont.

	Weighted Scores			Mean Scores
	Yes	Don't Know	No	
89. Freedom of opinion and communication are so vital to civilization that they should be guaranteed to space colonies by political force if necessary.	1	2	5	1.8824
90. Justice is the highest virtue a citizen can possess.	1	4	5	3.4853
91. One should not substitute his own judgment for the will of the majority but should strive to change the law.	1	2	5	2.6324
92. There should be no national sovereignty over the soil of any space body, planet, sun, or what-not.	1	2	5	2.4412
93. Patterns of political and legal behavior can be discerned in all societies however primitive or however small and specialized.	1	2	5	1.3824
94. Every society exists only for the individuals that compose it.	1	2	5	2.3676
95. It is the part of wisdom to set down in advance of colonization all the legal controls that look necessary and desirable.	1	4	5	2.7941
96. Harmonious living consists in each person cultivating his own personality on an individual basis.	5	2	1	2.5000
97. Courts should respect precedents.	1	4	5	2.2941
98. I believe that in the matter of civil disobedience the judge should take into account the defendant's claim that the violated law results in evil or anti-social behavior.	5	2	1	3.9118
99. The idea that all men should be equal before the law appeals strongly to me.	1	4	5	1.3382
100. It is better for differences in a group to be threshed out on some more or less formal basis in order to prevent serious trouble later on.	1	2	5	2.3088
101. Justice is social vengeance.	5	2	1	1.4118

Appendix 1 - cont.

	Weighted Scores			Mean Scores
	Yes	Don't Know	No	
* Space should be free from all national restrictions.				
102. Courts should never hesitate to overturn precedent if it seems that a fairer result can be obtained.	5	4	1	4.1029
103. The sentiment of love of one's country is nobler than the sentiment of love of one's self.	1	4	5	3.2059
104. I dislike seeing a group divide into coalitions and cliques.	5	2	1	3.4853
105. Whether or not a proposed use of space is peaceful depends primarily on the intention of the space explorers.	1	2	5	2.0441
106. I think that people who engage in civil disobedience should nevertheless pay the legal penalty for their disorderliness.	1	4	5	2.5588
107. If a rule is constantly violated, it ought to be repealed.	1	2	5	3.4853
108. Under no circumstances should society resort to capital punishment.	1	2	5	2.7941
109. I tend to hold myself rather strictly to a contract once I have agreed to it.	1	4	5	1.5000
110. Politics is the art of the possible.	1	2	5	2.0147
111. There is such a thing as the law of war.	1	4	5	2.0882
112. I subscribe to the notion that all law enforcement should be voluntary.	5	2	1	1.2500
113. I always tend to do things differently from the way I have previously done them.	5	3	1	1.1618
114. Political institutions are an affront to human dignity.	5	4	1	1.2941
115. Fundamental law should change only very slowly.	1	2	5	2.1765
* No one should be allowed to exploit space resources for private profit.				

Appendix 1 - cont.

		Weighted Scores			Mean Scores
		Yes	Don't Know	No	
116.	I tend to withdraw from competitive situations.	1	2	5	4.2059
*	The United Nations should have sovereignty over space.				
117.	Freedom of speech is a basic right that should be guaranteed to all space colonizers.	1	2	5	1.3529
118.	Society should tolerate social deviation maximally; only in this way can society progress.	5	2	1	3.3676
119.	The longer a legal precedent lasts, the less likely it is that it is a good one.	5	2	1	1.4706
120.	Rules don't bother me if they are not enforced.	5	2	1	2.2941

CHAPTER VII

APPENDIX 2

SCALING ALTERNATIVES FOR THE PENTHOUSE LEGAL QUESTIONNAIRE II

The application of a linear correlational technique to the data obtained by the questionnaire, requires the assumption of linear relationships among the variables. That is, in one form or another, the assumption is made that the responses to the questions can be conceived as denoting points on a straight line, rather than a curved one, so that the extent to which scores on the different questions demonstrate similar patterns of response can be evaluated. "Yes" and "No" can be conceptualized as opposite poles of opinion or attitude toward the problems posed in the questions, but "don't know" is difficult to place on that continuum. "Don't know" can be viewed as an indifference point, but the respondents were not so instructed and several of them pointed out that they used this response category as a catch-all. Because of the multiple uses and interpretations of the "don't know" category, the responses cannot be considered to form unidimensional scales in which the "don't know" logically occupies some one of the scale points.

Several possible alternative treatments of the "don't know" were considered. First, the inadequacy of the "don't know" category can be admitted and all "don't know" responses eliminated from the analysis thereby reducing the data to a dichotomous scale. This approach is methodologically soundest but also discards information, and if the number of "don't know" responses is large, it can reduce the possible level of correlation in the matrix. It would, however, yield an acceptable and fairly rigorous analysis which would avoid the complicating assumption of the following procedures.

Appendix 2 - cont.

Second, the "don't know" responses can be assigned, by some criteria acceptable to the investigator, to the alternative response categories. Pseudo-empirically, the "don't know" response can be assigned to the alternative response category having the plurality answer of the entire subject group or of the appropriate subgroup. This procedure collapses the scale to a dichotomy and increases the homogeneity among the subjects. With so small a group of subjects, it is an extremely arbitrary procedure; the number of persons determining the plurality may be only one or two more than the minority and, in some cases, no plurality exists. To the extent that the respondent may not have chosen the plurality response, this approach falsifies the data.

Third, the scale can be expanded and the "don't know" responses assigned values on the basis of the investigator's intuitive and arbitrary judgment of their meaning and interpretation. The "yes" and "no" answers were assumed to characterize or express strongly a basic orientation toward a single problem or dimension, law, and the "don't know" responses were assumed to mask a reluctance to express so strong an opinion as well as expressing "indifference, confusion, and no opinion." The scale was expanded to five points with the vollowing values associated: 1. strongly agree, 2. agree, 3. indifference point, 4. disagree, 5. strongly disagree. Although this method is arbitrary, it is in keeping with the purposes of the study--to explore attitudes toward law and legal problems--and introduces less distortion than the second alternative.

CHAPTER VII

APPENDIX 3

PERCENTAGE FREQUENCY DISTRIBUTION OF "YES," "NO," AND "DON'T KNOW"

ANSWERS FOR EACH SUBJECT ON THE PENTHOUSE

LEGAL QUESTIONNAIRE II

SUBJECT	RESPONSE ALTERNATIVES		
	Yes	No	Don't Know
Group I			
101	10.4	21.5	68.1
102	37.8	61.5	0.7
103	20.7	32.6	46.7
104	55.6	36.3	8.1
105	47.4	35.6	17.0
106	43.0	52.6	4.4
Group II			
201	60.0	34.8	5.2
202	58.5	34.8	6.7
203	56.3	43.7	
204	23.0	32.6	44.4
205	41.5	17.8	40.7
206	40.0	35.6	24.4
207	45.9	53.3	0.4
208	67.4	24.4	8.1
209	34.1	27.4	38.5
210	48.9	33.3	17.8
211	47.4	47.4	5.2
Group III			
301	47.4	45.9	6.7
302	28.9	47.4	23.7
303	45.9	43.7	10.4
304	60.7	37.0	2.2
305	57.0	41.5	1.5
306	46.7	50.4	3.0
307	48.9	29.6	21.5
308	25.9	48.9	25.2
309	43.7	53.4	3.0
310	39.3	37.8	23.0
311	55.6	44.0	
312	40.7	40.0	19.3
313	40.0	37.0	23.0
314	47.4	43.7	8.9
315	43.7	43.7	12.6
316	60.7	35.6	3.7
317	47.4	47.4	5.2
318	47.4	46.7	5.9
319	43.0	45.2	11.9
320	29.6	54.8	15.6
321	56.2	37.0	10.4
322	43.7	44.4	11.9
323	63.0	25.2	11.9
324	50.4	36.3	13.3
Group IV			
401	63.0	29.6	7.4
402	56.3	29.6	14.1
403	56.3	20.7	23.0
404	54.8	42.2	3.0
405	45.9	48.9	5.2
406	29.6	15.6	54.8
407	25.2	59.3	15.6
408	48.9	40.0	11.1
409	48.9	28.9	22.2
410	40.0	40.0	20.0
411	44.4	26.7	28.9
412	49.6	45.9	4.4
413	45.9	35.6	18.5
414	41.5	43.7	14.8
415	37.8	61.5	0.7
416	47.4	39.3	13.3
417	14.8	84.4	0.7
418	65.2	34.1	0.7
419	55.6	44.4	
420	23.7	52.6	23.7
421	25.2	22.2	52.6
422	38.5	47.4	14.1
423	42.2	54.1	3.7
424	38.5	49.6	11.9
425	48.1	51.9	
426	38.5	49.6	11.9
427	68.9	18.5	12.6

CHAPTER VII

APPENDIX 4

PERCENTAGE FREQUENCY DISTRIBUTION OF "YES", "NO", AND "DON'T KNOW" ANSWERS TO EACH QUESTION OF THE PENTHOUSE LEGAL QUESTIONNAIRE II

Response Alternatives:	GROUP I N = 6			GROUP II N = 11			GROUPS I & II ALL PENTHOUSE SUBJECTS N = 17			GROUP III LAW STUDENTS N = 24			GROUP IV MISCEL. N = 27			ALL SUBJECTS N = 68		
	Yes	No	Don't know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
Question																		
1	50	50		82	9	9	71	24	6	25	58	17	59	41		50	43	7
2	17	50	33		91	9	6	76	18	8	79	13	15	67	19	10	74	16
3		67	33		18	82		76	24	4	83	13	11	67	22	6	75	19
4	33	50	17	55	27	18	47	35	18	67	17	17	59	30	11	59	26	15
5	17	50	33	55	36	9	41	41	18	33	58	8	48	41	11	41	47	12
6	33	67		36	55	9	35	59	6	8	92		19	78	4	19	78	3
7	33	33	33	45	18	36	41	24	35	38	58	4	26	59	15	34	50	16
8		83	17	55	36	9	35	53	12	42	58		41	59		40	57	3
9	33	50	17	91	9		71	24	6	79	17	4	56	41	4	68	28	4
10	50	50		36	64		41	59		71	25	4	44	41	15	53	40	7
11	67	17	17	36	64		47	47	6	38	50	13	48	44	7	44	47	9
12	83	17		73	18	9	76	18	6	46	46	8	78	22		66	29	4
13	67	17	17	73	9	18	71	12	18	79	18	13	48	26	26	65	16	19
14	67		33	82	18		76	12	12	33	58	8	48	41	11	50	40	10
15	33	33	33		91	9	12	71	18		100		11	70	19	7	81	12
16	33	17	50	27	45	27	29	35	35	17	50	33	33	26	41	26	37	37
17	17	67	17	27	55	18	24	59	18	25	54	21	22	52	26	24	54	22
18		100		18	73	9	12	82	6	4	96		26	65	19	15	76	9
19	67		33	82	9	9	76	6	18	67	25	8	74	15	11	72	12	16
20	67	17	17	64	27	9	65	24	12	71	25	4	44	41	15	59	31	10
21	50	33	17	55	9	36	53	18	29	46	46	8	63	26	11	54	31	15
22		100			100			100		4	92	4	22	59	19	10	81	9
23	17	50	33	27	45	27	24	47	29	29	33	38	30	48	22	28	43	29
24	17	67	17	36	64		29	65	6	4	92	4	15	85		15	82	3
25		67	33	27	45	27	18	53	29	25	63	13	22	48	30	22	54	24
26	83	17		64	9	27	71	12	18	71	21	8	85	15		76	16	7
27		67	33	18	55	27	12	59	29	13	83	4	19	41	41	15	60	25
28	33	33	33	55	36	9	47	35	18	63	33	4	70	19	11	62	28	10
29	50	33	17	73	27		65	29	6	33	58	8	56	44		50	46	4

Appendix 4 - continued

Question	I Yes	I No	I Don't Know	II Yes	II No	II Don't Know	I & II Yes	I & II No	I & II Don't Know	III Yes	III No	III Don't Know	IV Yes	IV No	IV Don't Know	ALL Yes	ALL No	ALL Don't Know
30	33	76		36	36	27	35	47	18	50	42	8	41	56	4	43	49	9
31		83	17	9	82	9	6	82	12	17	71	13	11	67	22	12	72	16
32	50	17	33	73	9	18	65	12	24	79	17	4	52	41	7	65	25	10
33	100			82	9	9	88	6	6	79	17	4	85	15		84	13	3
34	17	67	17	91		9	65	24	12	79	13	8	44	37	19	62	25	13
35	17	67	17	36	27	36	29	41	29	38	38	25	22	41	37	29	40	31
36		67	33	9	64	27	6	65	29	21	67	13	19	70	11	16	68	16
37	17	67	17	55	36	9	41	47	12	83	8	8	48	37	15	59	29	12
38	67		33	82		18	76		24	92		8	52	15	33	72	6	22
39	50	33	17	36	45	18	41	41	18	42	38	21	33	44	22	38	41	21
40	83		17	45	27	27	59	18	24	83	13	4	74	19	7	74	16	10
41	17	50	33		64	36	6	59	35	17	54	29	37	37	26	22	49	29
42	50	17	33	55	45		53	35	12	46	29	25	52	26	22	50	29	21
43	83		17	91		9	88		12	79	13	8	78	15	7	81	10	9
44	100			82	9	9	88	6	6	83	17		78	19	4	82	15	3
45	33	33	33	64	18	18	53	24	24	58	33	8	41	52	7	50	38	12
46		83	17	27	55	18	18	65	18	21	54	25	26	63	11	22	60	18
47	83		17	82	9	9	82	6	12	63	25	13	74	22	4	72	19	9
48	17	50	33		82	18	6	71	24	17	46	38	26	56	19	18	56	26
49	33	33	33	18	64	18	24	53	24	8	79	13	30	63	7	21	66	13
50	67	17	17	73		27	71	6	24	67	25	8	59	37	4	65	25	10
51	17	33	50	45	36	18	35	35	29	42	42	17	26	52	22	34	44	22
52	33	67		45	55		41	59		63	29	8	48	41	11	51	41	7
53	33	33	33	73	18	9	59	24	18	46	38	17	52	33	15	51	32	16
54	67		33	91		9	82		18	79	13	8	52	26	22	69	13	18
55	17	83		45	45	9	35	59	6	50	50		33	67		40	59	1
56	17	83		27	55	18	24	65	12	38	63		19	74	7	26	68	6
57	17	33	50	36	27	36	29	29	41	58	21	21	44	26	30	46	25	29
58	33	17	50	55	9	36	47	12	41	46	29	25	37	37	26	43	28	29
59	50		50	91		9	76		24	79	21		63	19	19	72	15	13
60	50	33	17	55	36	9	53	35	12		88	13	37	59	4	28	63	9
61	17	67	17	64		35	47	24	29	67	13	21	56	19	26	57	18	25
62		67	33	9	64	27	6	65	29	8	92		22	70	7	13	76	10
63	33	50	17	55	18	27	47	29	24	13	42	46	26	48	26	26	41	32
64		67	33	36	64		24	65	12	33	63	4	15	67	19	24	65	12
65		100			91	9		94	6	21	75	4	22	70	7	16	78	6

App. 4 - [illegible]nt./

Question	I Yes	I No	I Don't Know	II Yes	II No	II Don't Know	I & II Yes	I & II No	I & II Don't Know	III Yes	III No	III Don't Know	IV Yes	IV No	IV Don't Know	[illegible] Yes	[illegible] No	[illegible] Don't Know
66	50	17	33	100			82	6	12	88	13		81	19		84	13	3
67	17	50	33	18	36	45	18	41	41	17	79	4	48	41	11	29	54	16
68	33	33	33	27	27	45	29	29	41	50	25	25	26	56	19	35	38	26
69	83		17	82	9	9	82	6	12	75	4	21	63	30	7	72	15	13
70		67	33	45	27	27	29	41	29	29	42	29	37	41	22	32	41	26
71	17	83		82	9	9	59	35	6	67	33		70	26	4	66	31	3
72	100			82	18		88	12		33	63	4	78	15	7	65	31	4
73	50	17	33	64	18	18	59	18	24	54	21	25	41	30	30	50	24	26
74	67	17	17	45	36	18	53	29	18	42	33	25	52	37	11	49	34	18
75		33	67	45	27	27	29	29	41	63	29	8	37	26	37	44	28	28
76	33	67		64	9	27	53	29	18	63	25	13	48	44	7	54	34	12
77	33	67		45	55		41	59		58	42		52	44	4	51	47	1
78	33	50	17	27	64	9	29	59	12	58	25	17	33	41	26	41	40	19
79	17	67	17	73	9	18	53	29	18	58	38	4	41	44	15	50	38	12
80		100		18	73	9	12	82	6	4	75	21	11	74	15	9	76	15
81	17	67	17	27	45	27	24	53	24	33	46	21	41	41	19	34	46	21
82	17	50	33	82	9	9	59	24	18	50	46	4	48	37	15	51	37	12
83	83		17	82	9	9	82	6	12	83	8	8	78	15	7	81	10	9
84		83	17	9	82	9	6	82	12		100		4	85	11	3	90	7
85	17	33	50	45	18	36	35	24	41	42	38	21	33	56	11	37	41	22
86	67	17	17	18	45	36	35	35	29	67	21	13	26	56	19	43	38	19
87	17	67	17	18	72	9	18	71	12	13	88		19	70	11	15	76	7
88	50	50		18	55	27	29	53	18	58	33	8	44	48	7	46	44	10
89	33	33	33	64	9	27	53	18	29	67	17	17	59	15	26	60	16	24
90	17	33	50	45	9	45	35	18	47	33	33	33	26	63	11	31	41	28
91	50	17	33	27	55	18	35	41	24	79	8	13	44	33	22	54	26	19
92	17	33	50	64	18	18	47	24	39	50	33	17	74	7	19	59	21	21
93	67	17	17	82	9	9	76	12	12	100			85		15	88	3	9
94	50	33	17	55	18	27	54	29	18	71	25	4	56	41	4	60	32	7
95	50	33	17	18	55	27	29	47	24	63	33	4	37	44	19	44	41	15
96	67	17	17	45	27	27	53	24	24	25	54	21	26	56	19	32	47	21
97	50	17	33	45		55	47	6	47	88	8	4	48	26	26	62	15	24
98	67		33	73	9	18	71	6	24	67	25	8	70	15	15	69	16	15
99	83	17		82	9	9	82	12	6	96	4		93	7		91	7	1
100	50		50	55	18	27	53	12	35	71	29		63	19	19	63	21	16

Appendix 4 - cont.

Question	I			II			I & II			III			IV			ALL		
	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
101		50	50	9	82	9	6	71	24	13	79	8	4	89	7	7	81	12
102	50	17	33	82		18	71	6	24	58	33	8	74	15	11	68	19	13
103	17	83		36	45	18	29	59	12	67	17	17	26	59	15	41	44	15
104	50	50		73	18	9	65	29	6	63	25	13	56	41	4	60	32	7
105	33	17	50	55	18	27	47	18	35	50	29	21	70	15	15	57	21	22
106	33		67	45	18	36	41	12	47	71	13	17	52	41	7	56	24	21
107		67	33	9	64	27	6	65	29	13	50	38	33	56	11	19	56	25
108	50	17	33	55	18	27	53	18	29	21	75	4	59	26	15	44	41	15
109	83	17		82	9	9	82	12	6	92	8		85	11	4	87	10	3
110		50	50	64		36	41	41	18	71	17	13	52	22	26	56	19	25
111	50		50	55		45	53		47	83	13	4	63	19	19	68	12	21
112		67	33	9	82	9	6	76	18		92	8	4	81	15	3	84	13
113		100		9	82	9	8	88	6		96	4	4	93	4	3	93	4
114	17	50	33	9	82	9	12	71	18		92	8	4	85	11	4	84	12
115	33	17	50	45	27	27	41	24	35	63	21	17	52	26	22	53	24	24
116		83	17	9	91		6	88	6	21	75	4	22	78		18	79	3
117	67	17	17	91	9		82	12	6	79	4	17	85	4	11	82	6	12
118	50	33	17	73	18	9	65	24	12	46	42	13	56	15	30	54	26	19
119		67	33		73	27		71	29	4	88	8	11	56	33	6	71	24
120	17	67	17	9	73	18	12	71	18	21	71	8	48	41	11	29	59	12

CHAPTER VII

APPENDIX 5

PERTINENT COMPONENT PROGRAMS OF BC TRY

The computer programs corresponding to the steps in the analysis are all components of Professor Tryon's BC TRY system. Except when noted the standard options were used.

COR2 computes the mean and standard deviation for each variable, and the Pearson product-moment correlation between all pairs of variables.

DVP estimates the communality, a measure of the generality of the individual differences on a given variable across the remaining variables, which is inserted in the diagonal of the matrix by CC5. The estimate selected was the highest correlation of the variable, a commonly used *ad hoc* estimate which is slightly biased upward.

CC5, using the diagonal value estimate from DVP, factors the matrix using 1) a predefined set of variables to define the dimensions or 2) empirically derived mutually collinear subsets of defining variables. In the later case the variable with the highest variance of squared correlations is selected as the central or pivot variable defining the dimension. Additional variables most collinear with the pivot variable and with each other (minimal collinearity for inclusion as a definer is set as a standard option at .4) are added. Factoring is terminated when .92 of the communality in the matrix is exhausted.

CSA2 computes oblique factor coefficients (correlations of the variables with the cluster domain), domain validities of the cluster scores, and groups or clusters together those variables having a communality above .2 with the definers of the dimension.

FACS computes simple sum (unweighted) scores of the subjects in standard score form (mean = 50, standard deviation = 10) on the oblique

cluster dimensions from CC5. Only the defining variables are used in calculating these scores.

EUCO computes a Euclidean distance score matrix of the subjects' scores from FACS.

To complete steps 4 and 5 components COR2, DVUP, CC5, and CSA2 are applied to this matrix of the cluster score of the individuals.

CHAPTER VII

APPENDIX 6

RELIABILITY, VALIDITY AND CLUSTER SCORES FOR THE DEFINING VARIABLES

OF THE SIX EMPIRICALLY-SELECTED CLUSTERS OF VARIABLES

Category or Cluster	Defining Questions	Average Correlation with the Other Definers	Communality	Correlation with the Cluster Domain (Cluster Scores)
1. Strongly "pro-law," order, property, codification and authoritarian	37	.5243	.7504	.8147
	9	.4271	.5069	.6637
	81	.3591	.3410	.5580
	55	.3460	.3329	.5376
2. Freedom Congeries --Affirmative concept of freedom	117	.5882	.7509	.8583
	89	.5142	.5855	.7504
	75*	.3064	.2212	.4471

*This question may be detracting from the reliability of the cluster scores.

3. Strong "anti-law"	49	.4237	.5484	.7315
	15	.5119	.5441	.7150
	114	.5021	.5460	.7014
4. Property	3	.4606	.5100	-.6852
	54	.4432	.4752	.6593
5. Freedom Congeries --negative concept of freedom	50	.4450	.4793	.6687
	12	.4406	.4706	.6621
6. Group Interests	10	.5598	.6014	.7482
	29	.5598	.6014	-.7482

CHAPTER VII

APPENDIX 7

QUESTIONS ELIMINATED FROM THE EMPIRICAL CLUSTER ANALYSIS

BY COMMUNALITY CRITERION

All questions in the list had communalities below .2000.

1. I believe strongly that the majority should not impose its will on the minority.

6. If people could follow the ideal of loving one another, there would be no need for laws.

7. Truly fundamental law never changes.

13. There is an unconscious set of laws governing all human societies.

16. A space colony should be governed by laws drawn up by the United Nations.

18. Both competition and its opposite monopoly are deplorable ideals.

20. Everyone should be able to explore space at will.

22. No extra-terrestrial exploitation whatever should be permitted.

25. The criminal law should be made a branch of medicine.

31. In a collison between truth and feeling, law should be on the side of feeling.

33. I would not condemn too seriously a poor man who stole from hunger.

34. Living in a small group calls for a larger measure of self-discipline than living in a large group.

42. Since space is for peaceful purposes only, military conscription should be forever barred on all space territory.

43. All nations should bind themselves not to use space for any but peaceful purposes.

44. While I may not approve of it, I tend to reward my friends and ignore my enemies in the disposition of any favors that I have to distribute.

45. Psychiatric examination should be compulsory for everyone charged as a juvenile delinquent.

48. Social reality is more important than individual reality.

53. The way to cope with juvenile delinquency is to give every potential social deviate an opportunity for psychiatric or psychoanalytic help.

56. Disobedience of one law leads to disobedience of another.

57. Legal forms save time and promote efficiency.

62. Law is in no sense a science.

63. Freedom is the recognition and acceptance of necessity.

64. War is the direct antithesis of law.

65. The basis of law and its ultimate justification is religion.

67. The only true basis for all law is morality.

69. Where a group is small, differences should be adjusted on an informal basis.

71. Politics is the duty of every citizen.

74. Routine is a great time saver.

77. I try to avoid routine work.

78. It is not the function of law to discover the truth but to make a decent adjustment of human conflict.

82. It is impossible to obey all the laws on the books, so each man depends on his own conscience as to what laws he ought to obey.

84. If space colonies need rules of law to govern them they are failures and should be disbanded.

87. The notion that a group should be divided into leader and followers is distasteful to me.

88. Law is force.

92. There should be no national sovereignty over the soil of any space body, planet, sun, or what-not.

96. Harmonious living consists in each person cultivating his own personality on an individual basis.

99. The idea that all men should be equal before the law appeals strongly to me.

101. Justice is social vengeance.

Appendix 7 - continued

102. Courts should never hesitate to overturn precedent if it seems that a fairer result can be obtained.

105. Whether or not a proposed use of space is peaceful depends primarily on the intentions of the space explorers.

107. If a rule is constantly violated, it ought to be repealed.

108. Under no circumstances should society resort to capital punishment.

111. There is such a thing as the law of war.

113. I always tend to do things differently from the way I have previously done them.

115. Fundamental law should change only very slowly.

CHAPTER VII

APPENDIX 8

CORRELATIONS WITH THE CLUSTER DOMAIN, "PRO-LAW" RESPONSE (WEIGHT = 1), AND MEAN SCALED SCORES FOR THE VARIABLES DEFINING THE EMPIRICAL CLUSTERS AND FOR THE NOTABLE MEMBERS OF THE EXPANDED CLUSTERS

CLUSTER 1 - Strongly "pro-law," Order, Property, Codification and authoritarian

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
37	.8147	Yes	2.5294
9	.6637	Yes	2.2500
81	.5580	Yes	3.4415
55	.5376	Yes	3.3971
Expanded Cluster Members			
32	.6080	Yes	4.3824
90	.5843	Yes	3.4853
79	.5759	Yes	2.6471
72	.5416	No	3.6324
52	.5295	Yes	2.8676
76	.5130	Yes	2.7059
103	.5043	Yes	3.2059

Additional Cluster Members, cluster scores below .5000, in order of decreasing cluster scores are: 4, 66, 30, 104, 100, 61, 23, 95, 68, 106, 110, 59, 46, 86, 14, 73, 38, 17, and 36.

CLUSTER 2 - Freedom Congeries - Affirmative Concept of Freedom

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
117	.8583	Yes	1.3529
89	.7504	Yes	1.8824
75*	.4471	Yes	2.3971
Expanded Cluster Members			
85	.5088	Yes	2.8676
35	.5027	Yes	3.5147

Additional Cluster Members, cluster scores below .5000, in order of decreasing cluster scores are: 75, 94, 83, 112, 70, 5, 39, and 19.

*This question may be detracting from the reliability of the cluster scores.

Appendix 8 - continued

CLUSTER 3 - Strongly "Anti-Law"

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
49	.7315	No	1.9559
15	.7150	No	1.4118
114	.7014	No	1.2941

There are no Expanded Cluster Members.
Additional Cluster Members, cluster scores below .5000, in order of decreasing cluster scores are: 60, 2, 98, 97, 27, 41, 119, 109, and 11.

CLUSTER 4 - Property

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
3	-.6852	Yes	4.5735
54	.6593	Yes	1.7059

Expanded Cluster Member

120	.5106	No	2.2941

Additional Cluster Members, cluster scores below .5000, in order of decreasing cluster scores are: 116, 80, 51, and 58.

CLUSTER 5 - Freedom Congeries - Negative Concept of Freedom

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
50	.6687	Yes	2.3088
12	.6621	Yes	2.2206

Expanded Cluster Member

26	-.5590	No	4.1324

Additional Cluster Members, cluster scores below .5000, in order of decreasing cluster scores are: 24, 47, 40, 28, 118, 8, and 21.

Appendix 8 - concluded

CLUSTER 6 - Group Interests

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
10	.7482	No	3.1912
29	-.7482	No	3.0882

There are no Expanded Cluster members.

Additional Cluster Members are 93 and 91.

CHAPTER VII

APPENDIX 9

RELIABILITY, VALIDITY, AND CLUSTER SCORES FOR THE DEFINING INDIVIDUALS OF THE FIVE PROFILE TYPES ON THE EMPIRICALLY-DEFINED CATEGORIES

(The * denotes definers which may be detracting from reliability.)

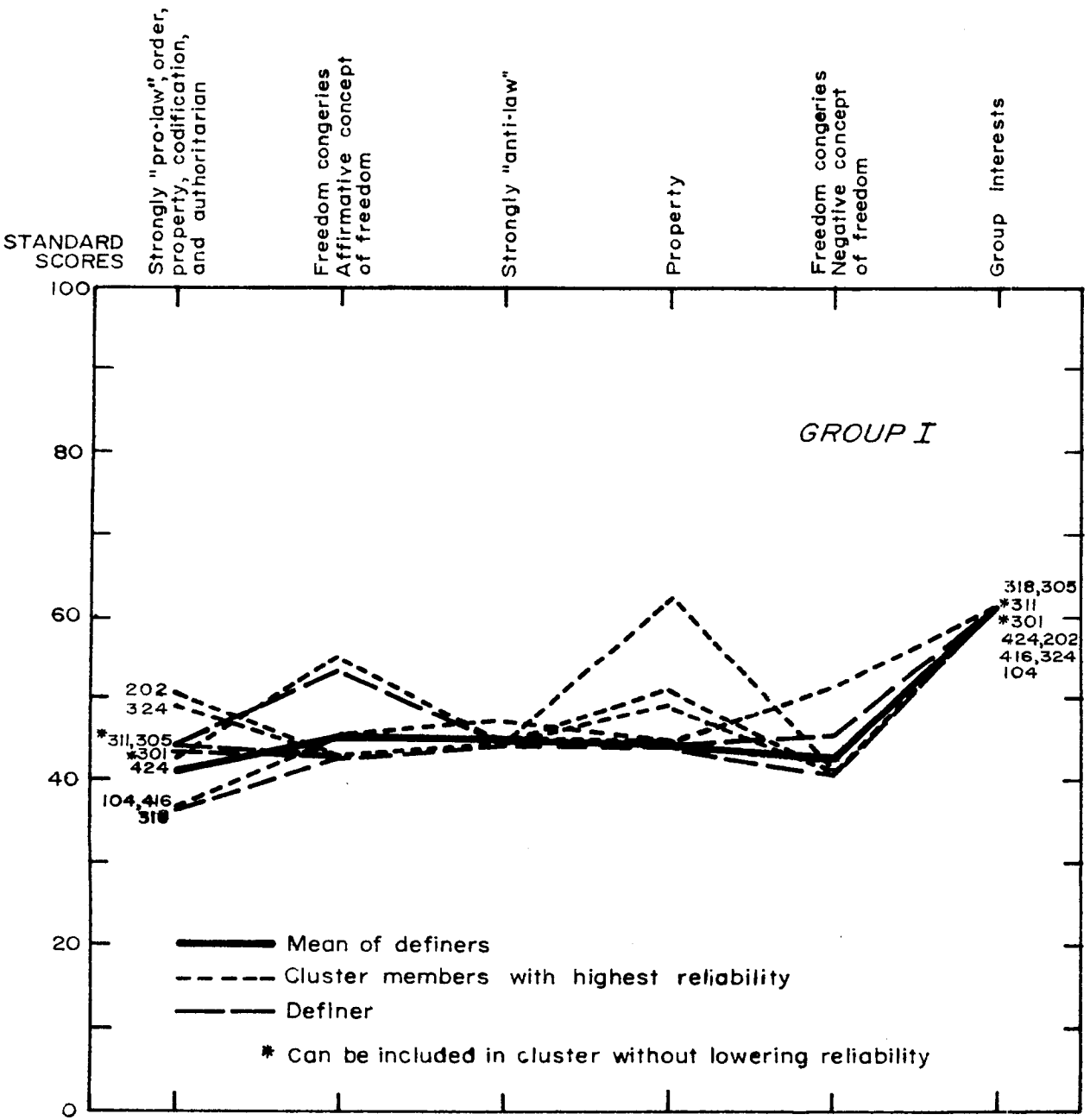
Profile Type	Defining Individuals	Average Correlation with the Other Definers	Communality	Cluster Scores
1	311	.9817	.9971	.9955
	301	.9803	.9938	.9940
	318*	.9681	.9738	.9817
	305*	.9601	.9816	.9735
2	209	.8966	.9726	.9693
	419*	.8817	.9677	.9532
	103*	.8752	.9838	.9462
	306*	.8660	.9432	.9362
	421*	.8593	.9732	.9290
	425*	.8528	.9636	.9219
	323*	.8106	.9720	.8763
	321*	.8028	.9708	.8679
3	403	.6969	1.0472	.8925
	402*	.6544	.7913	.8381
	410*	.6431	.7278	.8236
	321*	.4443	.9708	.5691
4	415	.9200	.9834	.9811
	204	.9105	.9867	.9709
	206*	.8628	.9812	.9200
	205*	.8545	.9540	.9112
	422*	.8491	.9541	.9055
5	207	.8088	.9967	.9731
	319*	.7175	.9108	.8634
	102*	.7173	.9384	.8631
	305*	.5193	.9816	.6248

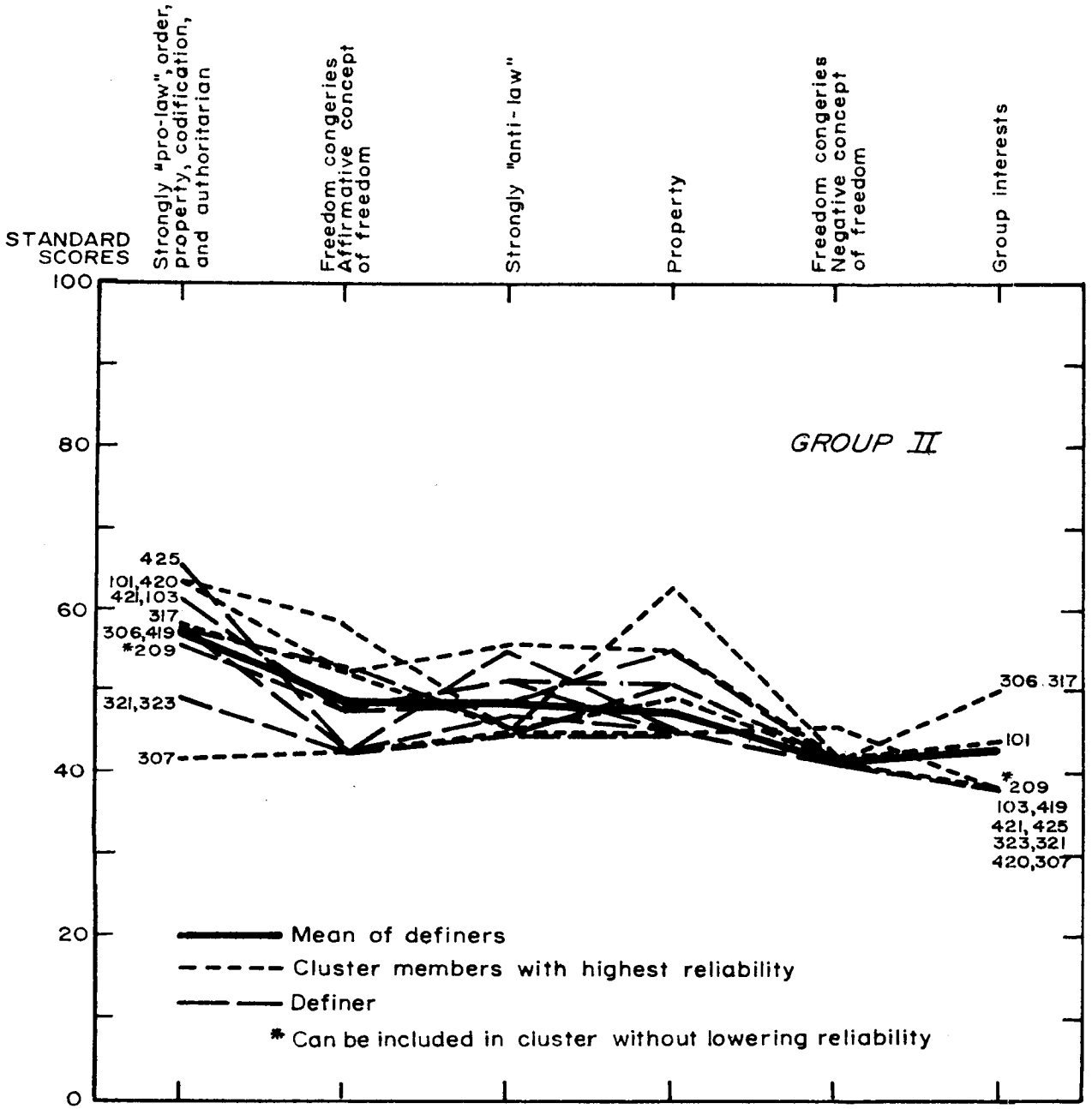
CHAPTER VII

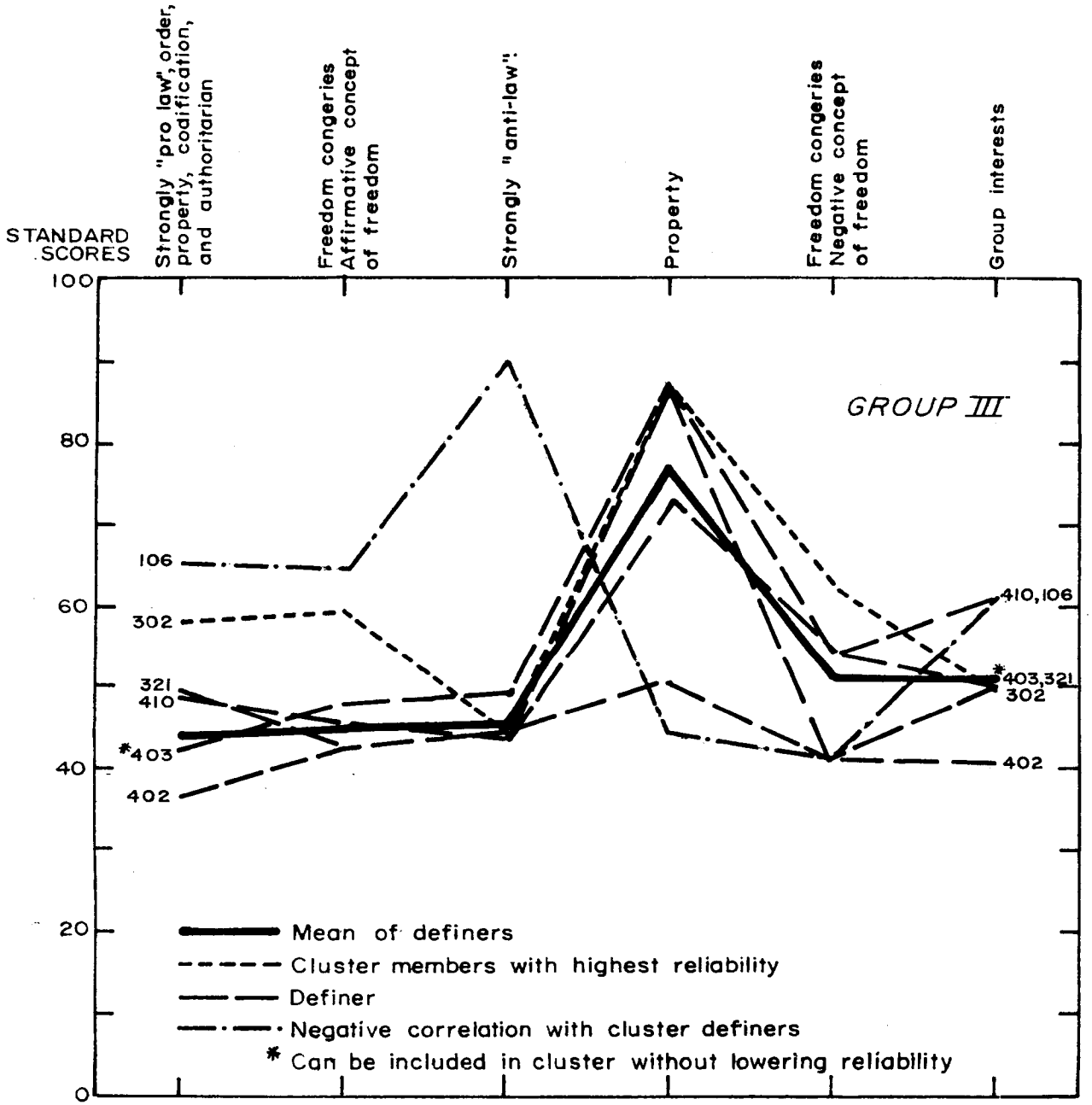
APPENDIX 10

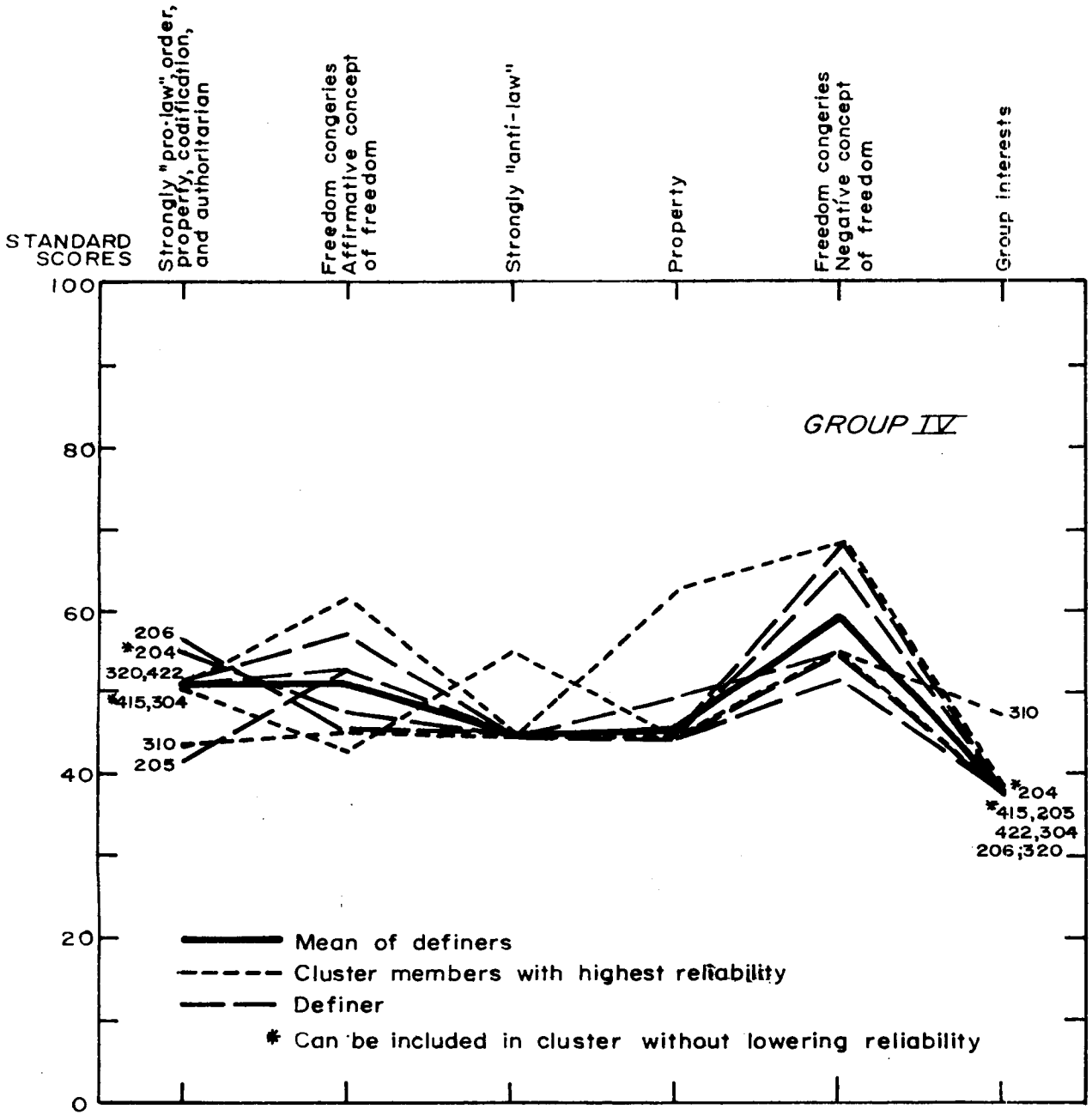
PROFILES OF THE DEFINING MEMBERS OF THE FIVE PROFILE TYPES ON THE EMPIRICALLY-SELECTED CLUSTERS OF VARIABLES, THE MEAN FOR THE PROFILE TYPE, AND PROFILES OF SOME MEMBERS OF THE EXTENDED PROFILE GROUP

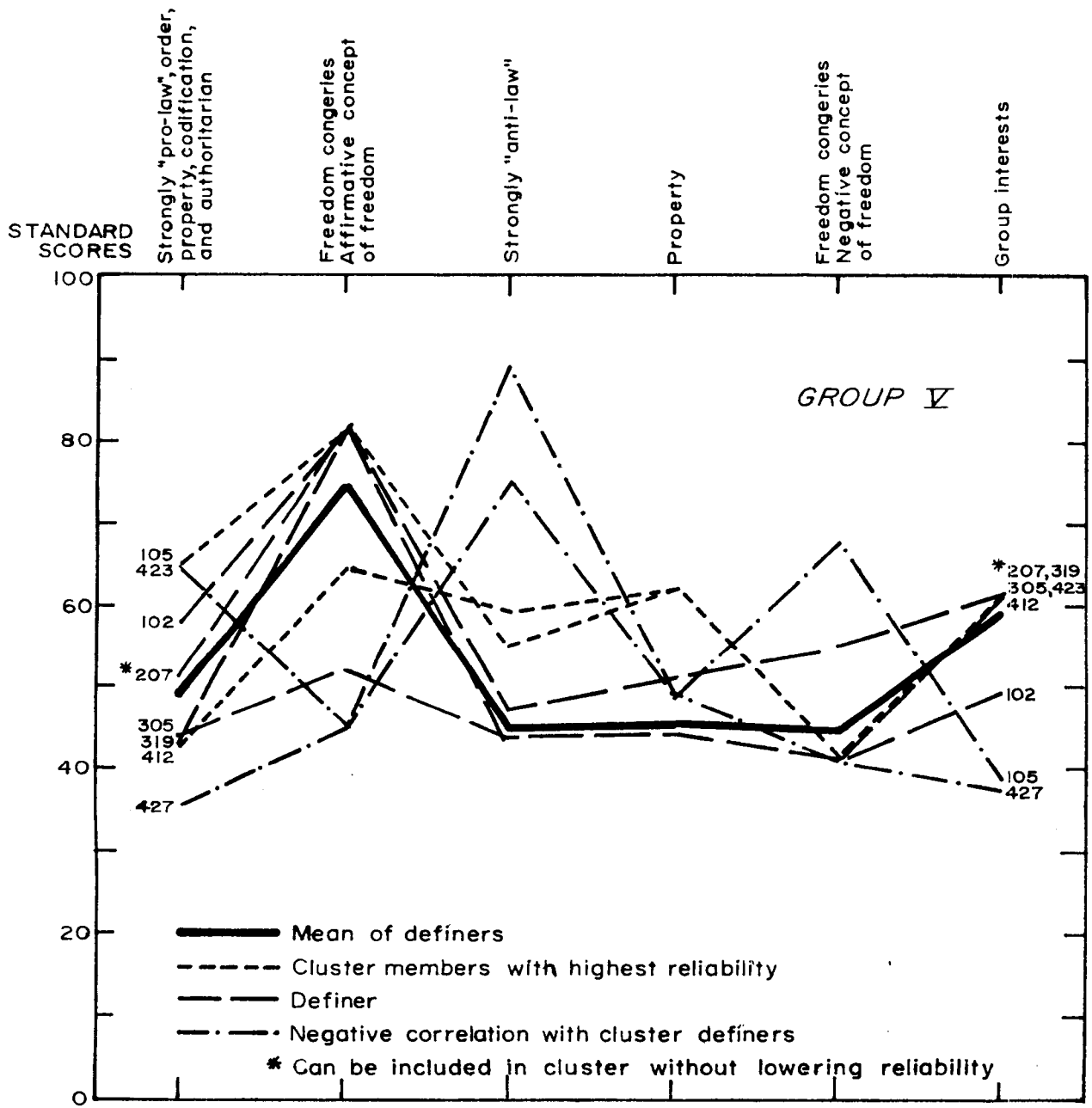
Note: The relatively high unreliability of the questions composited to form variable clusters, the number of individuals who define profile types but are simultaneously detracting from the reliability of the types, and the small number of subjects, yield profile types in which the profiles of the defining individuals can be relatively disparate in both pattern and height.


STANDARD SCORES
100
80
60
40
20
0
Strongly "pro-law", order, property, codification, and authoritarian
Freedom congeries Affirmative concept of freedom
Strongly "anti-law"
Property
Freedom congeries Negative concept of freedom
Group interests
GROUP I
202
324
*311,305
*301
424
104,416
318
318,305
*311
*301
424,202
416,324
104
Mean of definers
Cluster members with highest reliability
Definer
* Can be included in cluster without lowering reliability


STANDARD SCORES
Strongly "pro-law", order, property, codification, and authoritarian
Freedom congeries Affirmative concept of freedom
Strongly "anti-law"
Property
Freedom congeries Negative concept of freedom
Group interests
100
80
60
40
20
0
GROUP II
425
101,420
421,103
317
306,419
*209
321,323
307
306.317
101
*209
103,419
421,425
323,321
420,307
Mean of definers
Cluster members with highest reliability
Definer
* Can be included in cluster without lowering reliability


STANDARD SCORES
Strongly "pro law", order, property, codification, and authoritarian
Freedom congeries Affirmative concept of freedom
Strongly "anti-law"
Property
Freedom congeries Negative concept of freedom
Group interests
100
80
60
40
20
0
GROUP III
106
302
321
410
*403
402
410,106
*403,321
302
402
Mean of definers
Cluster members with highest reliability
Definer
Negative correlation with cluster definers
* Can be included in cluster without lowering reliability


STANDARD SCORES
Strongly "pro-law" order, property, codification, and authoritarian
Freedom congeries Affirmative concept of freedom
Strongly "anti-law"
Property
Freedom congeries Negative concept of freedom
Group interests
100
80
60
40
20
0
GROUP IV
206
*204
320,422
*415,304
310
205
310
*204
*415,205
422,304
206;320
Mean of definers
Cluster members with highest reliability
Definer
* Can be included in cluster without lowering reliability


STANDARD SCORES
Strongly "pro-law", order, property, codification, and authoritarian
Freedom congeries Affirmative concept of freedom
Strongly "anti-law"
Property
Freedom congeries Negative concept of freedom
Group interests
100
80
60
40
20
0
GROUP V
105
423
102
*207
305
319
412
427
*207,319
305,423
412
102
105
427
Mean of definers
Cluster members with highest reliability
Definer
Negative correlation with cluster definers
* Can be included in cluster without lowering reliability

CHAPTER VII

Appendix 11

RELIABILITY, VALIDITY AND CLUSTER SCORES FOR THE DEFINING VARIABLES

OF THE EIGHT RATIONALLY-PREDEFINED CATEGORIES AND THE

CATEGORY OF SPACE QUESTIONS

(The * denotes definers which may be detracting from the reliability.)

Category	Defining Questions	Average Correlation with Other Definers	Communality	Cluster Scores
1. Group Interests vs. Individual Interests	94	.1456	.5220	.5190
	10	.1116	.4106	-.3978
	20	.1112	.4679	-.3962
	34	.1077	.3033	-.3837
	104	.1023	.2968	-.3646
	83	.0979	.4627	.3489
	38	.0920	.2056	.3279
	2	.0804	.3174	.2864
	14	.0796	.5141	.2838
	36	.0680	.7231	-.2423
	35	.0676	.2259	.2410
	69	.0632	.3306	.2254
	48*	.0451	.3506	.1606
	46*	.0419	.5776	.1492
	29*	.0240	.2183	.0857
	12*	.0216	.2828	-.0771
2. Equity vs. Law	85	.3203	.8902	-.8001
	33	.2041	.5517	.5098
	47	.1632	.4086	.4078
	78	.1203	.1875	-.3005
	98*	.1141	.3609	.2851
	31*	.1047	.2519	.2614
	70*	.0951	.4027	.2374
3. Anti-Order vs Order	49	.1993	.7295	.6048
	9	.1687	.5232	.5120
	55	.1668	.5303	.5061
	79	.1661	.5458	.5040
	15	.1642	.5385	.4984
	76	.1521	.3935	.4617
	28	.1281	.3174	.3886
	73	.1236	.5623	.3752
	114	.1049	.2868	.3184
	106	.1032	.4035	.3133
	27	.1029	.2098	.3121

Appendix 11 - continued

Category	Defining Questions	Average Correlation with Other Definers	Communality	Cluster Scores
	56	.0977	.1686	.2966
	118	.0967	.4324	.2935
	64	.0915	.4189	.2777
	112*	.0644	.1705	.1954
	101*	.0466	.4466	.1413
	41*	.0375	.4790	.1138
	82*	.0365	.0832	.1109
	62*	.0121	.2361	.0368
4. Anti-Property vs. Property	3	.2270	.5641	-.5781
	54	.1925	.5430	.4903
	68	.1713	.5958	.4364
	22	.1232	.3339	-.3138
	92*	.0567	.1970	.1443
5. Innovation vs. Precedent	97	.1768	.5293	.5506
	74	.1567	.5509	.4880
	57	.1496	.5540	.4657
	60	.1464	.3789	.4558
	23	.1408	.5051	.4383
	21	.1203	.3959	.3745
	4	.1157	.1988	.3601
	113	.1133	.3839	.3526
	32	.1042	.3265	.3245
	102	.0866	.1742	.2697
	77*	.0535	.2525	.1667
	51*	.0372	.1421	.1159
	119*	.0307	.2907	-.0956
	63*	.0123	.3447	-.0384
6. Natural Law vs. Positivism	90	.1042	.4566	.4351
	110	.1000	.3044	.4178
	72	.0940	.4190	.3926
	103	.0922	.7117	.3851
	59	.0884	.3435	-.3692
	80	.0690	.2751	.2886
	111	.0580	.1880	.2424
	67	.0557	.2505	.2325
	13	.0544	.2842	.2273
	35	.0492	.2259	.2054
	7*	.0343	.4945	-.1431
	11*	.0309	.3593	.1289
	29*	.0122	.2183	-.0509
	115*	.0105	.3012	-.0440
	65*	.0070	.1347	.0293

Appendix 11 - continued

Category	Defining Questions	Average Correlation with Other Definers	Communality	Cluster Scores
7. Ad hoc Adjustment vs. Authoritarianism	37	.2305	.8283	-.6724
	96	.1918	.4038	.5593
	95	.1529	.3115	-.4459
	43	.1523	.6419	-.4441
	84	.1411	.4471	.4114
	61	.1205	.2826	-.3515
	6	.1180	.2797	.3442
	66	.0936	.4488	-.2730
	120*	.0433	.4669	.1264
	107*	.0354	.1310	.1032
	75*	.0137	.4334	.0400
8. Democratic Decision vs. Authoritarianism	26	.1404	.4212	.4954
	100	.1284	.4738	.4531
	1	.1233	.3421	.4351
	87	.1215	.3288	.4287
	52	.1049	.6278	.3700
	39	.0936	.3015	.3303
	91	.0837	.2676	.2953
	50	.0755	.3396	-.2664
	88	.0713	.4537	.2515
	71	.0687	.2640	-.2424
	30	.0667	.3659	.2355
	40*	.0522	.2779	.1840
	99*	.0502	.2485	.1770
	81*	.0459	.2580	.1620
	8*	.0422	.2701	-.1491
	24*	.0169	.2388	-.0595
9. Space Questions	46	.1883	.5776	.6292
	58	.1635	.5203	.5466
	16	.1315	.3433	.4394
	68	.1094	.5958	-.3656
	73	.1069	.5623	.3573
	19	.0984	.3131	.3288
	43	.0960	.6419	.3208
	42	.0841	.2959	-.2812
	20	.0753	.4679	.2518
	105	.0727	.1976	.2431
	15	.0726	.5385	-.2427
	89*	.0649	.3788	.2170
	117*	.0603	.3058	.2016
	92*	.0470	.1970	.1572
	3*	.0432	.5641	.1444
	84*	.0181	.4471	.0604

CHAPTER VII

APPENDIX 12

CORRELATIONS WITH THE CLUSTER DOMAIN, "PRO-LAW" RESPONSE (WEIGHT = 1), AND MEAN SCALED SCORES FOR THE VARIABLES, DEFINERS AND EXTENDED CLUSTER MEMBERS, WITH CLUSTER SCORES OF .3000 OR MORE AND THAT CANNOT REDUCE RELIABILITY

CLUSTER 1 - Group Interests vs. Individual Interests

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
94	.5190	Yes	2.3676
10	-.3978	No	3.1912
20	-.3962	No	3.4559
34	-.3837	No	3.7353
104	-.3646	No	3.4853
83	.3489	Yes	1.5000
38	.3279	Yes	1.4559
Expanded Cluster Members			
68	-.5648	No	2.6765
9	.5188	Yes	2.2500
32	.4747	Yes	2.3088
86	.4117	Yes	2.7206
89	.3962	Yes	1.8824
7	.3956	Yes	3.4853
71	.3796	Yes	2.3235
61	.3703	Yes	2.4559
40	-.3192	No	4.0441

Additional cluster members, including *'d definers, with cluster scores below .3000 in order of decreasing cluster scores are:
2*, 14*, 13, 88, 36*, 35*, 69*, 48*, 46*, 29*, and 12*.

Appendix 12 - continued

CLUSTER 2 - Equity vs. Law

Defining Variables	Cluster Scores	"Pro-Law" Response	Mean Scaled Scores
85	-.8001	Yes	2.8676
33	.5098	No	4.3824
47	.4078	Yes	2.0294
78	-.3005	Yes	2.7794
Expanded Cluster Members			
120	.4650	No	2.2941
39	.4371	No	2.7353
116	-.4146	Yes	4.2059
36	.4139	No	1.8088
117	-.3934	Yes	1.3529
75	-.3884	Yes	2.3971
115	.3045	Yes	2.1765

Additional cluster members, including *'d definers, with cluster scores below .3000 in order of decreasing cluster scores are: 98*, 31*, 70*, and 77.

CLUSTER 3 - Anti-Order vs. Order

49	.6048	No	1.9559
9	.5120	Yes	2.2500
55	.5061	Yes	3.3971
79	.5040	Yes	2.6471
15	.4984	No	1.4118
76	.4617	Yes	2.7059
28	.3886	No	3.5735
73	.3752	No	3.2647
114	.3184	No	1.2941
106	.3133	Yes	2.5588
27	.3121	No	1.8382
Expanded Cluster Members			
103	.5717	Yes	3.2059
2	.4289	No	1.7353
109	.3490	Yes	1.5000
8	.3292	Yes	3.3824
17	.3177	Yes	3.8382
99	.3175	Yes	1.3382

Additional cluster members, including *'d definers, with cluster scores below .3000 in order of decreasing cluster scores are: 56*, 118*, 64*, 112*, 101*, 41*, 82*, and 62*.

Appendix 12 - continued

CLUSTER 4 - Anti-Property vs. Property

Defining Variables	Cluster Score	"Pro-Law" Response	Mean Scaled Score
3	-.5781	Yes	4.5735
54	.4903	Yes	1.7059
68	.4364	No	2.6765
22	-.3138	Yes	4.5000
Expanded Cluster Members			
41	.5182	No	2.1765
14	-.4356	No	3.1029
48	-.4041	Yes	3.7647

A definer, 92, had a cluster score below .3000.

CLUSTER 5 - Innovation vs. Precedent

97	.5506	Yes	2.2941
74	.4880	Yes	2.8824
57	.4657	Yes	2.8824
60	.4558	No	2.2059
23	.4383	Yes	3.5882
21	.3745	No	3.3235
4	.3601	Yes	2.5000
113	.3526	No	1.1618
32	.3245	Yes	2.3088
Expanded Cluster Members			
72	.4100	No	3.6324
70	.3511	No	2.5588

Additional cluster members, including *'d definers are 102*, 77*, 51*, 119*, and 63*.

Appendix 12 - continued

CLUSTER 6 - Natural Law vs. Positivism

Defining Variables	Cluster Score	"Pro-Law" Response	Mean Scaled Score
90	.4351	Yes	3.4853
110	.4178	Yes	2.0147
72	.3926	No	3.6324
103	.3851	Yes	3.2059
59	-.3692	No	4.0147
Expanded Cluster Members			
30	.4906	Yes	3.0294
101	-.4052	No	1.4118
66	.3799	Yes	1.6176
106	.3547	Yes	2.5588
69	.3196	Yes	1.7206

Additional Cluster Members, including *'d definers, with cluster scores below .3000 in order of decreasing cluster scores are 80*, 111*, 67*, 13*, 35*, 7*, 11*, 29*, 115*, and 65*.

CLUSTER 7 - Ad hoc Adjustment vs. Codification

37	-.6724	Yes	2.5294
96	.5593	No	
95	-.4459	Yes	
43	-.4441	Yes	1.6765
84	.4114	No	
61	-.3515	Yes	
6	.3442	No	1.7941
Expanded Cluster Members			
59	.5328	No	4.0147
52	-.5097	Yes	2.8676
64	-.4694	Yes	3.9412
42	.4259	Yes	3.2059
63	-.4206	Yes	3.6176
10	.4169	No	3.1912
81	-.3766	Yes	3.4412
19	-.3378	Yes	2.0000
80	-.3143	Yes	4.2059
53	-.3099	Yes	2.4559

Additional cluster members, including *'d definers, with cluster scores below .3000 in order of decreasing cluster scores are 66*, 120*, 107*, and 75*.

Appendix 12 - continued

CLUSTER 8 - Democratic Decision vs. Authoritarianism

Defining Variables	Cluster Score	"Pro-Law" Response	Mean Scaled Scores
26	.4954	No	4.1324
100	.4531	Yes	2.3088
1	.4351	No	3.1471
87	.4286	No	1.7206
52	.3700	Yes	2.8676
39	.3303	No	2.7353
Expanded Cluster Members			
118	.3984	No	3.3676
12	-.3827	Yes	2.2206
67	.3330	No	2.3382
108	-.3220	Yes	2.7941

Additional cluster members, including *'d definers, with cluster scores below .3000, in order of decreasing scores are: 25, 91*, 50*, 88*, 71*, 30*, 40*, 99*, 81*, 8*, and 24*.

CLUSTER 9 - Space Questions

46	.6292	Yes	3.9412
58	.5466	Yes	3.0000
16	.4394	Yes	3.5735
68**	-.3656	No	2.6765
73**	.3573	No	3.2647
19	.3288	Yes	2.0000
43**	.3208	Yes	1.6765
Expanded Cluster Members			
5	-.4263	No	2.7647
18	-.3804	No	1.7647
24	.3610	Yes	4.3235
45	.3474	Yes	2.8824
29	-.3356	No	3.0882
22	.3298	Yes	4.5000
11	-.3121	No	2.8529

Additional cluster members, including *'d definers, with cluster scores below .3000, in order of decreasing cluster scores are 119, 93, 42*, 62, 20*, 105*, 15**, 89*, 117*, 92*, 3**, and 84*.

**Indicates "space" questions which also define categories.

CHAPTER VII

APPENDIX 13

RELIABILITY, VALIDITY AND CLUSTER SCORES FOR THE DEFINING INDIVIDUALS

OF THE FIVE PROFILE TYPES ON THE RATIONALLY-PREDEFINED CATEGORIES

(The * denotes defining subject who may be detracting from the reliability of the cluster scores.)

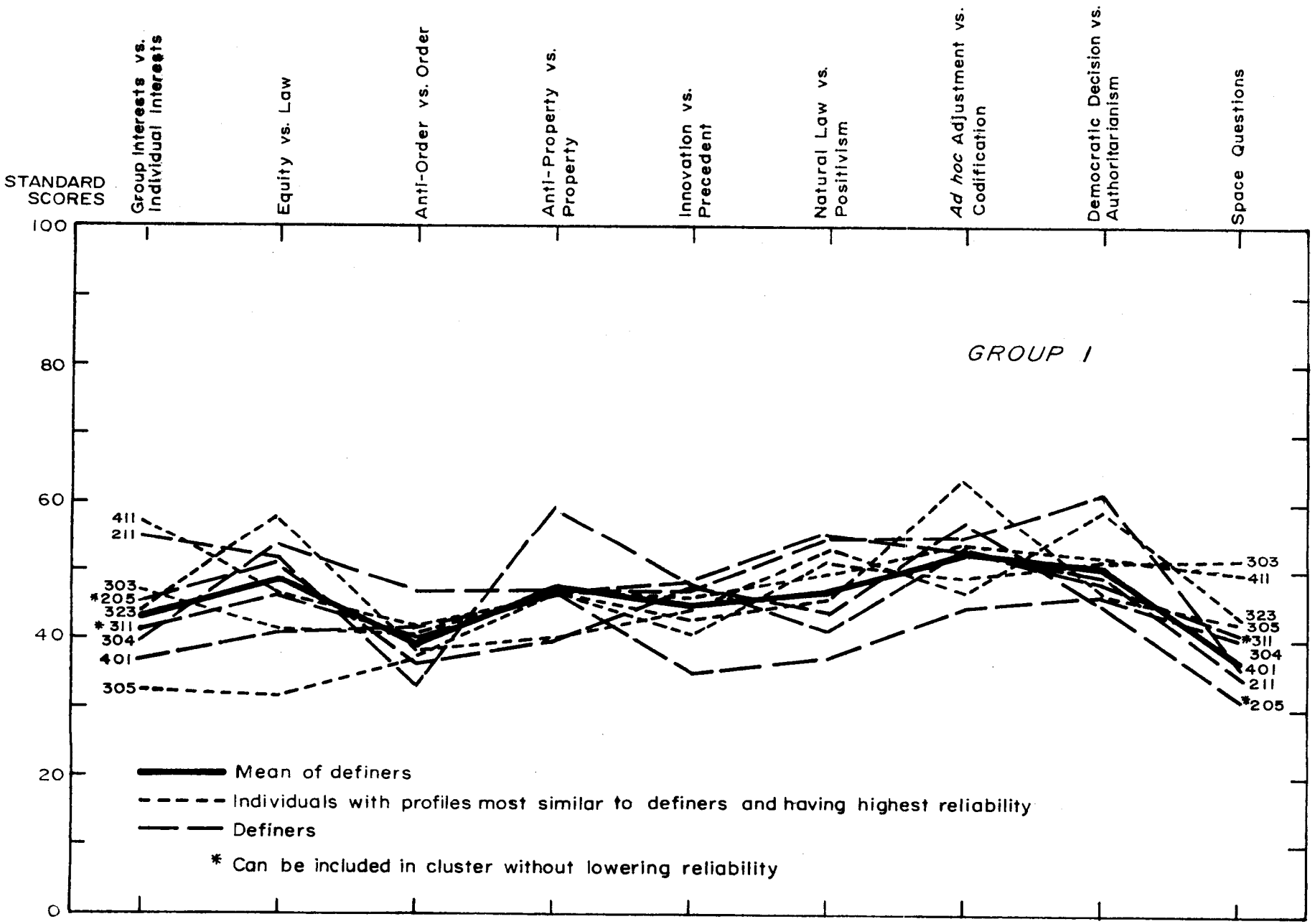
Profile Type	Defining Individuals	Average Correlation with the Other Definers	Communality	Cluster Scores
1	205	.8483	.9372	.9597
	311	.8353	.9259	.9450
	401	.7465	.7517	.8445
	304	.7428	.8022	.8404
	211	.7336	.7628	.8299
2	103	.8365	.9419	.9399
	405	.8112	.8639	.9115
	106	.7999	.8499	.8988
	425*	.7205	.7509	.8096
3	301	.8327	1.0072	.9579
	306	.7726	.8475	.8888
	310*	.7283	.8948	.8378
	406*	.6893	.8584	.7929
4	402	.4993	.7321	.7781
	207*	.4548	.8451	-.7087
	302*	.3493	.8992	.5444
	321	.3437	.8900	.5356
5	404	.5880	.7510	.7816
	208	.5722	.6961	.7606
	322	.5707	.8413	.7584
	417*	.5330	.8700	-.7085

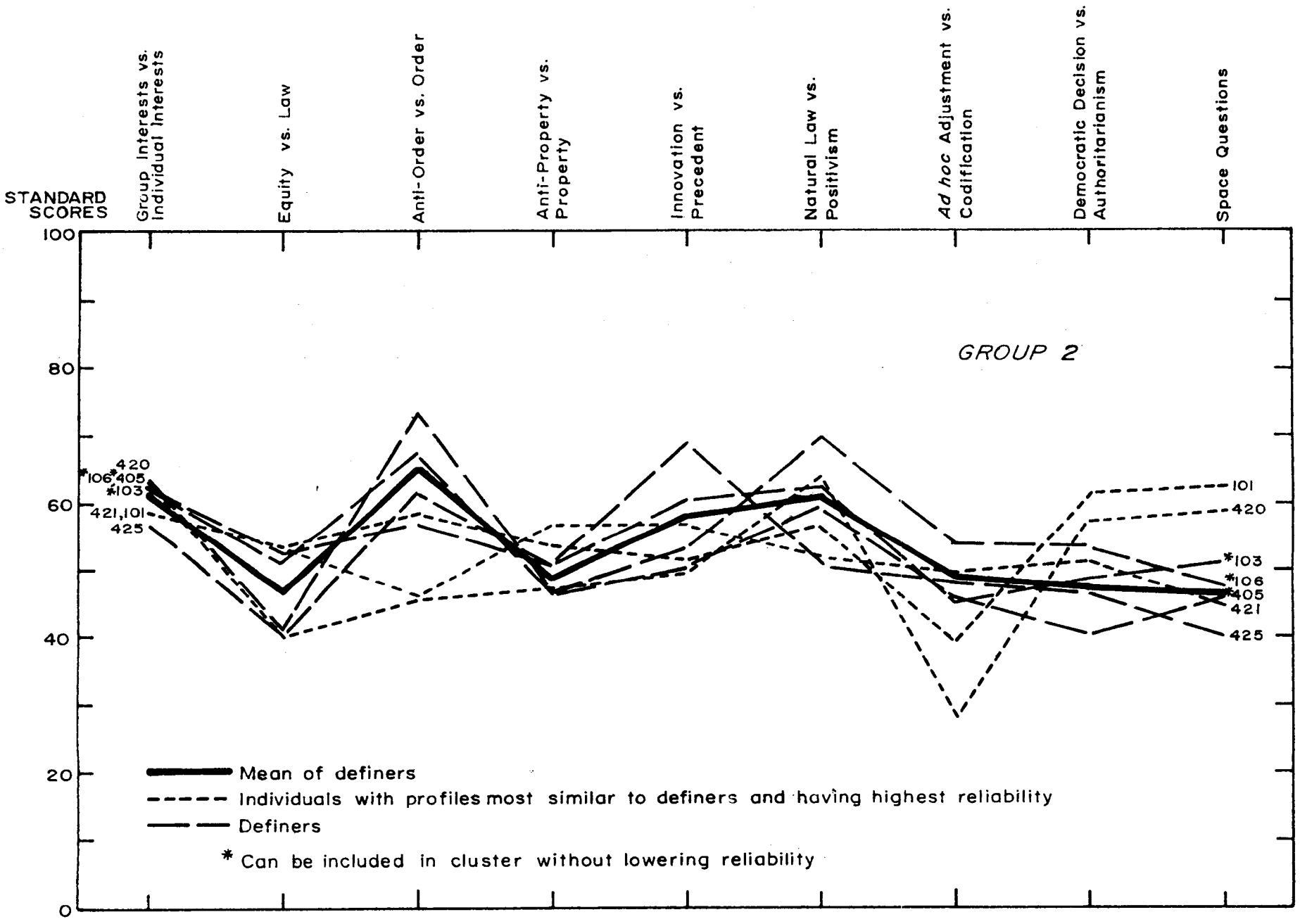
CHAPTER VII

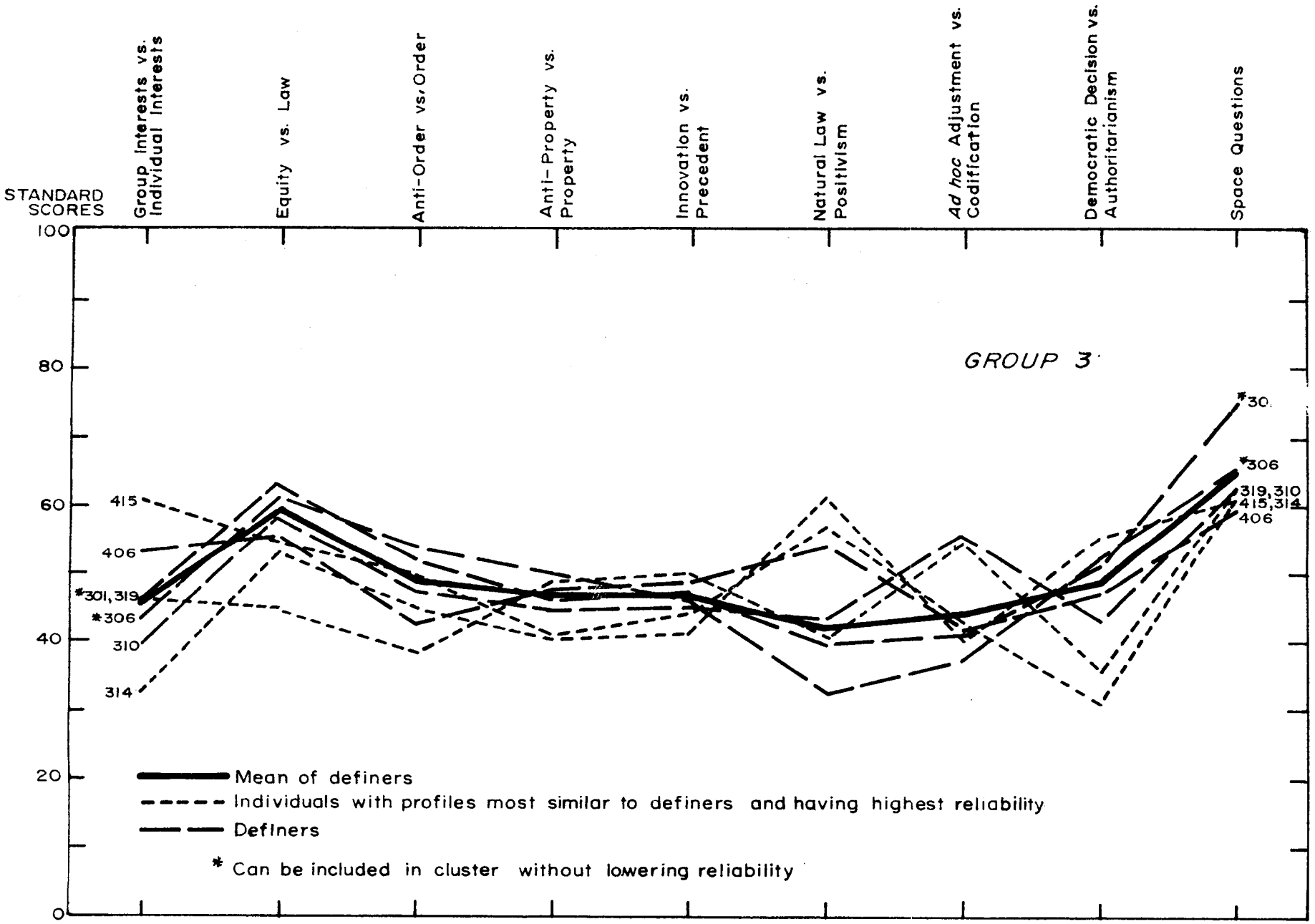
APPENDIX 14

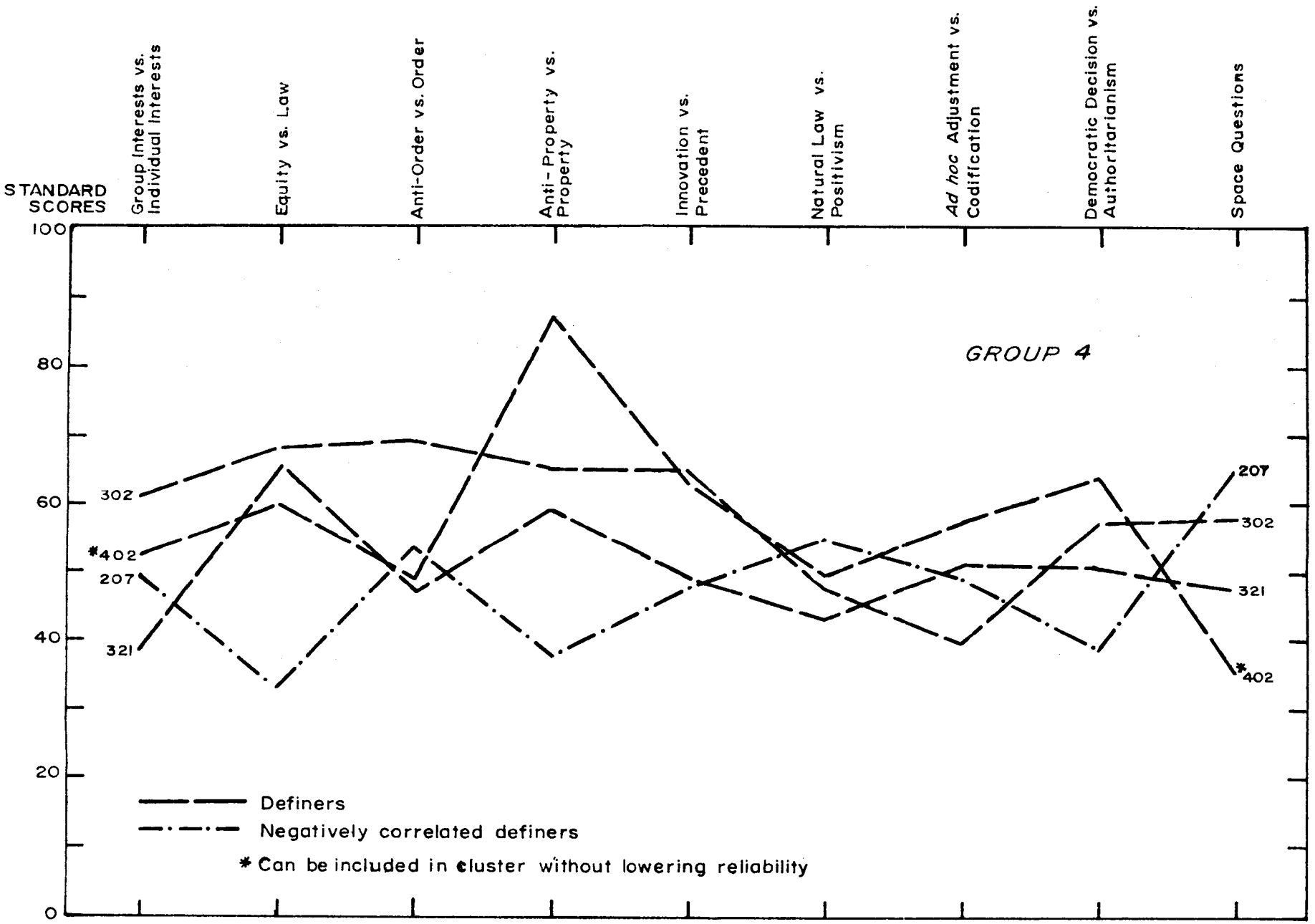
PROFILES OF THE DEFINING MEMBERS OF THE PROFILE TYPES ON THE RATIONALLY-PREDEFINED CATEGORIES, THE MEAN FOR EACH PROFILE TYPE, AND PROFILES OF SOME MEMBERS OF THE EXTENDED PROFILE GROUP

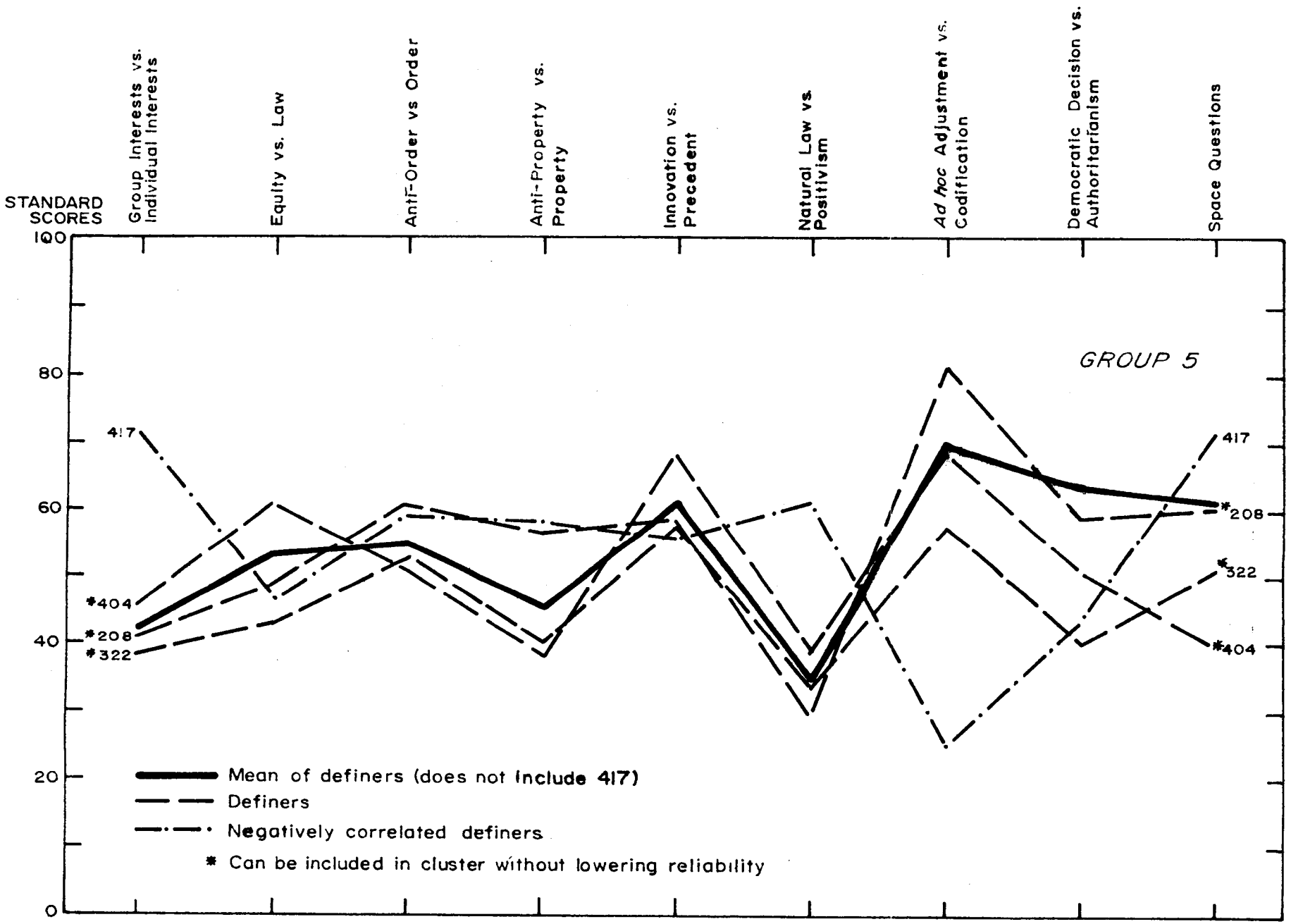
Note: The relatively high unreliability of the questions composited to form the categories, the number of individuals who define profile types while lowering the reliability of the types, and the small number of subjects, yield types in which the defining profiles can be relatively disparate in pattern and height. Profile Type 4's defining profiles were of strikingly unsimilar patterns and have been omitted.


STANDARD SCORES
Group Interests vs. Individual Interests
Equity vs. Law
Anti-Order vs. Order
Anti-Property vs. Property
Innovation vs. Precedent
Natural Law vs. Positivism
Ad hoc Adjustment vs. Codification
Democratic Decision vs. Authoritarianism
Space Questions
100
80
60
40
20
0
GROUP I
411
211
303
*205
323
*311
304
401
305
303
411
323
305
*311
304
401
211
*205
Mean of definers
Individuals with profiles most similar to definers and having highest reliability
Definers
* Can be included in cluster without lowering reliability


STANDARD SCORES
Group Interests vs. Individual Interests
Equity vs. Law
Anti-Order vs. Order
Anti-Property vs. Property
Innovation vs. Precedent
Natural Law vs. Positivism
Ad hoc Adjustment vs. Codification
Democratic Decision vs. Authoritarianism
Space Questions
100
80
60
40
20
0
GROUP 2
*106 420 *405 *103 421,101 425
101
420
*103
*106
*405
421
425
Mean of definers
Individuals with profiles most similar to definers and having highest reliability
Definers
* Can be included in cluster without lowering reliability


STANDARD SCORES
100
80
60
40
20
0
Group Interests vs. Individual Interests
Equity vs. Law
Anti-Order vs. Order
Anti-Property vs. Property
Innovation vs. Precedent
Natural Law vs. Positivism
Ad hoc Adjustment vs. Codification
Democratic Decision vs. Authoritarianism
Space Questions
GROUP 3
415
406
*301, 319
*306
310
314
*306
319, 310
415, 314
406
Mean of definers
Individuals with profiles most similar to definers and having highest reliability
Definers
* Can be included in cluster without lowering reliability


STANDARD SCORES
100
80
60
40
20
0
Group Interests vs. Individual Interests
Equity vs. Law
Anti-Order vs. Order
Anti-Property vs. Property
Innovation vs. Precedent
Natural Law vs. Positivism
Ad hoc Adjustment vs. Codification
Democratic Decision vs. Authoritarianism
Space Questions
GROUP 4
302
*402
207
321
207
302
321
*402
Definers
Negatively correlated definers
* Can be included in cluster without lowering reliability


STANDARD SCORES
100
80
60
40
20
0
Group Interests vs. Individual Interests
Equity vs. Law
Anti-Order vs Order
Anti-Property vs. Property
Innovation vs. Precedent
Natural Law vs. Positivism
Ad hoc Adjustment vs. Codification
Democratic Decision vs. Authoritarianism
Space Questions
GROUP 5
417
*404
*208
*322
417
*208
*322
*404
Mean of definers (does not include 417)
Definers
Negatively correlated definers
* Can be included in cluster without lowering reliability

CHAPTER VII

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CHAPTER VIII

FINDINGS AND RECOMMENDATIONS

FINDINGS.

We use the legal term Findings instead of attempting to state experimental results. This choice of terminology allows us greater leeway in relying upon subjective factors of experience, intuition and even surmise rather than the relatively controlled and objective results that are ordinarily based on scientifically processed data. In legal parlance, a Finding is a determination of an existential condition, or more specifically a determination of disputed, complex or heterogenous facts necessary to the resolution of a legal problem. Findings are made only on the basis of legally relevant evidence, but they are made with what evidence the court, legislature or executive has at its disposal. Often Findings must be made on virtually no objective evidence at all, but rest on the subjective experience or expertise plus the intuition or hunches of the trier of fact.

We therefore have not hesitated in this summary statement of Findings to venture conclusions which, in a scientific setting, could only be described as proto-hypotheses, or at best as hypotheses, more or less well formulated. Responsibility for these Findings rests with Cowan and Strickland. For more detailed findings on the socio-psychological studies of Martin Stow or on the tentative conclusions drawn by Suellen Lanstein, reference should be made to their separate chapters in this Report.

1. <u>Our most general conclusion is that in a group confined for purposes of physiological experimentation it is feasible to extend the spectrum of the investigation to include psychological, sociological, political and legal behavior of the confined group.</u>

In brief, we are pleased with the results of our efforts. We learned that subjects must be specifically apprised of the nature and extent of the investigation where psychological-legal work is to be done. It cannot be assumed that a general interest in and willingness to submit to physiological testing can automatically be extended to psychological, sociological or socio-legal testing. Much of our data indicate quite the contrary. Nonetheless, if care is taken at the outset to inform the subjects of the nature of this work, then the task becomes much easier.

2. We found that our Penthouse II and III groups permitted us to observe the formation of what we have called the "legal structure of a confined micro-society."

The groups' major objective-the physiological experiments-gave them a central purpose around which "law-making" could form. Our definition of law as the resolution of conflict by sanctioned rules proved useful in unearthing legal data. The group possessed sufficient solidarity and enough incentive for conflict-resolution. The periods of three months' and two months' duration, respectively, proved long enough to give the group more than an ephemeral life span.

3. We found that the fact that the Penthouse II group was already in being and charged with an objective (physiological experimentation) different from our own gave us the advantage of investigating what for us was a real society and not an experimental artifact. This advantage carried over into Penthouse III despite the fact that the legal investigators participated in the selection of its subjects.

We suggest that socio-legal investigators take advantage of existing experimental groups instead of trying at first to create their own. Despite the fact that one can hardly resist the temptation to devise his own experimental settings,

nevertheless our experience indicated that the very great advantages to be derived from studying the relatively real societies of other investigators make the work of the socio-legal investigator much more feasible.

Incidentally, we suggest that social anthropologists might also seize the opportunity to develop experimental techniques by means of work upon experimentally confined societies.

4. We found that greater resistance exists to political and legal investigation than to psychological and socio-metric testing.

We allow this finding to stand as a warning without venturing to suggest reasons, obvious or abstruse, for the difference in attitudes.

5. We found that our confined micro-societies were reluctant to formulate rules for their own governance.

The kind and degree of this resistance is the main burden of our study. At this point we merely summarize it in the form of a general rubric. "See paragraphs 13 et seq."

6. We found it necessary to construct a general concept which we have designated "Anti-Law" to contain all the variegated resistances, evasions, slurrings-over, oppositions, and resentments aroused against the legal exactions which existed or arose to constrain these confined micro-societies.

Anti-Law falls into two main sub-categories: resistance to explicit agreed upon rules emanating from external authority (exo-legality); and resistance to the internal, inchoate and generally unexpressed but nevertheless quite real patterns of restraint and conformity imposed by the group on its own members. In brief, the society's internal legislation and adjudication (endo-legality).

Dialectic tension between Law and Anti-Law are the warp and woof of our work on the legal structure of these societies.

Without reference to whether the activity could be designated "legal" or not, we found a general inclination on the part of our Subjects to single out one after another activity in the micro-society, to characterize it as "inessential" to their over-all purpose, and to attempt to jettison it.

We venture no opinion on whether there is a general tendency on the part of confined temporary societies to pass into a state of relative inaction.

7. We found that in reacting to the constraints of exo-legality, the subjects persistently challenged and otherwise tested all its rules. This activity went on, wittingly or unwittingly, during the entire duration of the experiments.

We found even among the more compliant subjects a kind of pressure-equalization effect vis-a-vis the rules. The rules were both (a) resisted and complained against and (b) cited with over-emphatic approval and insisted upon. Such pathogenic legalism we include under the conception "Anti-Law."

8. Our use of the mental construct or scientific metaphor "Psychic Space" was unremitting. We found that this conception serves to focus much of the observational data of all investigators concerned with this study.

The conception is not primarily legal, but social-psychological. It sums up the individual's effort to maintain independence against group exactions. Its legal incidence is of course obvious for the law knows no sharper conflict than that between individual and group interests. This important area of both law and jurisprudence is not investigated in this report. What does emerge, however, are the manifold ways in which confinement and a common group purpose serve to raise the level of importance to each individual of what seems neces-

sary to do to preserve his individuality against the pressure of group affiliation where almost constant social contact can hardly be avoided.

We found that the subjects staked out areas of exclusive or special use, and that they acted hostile in response to "trespasses" into these areas.

We found a general tendency to insulate both affectional and aggressive feelings from the effects of crowding.

Stow suggests that the preservation of psychic space is exhibited primarily in situations in which the subject expresses individual activity in the midst of non-related group activity-for example reading in the midst of a group holding a conversation. These situations seem to us also to exhibit the phenomenon. But they are only examples of it. By use of the term "psychic space" we have in mind the congeries of all efforts to preserve psychic distance, all behavior designed to keep others from intruding on one's privacy, to prevent unwanted social contacts, in brief, to walk alone in a crowd.

9. We found that the conception of "cocooning" served us well.

Inter-personal relations changed very significantly as the experiment wore on. Both Strickland and Stow report a sharp drop in group activity for the latter parts of both experiments, although this does not mean that the groups' inter-actions were fewer or that group solidarity lessened.

10. Cocooning signifies withdrawal. Its ultimate manifestations may well be regarded as sleep. Less than that, there are varying shades of withdrawal available differentially to human beings, such as cat-napping, immobilization, conscious relaxation of attention, dissociation. In general, the mechanism is a dampening of social stimuli accepted. The condition is of course not incompatible with a high degree of general social awareness or with a high intensity of social disturbance on the part of the cocooner.

We found some evidence to support the surmise that cocooning is correlated with severity of confinement.

11. The demands of psychic space and cocooning foster a negative attitude toward overt or explicit methods of conflict resolution.

In a sense, these phenomena are part of the individual's natural efforts to resolve or dissolve conflict on an individual basis. Added to that, there seems to be a social factor implicit in the age-old wisdom that conflict should be ignored if possible. Further, there is probably a cultural bias in Americans in favor of ad hoc and, if possible, even unconscious adjustment. These appear to be following an unexpressed rule that much inconvenience should be suffered and much informal griping may be indulged in before formal and explicit complaint should be resorted to.

We found our subjects unwilling to submit their own differences to adjudication, inexpert when forced by superior authority or adverse circumstances to resort to formal adjudication, but, contrariwise, willing to adjudicate hypothetical disputes.

This finding points to one of the basic weaknesses in simulation in the social sciences in general. We found, for example, that our use of the prisoner's dilemma game was immediately seized upon as an opportunity by the strongly cohesive group of Penthouse II as a weapon against the investigators as authority figures. In brief, the game went over quickly to a two-person zero-sum contest between the subjects and the investigators. This led us to make informal use of the game as a diagnostic tool for testing group solidarity. We have nothing in the way of statistical data to indicate an objective measure of the validity of this suggestion that a confined group with a common objective will exhibit a heightened degree of solidarity over randomly selected groups of players.

12. We found that the subjects in Penthouse III readily responded to directives to consider hypothetical cases in a pro-con-decision - maker format. We had no opportunity to rotate roles. Since the societies were composed solely of peer members we make no reference to what might have happened had a social hierarchy existed or been imposed.

There was a decided difference between the willingness of the subjects of Penthouse II and those in Penthouse III to adopt the "legal" format for settling hypothetical conflict. This indicates that conscious preparation of the members of a confined society for undertaking such roles is helpful.

13. We found that we were unable to persuade the subjects to devise conscious techniques for settling their internal differences. They preferred to allow tensions to be dissipated in any form rather than create adjudicatory machinery for conflict resolution. There was better success at inducing the subjects to act as mediation or conciliation boards if the subject matter of the disputes was hypothetical.

We found that the subjects became increasingly chary about approaching "the authorities" with their complaints.

14. In the course of discussing and deciding problems submitted to them, we observed various devices used by subjects: for example, "stultification," as where an argument is used against its original proponent to point to a result he doesn't want; "pseudo-consensus," as where a plausible sounding summary of the members' views cleverly imports the speaker's bias as though the group had already indorsed it, which they had not.

We found a strong tendency on the part of all the subjects to avoid and evade decision-making tasks, sometimes employing intellectually fancy techniques for begging the question.

15. We observed various techniques used by the subjects in their group life to maintain a minimum level of group solidarity and to control the pull and tug of personal interests. Among these techniques were overt consensus-declaration, shows of force, legislation, abandonment of grievances, and public denial of existing conflicts (solidarity-invocation).

16. We found a division of labor among the subjects such that those most prominent in the informal and affectional life of the subjects' peer group were not the ones most prominent in its formal work and in confrontations with non-peers and authorities.

This points to a rudimentary but basic distinction between the repair work of an emotional or affectional sort which tends to dissolve conflict as opposed to the necessary conscious realization that some demands, some conflicts must be pressed to resolution.

Much study remains to be done on what psycho-social measures are available for detecting these differences among individuals, to say nothing of investigations to determine what might be an optional division of labor between the two types.

17. For the specific findings, hypotheses and other conclusions from the socio-psychological studies please refer to Chapter VI.

In particular, we call attention at this point to the concluding section of Chapter VI entitled "Socio-psychological Data in Support of Socio-legal Hypotheses and Assumptions."

18. For the very detailed study of legal questionnaire number 2 from the point of view of cluster analysis we direct attention specifically to Chapter VII and the findings and conclusions there reported.

RECOMMENDATIONS

1. Naturally, our first general recommendation is that this work be continued. We enjoyed it so much that any other recommendation would indeed be surprising. If the Penthouse directors, Drs. Margen and Calloway are willing, then it seems to us that the Space Sciences Laboratory, Social Sciences Group might well continue to support these efforts.

2. We recommend that a more formal model for subsequent investigations be devised. There is an overwhelming abundance of proto-hypotheses and suggestions for future investigations in the empirical data presented in this Report. This rank growth must be pruned. Objectives must be more adequately specified and techniques be more precisely conformed to objectives.

3. We recommend that effort be directed to correlating the socio-psychological and the legal data as a first attempt. Thereafter a serious attempt should be made to correlate these findings with the results of the physiological experiments.

4. We recommend that the attention of authorities in charge of space flight be sharply drawn to the almost total state of ignorance that exists on how confined societies of long duration can be taught to devise conflict resolving techniques and other rules for their own governance.

5. We found that the subjects in these confined micro-societies were inclined to compensate for their deprivations by certain "compulsive-addictive" behaviors which were not disucssed in this Report. We recommend that studies of prolonged confinement be made by social anthropologists and sociologists to attempt to determine the extent to which these deviant behaviors are the result of confinement and how they may be ameliorated.

6. We do not discuss aberrations of sexuality in this Report. We recommend that psychiatric and psychological attention be paid to the sexual behavior of the members of confined micro-societies having scientific objectives.

APPENDIX A

LOG OF PENTHOUSE II

[Recognizing both the value of a record of the investigators' contemporaneous reactions to the situation they are observing and the value of privacy for those who do not intend to reveal parts of themselves to an unknown audience, we have decided to edit this log. The log was made from day to day to remind us of our procedures and feelings. It was initiated because the writer was impressed by the utility of logs kept by members of Antarctic teams. Only at the end of the Penthouse experiments, on the suggestion of Prof. Walter Weyrauch, did it occur to us to treat the log as itself data.

[Editing was done on the following basis: Material which was probably meant as confidential, though not so stated, was excised. Remarks of the writer which now appear too petulant, personal, or ill-tempered were also excised. Reminders which now make no sense or which called attention to facts of individual psychology, have been dropped. Some delicate matters, which subsequently we realized were well beyond our abilities or desires or license to investigate, have been deleted. Otherwise, the log is intact as it was made, with all its colloquialisms, laments, starts and stops. Hopefully, it will give the reader an idea of how we managed this part of our passive observations and what difficulties we met with.]

PENTHOUSE II

Log of Legal-Political and Social-Psychological Observations

and Experiments

Commencing 1 March 1965

26 Feb. Meeting with staff and attendants in Penthouse. Tape recorder tested. General description of the Cowan-Strickland work. (See "Briefing for Staff and Attendants.") Additions were suggested to the Daily Observations Record and duly incorporated. The staff agreed to cooperate with keeping this record and to review the procedure after a week or so to see if it is bearing fruit. The question was raised whether the DOR could be filled out during the last hour of duty, and it was the consensus that it would be, thereby relieving staff of overtime responsibilities. See tape for complete discussion.

1 March Grand opening. Dinner and briefing and socializing, 6:00 - 10:00 p.m. Good liaison with Chet and Al. Cowan talks with Bob at length. Cowan makes goodly statement of our aims; I add a word about its not cutting seriously into their free time. Al later wants to know just what we are after (as if to prepare); he says he hopes it will help him to learn more about himself; I state that is not our purpose, but it might. He and Chet and Bob and I have a discussion of whether one would or should be a subject in such an experiment out of patriotism alone, i.e. without being paid. The consensus seemed to be that no one really takes patriotism that seriously, unless there is a real emergency.

During the Director's presentation Frank kept stealing the show and cutting up. (Established self as the delinquent leader??) He looked a bit irritated and suspicious during Cowan's presentation. Made something of a commotion when the Director said the group would have to decide by tomorrow morning whether they wanted five or six cups of coffee per day. Frank: "Well why not six, gives you something to do." The others later asked him, and secondarily Ed, whether six was reasonable; he said it was, and they seem to accept his lead. Frank, Al, and Dave give evidence (in jokes, e.g.) already that they are prepared to be taken care of, passively. Chet is stolid, is not convinced that confinement and close control is necessary to this kind of experiment. . . .

2 March I have good talk with Chet about helping him get his gear. I ask Ed how many cups of coffee they decided to take; he says six and turns away (probably a mistake on my part). Talk with Bob about a magazine he is stapling together. He asks pointedly what I did during the Free Student Movement (FSM), remarking that I seem awfully unemotional about politics, seeing as how I am a political scientist. He evades my question about what he

did; on second try he says he got arrested, was one of "the seven" (?) - says he was arrested for being the printer, printing stuff he didn't especially agree with. (fast flying ambivalence).

3 March

Was unable to discover from staff members how the decision to take six rather than five cups per day was reached. Apparently it was made the night of the 1st in the Ss' private discussions.

This afternoon I met with the Ss for a half hour to discuss our routine and the general format of our experiments. I outlined the prisoner's dilemma-type problem, stressing the formality of the problem and that it had no rational answer. They seemed to agree to using the tape recorder at future sessions. They did not respond readily to idea that the present situation is similar to a space flight. Frank, especially, wanted to point out that whatever simulation we do will have virtually nothing to do with the real thing. I agreed with this but said it is a kind of sophistication that we all need and it is like not preparing ahead for a trip to the South Pole because you haven't been there yet. Ed was curious but silent. Chet was silently cooperative; suggesting at one point that Astronauts might want to take a dog along. The subject of cannibalism was broached and joked about. I assured Ss that we will supply them with our results, afterwards, if they want to see what we do with their cooperative behavior and contributions to our research. Frank cutting up as usual, suggested the Ss' names and pictures ought to appear on the report, maybe a group photo.

Al was attentive and cooperative, perhaps a bit suspicious. Dave was the most latently troublesome, saying at the end that it will be a question of who breaks down first. I had said that if the sessions got to be a pain in the neck we could reduce them or call them off.

When I posed the question of space crews, Al said he wouldn't be able to stand it because he likes to be alone - can't stand people yaking at him, needs privacy. Frank said this is a psychological question. We discussed crew selection and group living briefly.

Frank and I have good liaison now as a result of a conversation about pipes and my making a joke of our future sessions being like playing Hamlet over and over except that he (Frank) would not get the title role each time. He laughed abruptly, later on, when I remarked that he might take the role of captain or chief scientist in some situation-problem of our devising.

4 March evening

Long talk with a staff member. His impression is that in the last experiment the discussion of which TV programs to watch was made by pre-emption: the TV Guide was discussed and preferences would be indicated: "X is on tonight!"
I infer that what happened was that the assertion of a preference hardened into a decision if it was unchallenged. Often, he says, a certain channel would be left on until it became so bad that someone would get up and switch to another (also pre-emption). He himself would make comment about the historical anachronisms in gladiator movies (his field was classical history). The subjects were most vocal about musicals, gladiator movies, and Fractured Flicks. He observed that they kept to themselves a lot; e.g., he never learned much about the career plans and aspirations of the other subjects, or their backgrounds. He agreed with my suggestion that most of the day-to-day decisions were made by the Director and staff. Other decisions were made by pre-emption and by withdrawal: if you didn't like what someone turned on TV, you went to your room. Avoidance was also a general technique of decision-making: as with the protracted decision to go to a movie or not, there would be assertions of (positive and negative) preferences, no resolution or even debate, and the matter would be dropped until the staff initiated it again later. This evening he, Chet, Dave, and Frank were watching "Daniel Boone" when I arrived. Almost no remarks about program, except by staff member and me. One of subjects remarked: "That's a pretty clean-shaven Daniel Boone." Ed several times came into the room, looked at screen for a second, and returned to his own room. He seemed troubled. Some socializing, very brief and fractured, around stove when hot water was ready for coffee.

5 March

9:00 a.m. to 9:30
Administered first part of IPLA Test to Frank, Dave, and Ed. Ed reluctant to take it--did so standing up because he has lower backache and finds it painful to sit. Frank would not be quiet while taking test. He and Dave laughed a lot at the questions. Frank said that they were "absurd." He asserted heroically that it didn't bother him a bit to let others know what he thinks and feels, because he knows it already. Al (now present) volunteered that a good test will test things you aren't aware of . . .
I introduce the subject of extra magazines, saying I might bring some and locate some money for others. Definite preferences expressed by Ed, Dave, and Chet. (I shall pursue this as a decision-making problem). Nice talk with Chet about German poetry.

P.S.: On completing the test, Frank says: "You'll find that I'm an anarchist." DAS: "That's an attractive position." Frank: "Yeah, it's simple. When you don't like something just blow it up!"

5 March

1:00 p.m. to 1:20
Administered IPLA Test to Bob, Chet and Al. Uneventful. Al was intent on getting back to type a letter. Bob and Al wanted to ask questions about the questions--discouraged. Bob wanted to discuss the results of the test--I told him we couldn't do that until we gave some related tests. He said he doesn't like policemen. I said I don't either.

6 March afternoon

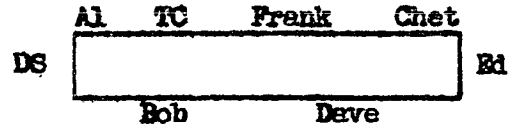
Delivered some magazines and had talk with John Bosley about joint work. Long talk with Chet about English idioms and proper usage; he is concerned to improve his "style" by reading style manuals. I told him that would probably be a waste of time. He is much concerned about rules, and seems to have memorized the most fantastic and elaborate rules about English usage - most of which were trivial or wrong. He is eager to get to work studying, which he plans to do "about six hours a day." I am to pick up his books this afternoon. Chet, Al, and Ed were very cooperative in completing their IPLA's, parts of which they had left blank. Ed is more sociable albeit still cautious. Al is chatty and hints he might not cooperate if he doesn't want to--joking. He and I discuss the painting he is doing . . . . Frank is friendly but not much in sight; ditto for Bob who is on the treadmill. Dave gives me a look when I say something to Bosley about more tests. He and Al and I talk about how difficult it is to answer the IPLA questions because they have so many interpretations. Frank and Dave recruit JB to buy some tape for them for the tape recorder. This was mentioned to me before because Frank and Dave wanted to tape some hilarities of theirs to send to a friend and I gave them permission to use the Wohlensack. To all appearances, they made the decision to buy about $10 worth of tape without consulting the others. They seem to form a fairly tight coterie, which I would guess does not include (and perhaps expressly excludes) Ed. However, I saw Dave teaching Al a card game (before, it was Frank initiating card games with Dave).

7 March afternoon

Talk with Chet about the ILPA; he is rather concerned about what we are after. I gave him a general idea. He is also curious about what use we intend to make of the biographical sketches that Bosley requested. During a discussion with John Bosley (JB), Ed burst in and demanded to know if there were any "real" reasons that his friends could not visit him today. J.B. called the Director, who said OK. Ed appeared very happy - his friends were about to leave on a trip. Bob then asked if he could have visitors. Yes. One of the staff was a bit upset about why he could have visitors. J.B. straightened that out. Al came in angrily stating that if he had known, he too would have had visitors. Chet walks by window looking a bit despondent. Frank and Dave seem to be sunning selves; no observation of their responses to this situation.

8 March

Session with Ss and Cowan and myself 3:30-4:22 p.m. Administered second half of IPLA Questionnaire. Again there was occasional guffawing at questions. Seating:



Frank, Ed, and Dave talking in a lively fashion before the session begins. Ed is thus center. He seems very alert today. He and Al are the first to get Questionnaire answered. Frank is last, others wait on him. From this, and subsequent observation, I infer that he is very sensitive to being less literate and quick than the others. (Eb - Ed is sitting where Frank sat in first session.) Chet pulls up chair late; looks puzzled as to where to break into the circle. Al crowds in at my end, lifting chair over TC's head.

I state that requests had been made for various magazines and that I had consulted with the Director, who managed to scrounge up $20 to be spent any way the group wanted. I emphasized that this would be in addition to whatever we could get from the staff and others, e.g., that the Director mentioned he might bring in Scientific American.

My presentation meets with suspicious glances. Dave is quick to ask whether the requests preceded the money or vice versa. I say vice versa. I reemphasize the fact that this is a warmup for our formal sessions and that it is also a practical matter which they can dispose of as they wish. To my surprise, there is at once a general discussion. Including everyone except Chet. The general form is that ideas are tossed out but not challenged; the aggression is (so far as I can see) directed toward abstractions and toward me, rather than toward one another. When Al (later) requested a pocket book, I said I did not regard that as a "magazine or newspaper." He was peeved and said if I was going to make difficulties he was not going to talk to me. Bob afterwards renewed the request to rule on pocket-books. (Al withdrew his request when someone pointed out that True had a condensation of the book he wanted.) I agreed.

Frank's role was at first silence; responding only to direct questions by me, e.g. - did he or did he not go along with a vote? Then he started cutting up with remarks that all he wanted was comic books. I said that is within definition of "magazine." Discussion of how that could be, if paperbacks weren't within the definition. I assert they have a date on them, so are magazines.
Frank: "Are you willing to go to Good Will and secondhand stores to get them?" Me: "Not unless you call ahead and not unless it is in Berkeley."

Frank: "Never mind, I am only interested in Wonder Women and Captain Marvel; can't get them any more; I don't read magazines." He also said he didn't care about his share of the $20 because he wasn't interested. Count me out - but will go along with what the others decide.

Initiative came from Ed and, to lesser extent, Dave, Bob and Al. Ed clearly dominant. Often he is excited in speech . . . . He is the one who suggests getting the New York Times regularly. This seems agreeable to others until I ask whether that means Sunday edition too? General discussion; heated, rapid; again a plethora of alternative suggestions (e.g., only Sunday, Air Mail Sunday, Sunday on Wednesday). A consensus begins to emerge several times, which I defeat on the grounds that it is still not clear what I am to get for them. Finally Dave and Bob and Ed call for a vote (after semi-serious discussion of how to decide); often one or more look at me for approval or decision; I shrug etc., ask for clarification; it's your money etc. Ed insists everybody raise hand for New York Times Sunday only. All do, Frank and Chet reluctantly (half-mast). I make more trouble by saying I don't know what the vote means, Air Mail or regular, beginning when? Pique; more discussion and chaos; decided by same method that it is Wednesday edition they want, especially since time doesn't mean so much to them (a point made by Bob and also by TC). Ed dubs this the "Times Open Fund."

There is chaotic discussion of how to spend residue - $13.85, or $2.93 each. There is floating disagreement (I can't recall who espoused what) between letting each spend his $2.93 as and how he wants and spending the whole fund communally until it is gone. Frank and Al oppose the latter because someone, e.g. Ed, might spend it right off the bat. The former solution is agreed on. I suggest there may still be a problem of overspending: am promptly told to keep accounts and tell someone when he has used up his $2.93. I agree. TC says it's about time for us to go.

I raise one more difficulty: Does anyone want me to bring magazines tomorrow? Dave and Ed have requests: Dave adds that if he overspends he will compensate me. Frank asserts, somewhat tragically, that magazines don't interest him.

I make another difficulty: Now, what magazines would they like me to get from the staff, e.g. magazines that they (Ss) may not want to spend $2.93 on? We have had some suggestions earlier (I name them). Desultory discussion, which I twice interrupt to ask whether Bob and Al (or Dave?) are being serious. TC says it is time to go. Talk trails off. I count backwards from five, new suggestions flood in, ending with "Playboy" from Al or Ed, with "How did we forget that?" I count backwards from five again and the session is over.

TC calls Ss back to say he wants to give them the Legal Aptitude test. They are dubious. TC says it will help us get better results. Frank says he will do it "under duress" and to help the experiment, but would prefer not to; Bob (and Dave) agree, under duress. Al says it will make the time go faster (Dave: "or slower") and "will give us someting to bitch about." TC says we will look into it.

I am convinced that interaction is too rapid and confused to tape, or even record on a Bales-adapted grill. TC agrees. He is impressed with how anarchic the group is and how hard to manage. He suggests to keep them writing and for the rest, be content for now with an observational model. I am amazed at the elan and pace of the debate. I had expected an elaborate avoidance of debate.

Dave remarks in parting that he sees what we are up to, we are getting (or did he say forcing?) them to make a decision. I say yes, that is what I said at the beginning of the session! He still appears suspicious.

9 March

One of the staff reports what she calls a "conspiracy", "not malicious," over the coffee ration. She says this sort of conflict did not occur so early last time. I suggest that it may be related to the excitement level of our session yesterday and that she should notice whether there is this sort of delinquency on Tuesday and Thursday.

Passim--Al remarks he just does what he is told and gets it over with; "That is the easiest way."

Chet interprets a TV character to me as someone who is "new and doesn't get along with the others yet."

10 March
3:10-4:20

First run of Prisoners' Dilemma game (P.D.). Al, who got the role of monitor, said he wasn't going to cooperate: "Win with Jesus says I don't have to." [?]
DS: [Pause] - "Well, then we'll go ahead with five people."
Al: "I was just kidding; I'll play."
Ed is on treadmill. Bob delays in room so that rules have to be repeated. DS and TC state rules of P.D.

During play, Frank and Dave make loud remarks about the game and have to be hushed. Frank is a very shrewd player. He later recalls with almost perfect accuracy all the moves and his own motivation--to cooperate with other team and beat the "bank."
Frank is very explicit about desire to act collectively with other Ss; disdainful when told later by DS that his team could have earned a little more by not sticking to cooperative pattern at end of sequence. Dave and Bob (team B) cooperate; Bob a trifle bored, Dave smug and, I think, on verge of varying strategy were it not for Frank on other side. Chet is as usual pleasant but does not get excited by the game and keeps very cool.

Dave, before and after game, is sarcastic to point of insolence. Tells TC (re questionnaire) that he is not at all interested in designing games and therefore will not answer questionnaire; but does. TC says we are not interested in games as such, either. All, especially Al and Frank, want to talk at once and drown out Dave. TC raps table. This part of session doesn't go too well, in my opinion, because they don't want a disciplined discussion and bridle at TC's authority (although getting used to him). Ed is visibly irritated at all this excitement, says he doesn't understand the game. I reiterate that all will take turns and have chance at equal earnings.

(I am quite surprised at how rapidly and consistently they hit upon the cooperative solution; rationale, repeated by several, is that they are playing against us (DS and TC) and <u>not</u> against one another.

7:30 p.m. Stopped by to leave a book with Al. He is engaged in card game with Frank, Dave and Ed on his bed. I remark later to Bob that our experiment has stimulated some poker. Bob says yes, it is all that extra change.

Conversation with Chet (who is alone in living room, watching a Western) about Old Shatterhand, marijuana, and juvenile delinquency . . . .

P.S.: In afternoon game, it was Frank who said that he varied the 0/10, 10/0 strategy "just for fun," because he got bored. It was also Frank who remarked at end of game when told that his team could have earned more by competing more: "We're going to split the money anyhow - Ha ha etc."

11 March
8:00-8;10 p.m. Dropped by to leave magazine. A staff member is agitated that Frank, Ed, Dave, and Al have refused to play cards with Chet and Bob. She fears that this is a hardening division, but was reluctant to report it on her "DOR" because it is "just an impression." Chet had evidently become isolated again and offered to teach her chess [a fairly wild suggestion].

12 March
2:00-5:00 Gave Shure's Test 3:00-3:30 and PDII 3:30-5:00 (aided by JB). Frank and Dave and I talked in the hall outside Ed's room (where, I later noticed, he was listening). Frank is passionate in asserting that the rules are inconsistent, and "they" are going to cut their own throats. (He won't say who "they" are, when I ask.) He complains that the investigators can bring a dog up but Ss can't. He asserts that the visitors' rule is absurd (JB later defends it, Frank backs off after a bit). It is absurd because what if Frank's mother and grandmother and grandfather came to see him? His grandmother would have to wait downstairs, sez he. (They have evidently not hit upon the solution of swapping visitor-rights: This, I speculate, because they fear getting caught in a system of interpersonal obligations.)

Around the table before PDII, Al refers obscurely to the time when he will become President. He says Frank is very "basic." I ask what that means. He says it means they have a secret brain language that he and Frank and Dave have. Frank is generally insurgent and says that the experiment will eventually blow up. He says he hopes our experiments won't require more decisions because he doesn't like decisions. (He makes similar comments to J.B., who tells him he is a Cassandra.)

PDII: A wild, chaotic experience, which ends with much complaining, tension, and claims by Frank that I tricked them about the rules, manipulated them, used them, etc. I become firm and tell him to wise up. Dave shares these sentiments, and I promise him that we shall discuss our findings with him when it is all over.

Despite discouragement from me and JB, there are several remarks suggesting impatience with PDII. Dave says it is ridiculous to go on. I tell them to be patient. One game I have to call foul because Frank "cooperated" loud enough to be heard across the room. The first 22 moves were "coop - coop." Then at move 23, for reasons I could not hear, but which were planned by Al and Bob (team B) a couple of moves in advance. Then Team B adopted a strategy which cost it 10 cents each move (for three moves) and benefited the other team (Frank and Ed) 10 cents/move. The second run, games 26-50, was fraught with a similar, puzzling result: Bob and Ed giving Frank and Al 10 cents for 16 times. This is especially interesting in that it was Frank, the consistent beneficiary, who insisted that I had misled him about the rules. (I tentatively interpret this phenomenon as Al's and Bob's tribute to Frank and Ed's dominance and Ed and Bob's (especially Ed's) submission to Frank. (Their order on our 'dominance scale' is Frank, Ed, Bob, Al.)
Something strange and tense-making is going on during the second game. . . . After the game, there is a violent (emotionally) reaction to my counting out the money. Frank makes his statement about not being manipulated, lied to, etc., etc. He and Ed hint that it doesn't really matter because all the money will be divided equally. Some (I think Al and Ed, and certainly Frank) indicate that they don't want to discuss the division at all. Bob and Al are generally silent about their losses. The game is assailed as absurd and disruptive; Frank says it would be better to stop playing it for money. I suggest that it has an objective character and we are interested in results to compare with other studies; much interest by Frank, Dave, and maybe others of whether we are taking account of what they do during and after game and how they divide the money. I (misleadingly) indicated that it is none of our business how they divide the money; we only need to know whom to pay, and our interest is the game itself. Frank and/or Ed ostentatiously gets teapot out of kitchen and puts their earnings in it, to be divided (it is

hinted) six (or is it four?) ways. Someone, I think Dave, asks what is to prevent their letting two Ss chalk up a lot of losses and abandoning them? I reply that is not my business, what they do about strategy and earnings; but that over the long run the matrices will vary and there will be many more chances to win than to lose--
This seems to relieve Frank (who, I suspect, feels guilty as delinquent leader and recipient of so much tribute). I reiterate (before and after this run) that in later sessions we shall have tape recorders placed so as to pick up the conversations of the separate teams.

I am swamped . . . and cannot possibly record all my reflections and observations now.

Dave and Frank have asked me to buy them some kites (prohibited, but they got the Director to agree to it). Frank is profuse in thanking me in advance; this is after we have had our post mortem altercation. Al asks me to mail a letter, more or less as if nothing had happened.

Dave is monitor, in his usual impatient, anxious, and covertly rebellious fashion. Chet is on ergometer and then busy doing Shure's test.

P.S.: I am becoming aware of how disruptive and revealing PDII was to the Ss - witness their intense concern with avoiding the division of the money, not wanting to discuss it, not wanting to play for money in future and (especially Dave) deep suspicion that the game was revealing of something about themselves outside their game behavior. (Dave was monitor and was less involved in the PDII, therefore having somewhat more perspective from which to make the inference.)

PP.S.: My new interpretation of PDII is that it is like the Ifugos ritual in which the headman divests himself of his competitive earnings . . . -- In this case Frank and Ed ostentatiously dump their money into the teapot. But more importantly, it is a recapitulation of their group life: Bob and Al (later Bob and Ed) can compete with Frank, but they are doomed (by the payoff schedule) to lose. This, I suspect, is what has actually happened in their daily lives.) By losing, they give Frank (and to a lesser extent Ed and later Al) very tangible credits. This embarrassment of riches (I infer) pleases and disturbs Frank - he ostentatiously plans several "coop" moves ahead and talks with Al about something else; he says "cooperate" aloud, if I recall correctly it was in the middle of the disastrous +10/-10 sequence, as if to tell the whole group to stop competing (even though it is tribute to him; albeit not competing becomes acceptance of his leadership). He then suggests that the others must have misunderstood the rules (as he did, or claims he did), is disturbed in general and very

quarrelsome, then (I think on Ed's prompting) starts talking about dividing it all equally, putting it in the teapot, etc. My interpretation is that all this fancy footwork is meant to atone for, but not to invalidate, the tribute money . . . . Hence, we now have the beginnings of a system of obligation, status, and reciprocity.

12 March
7:30-7:35 p.m.

Delivered kites to Frank and Dave. All are sitting in front of TV except Ed, who is sitting on his bed with a visitor (this I know because Frank goes in room, knocking first, to get money for me). . . . .
Frank is not at all shy about telling Dave to pay him half of the kite money, instanter (of PDII aftermath).

13 March
12:30-3:30

Gave interview to Frank. He constantly reverted to "right" and "wrong" answer talk, and is exceedingly chary of stating his own opinions. For a while he denied he has any; the he claimed he has too many and can't sort them out. . . . (He is very sensitive to the C-S experiments, and attributes most of what he intuits about group relations to a kind of ESP or collective unconscious. He said, e.g., in PDI he and Dave, without communicating knew that they could confine variations to plays 8-16-24; and that if he voted "compete" (or was it "coop"?) at first move, Dave probably would not.

Rest of my time spent talking with JB and other staff. En passant, I notice Bob is very busy with something at table; Chet, Dave, and Frank very eager to have some sort of bull session with me and one another; and Ed is reclining on Al's bed (Al is on treadmill).

15 March

We have trouble rounding Ss up to give them Cowan's part of IPLA. They take it docilely. Then all hell breaks loose (see tape). Dave first of all makes fun of the enterprise by what he says on the tape, then he and Frank raise a systematic attack on C-S investigations by asserting that what we are getting at is psychological or it is nothing, and the opinions we ask are superficial and ambiguous. TC answers all these objections rationally and patiently. Dave becomes exceedingly insolent in a sweet "I don't understand why you are such fools, explain it" kind of supercilious way. It came down to a ridiculous contradiction that a) we are trying to find out things about them and invade their privacy, but b) we are going about it wrong and should "plant" someone amongst them and study it from the inside. When TC said that we are trying to isolate the lego-political dispositions from the social-psychological, then the response was that they (Dave and Frank, also Al) just "aren't interested" in that sort of business. We try to stress that this is a scientific inquiry and they don't find the treadmill interesting either. Dave remarks pointedly: "That's different because the Director knows what he's doing."

Frank, throughout all this, is caught in a bind. He would like to agree with TC and me (in fact, he is betimes smoking one of TC's cigars) but he will not abandon Dave: he tries to make Dave's statements sound more reasonable for a while, then begins to lose control of himself . . . .

Bob was very reasonable and retained his criticisms of the Questionnaire because he didn't like "the direction the discussion has taken." Ed was sweet and asked for more concrete problems and fewer abstract, indefinite questions. The others were punks, following the Dave-Frank lead [see tape].

Dave even had the gall to ask, when TC said to turn off the tape because we had enough, why we thought we had enough. Says TC coolly, because you have begun repeating yourselves.

That evening

I stop by to leave some kites with Dave and Frank. Dave and Bob in living room. Dave (as if nothing at all had happened): "I really would like to talk to Cowan again. (All smiles) I think there is a misunderstanding between us." (smiles)

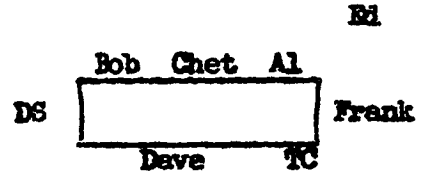
DS: (censorious) "That's obvious."

Talk between Bob, Dave, and me about LBJ's speech. Even on that score, Dave is dying to contradict.

TC and I are disgusted at this display. He vows to steer clear of the place. I shall try to patch it up by pretending nothing much has happened except some crazy behavior because they are under such stress; shall force on them the decision to withdraw, if they decide to--we want them in, etc. . . .

P.S.: Just prior to our session, Ed was coming down hall toward living room when Bob, behind him, gave him a poke (I don't know more than that) and Ed flew into a rage, snapped something at Bob, and fled back to his room. He emerged about three minutes later in a sullen, hurt frame of mind.

Seating during session:



Evening c. 7:45

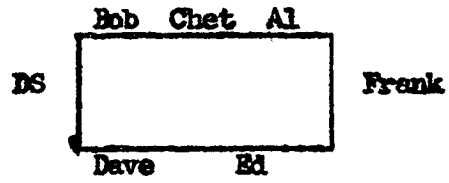
Stopped by to leave magazine. Chet in living room watching TV program that someone else had left on. Ed and Al playing cards on Al's bed. Frank and Dave outside. Bob visiting in kitchen with friends.

17 March
3:00 p.m.

I go for the regular session, mainly to present a conciliation game in hope it will be more congenial to Ss, and to show that their treatment of TC has not given them the upper hand. It backfires.

Some delay in getting Ss together. Dave comes in late from treadmill, wearing dark glasses, being jocular and disruptive.

Seating:



I first raise the question of what further favors I can do for them re magazines and newspapers. Frank and Ed (to lesser extent) suggest comic books. Al and to a lesser extent Chet suggest food (e.g., black bread and braunschweiger) as if it were the name of a magazine. Bob asks if someone, e.g. Dr. Calloway, can bring in back issues of Holiday.

I mention in passing that I spent day at San Quentin--various ribald joking about that. . . . . The conversation includes a good deal of obscenity and irrelevancy. I call them to order, after a fashion, and introduce Conciliation Problem I. Chet seemed to want to say something; I called on him and he said in essence that the conciliation board should lay down the rule and the parties could comply. I raised the question of enforcement of the decision. Chet fell silent. Al stated some other solution, also on the assumption that the parties would immediately comply. Al refers to self throughout as "we"--sometimes as "Pres" or as "God." I make a joke out of this and he drops it, except to suggest later, ambiguously, that "we" have already made a decision. I point out that other suggestions are not consistent with his. He is annoyed. I explain that the suggestions are fine, cute, etc., but I want to explore several hypotheticals. By this time Frank has lain down on floor because he does not want to participate; Ed is making something with paper and match stubs on top of table; Chet is in reverie; Bob has withdrawn to get coffee; Dave keeps getting up and sitting down; and Al is looking disconsolate. Dave suggests we make the problem "real" by pretending that Frank is the radio operator - because they can't stand these artificial problems. Someone raises the question of assassination of noncompliant crew members. Al discusses how to chop up body and dispose of it on space ship. Frank gleefully mentions cannibalism. More protests that these are not "realistic" problems and they don't like to discuss them. Frank (I think) mentions at this point that such a problem would be solved by, e.g., throwing Chet over the parapet.

Frank and Dave mount once again their attack: that they are not at all interested in "games," that people should solve these problems as they arise, that TC and I are trying to stir them up: that they cannot stand making decisions; that this is not at all part of their contract, etc.: see notes of 15 March. I try to cool them out, explaining how badly we need their help, that our human situation is like any other human situation, that if they don't want to participate that is their decision, etc. It doesn't help much. I get mad at Dave and tell him he doesn't know what the hell he is talking about, that due to his massive ignorance of the subject it would not appear more "meaningful" to him if we prepared our part of the experiment five years in advance, that he is hardly capable of deciding for the rest of us what is "real" and what isn't, that his interest in cribbage is pretty trivial and artificial. I tell Frank roughly the same thing, only nicer, and urge him to help us design some group activity that would be more pleasant and would make for more harmony. He says he is not going to compromise: Any of the "games" that Cowan and I are going to want to "play" are just not going to interest him, period. He is willing to discuss political-legal matters with me personally for thirty minutes a week. I say, very sarcastically, that this is awfully generous! By now the others have dispersed throughout the room. By now, I am pretty mad. Frank, with Dave's apparent agreement, states that he will not cooperate with any more of TC-DS stuff at all because it is too disturbing. I say that I guess all we can do is to ask the Director to lay down a line. Frank says he won't cooperate anyhow. I say sarcastically and heatedly that he could at least wait to see what kind of line it is. Stalemate.

I relate this to the Director later (about 5:15). He will talk to them tomorrow and try to smoothe things over. My advice is not to push Frank in particular because something very serious is the matter. I think my error is in treating their responses to Conciliation I as I would in a law school class, i.e., adding (frustrating) complications. I also think that there is another and more crucial variable, which is that our discussions, which bring the whole group face-to-face, is activating the faultily repressed hostility and rage of (especially) Frank and Dave (not to speak of myself) to an intolerable degree. Hence the conviction on their part that anything we want to "play" is out of the question, and suggestion that we talk to them separately.

P.S. 1--At beginning of session, one of the investigators came by and referred jokingly to the "food riot" of the morning (re bizarre flavors) - no one thought this was funny. And Bob wouldn't tell me what it was all about.

P.S. 2--Al has posted on the schedule-board a drawing labeled "Frankie" of the Devil standing under a sun (which is radiating toward him).

P.S. 3--Ed requested what he had mentioned before jokingly: "Wonder Women" comic books.

P.S. 4--Dave comes out of kitchen with a knife which he toys with; later Bob gets it and picks at the table-mat with it. Dave ends up with it later and is playing with it absent-mindedly on his knee, the handle pointed toward Frank.

P.S. 5--Ed, going into kitchen, makes mock lunge at Chet, coming out of kitchen, as if to hit Chet in gut with fist. Chet is carrying cup of hot coffee, and a few steps later he trips (on edge of rug) in such a position that had the tripping been a bit more serious he would have spilled the boiling coffee down Dave's back (seated by edge of rug).

Chet: "I won't sleep now because of the coffee."
DS: "But it is Sanka."
Chet: "I know." (smiles)

(What a day!)

18 March
PPS

Al and Chet, in the above session, are very intent on laying down a rule, which they assume will be immediately followed. They are strongly resistant to the idea that the rule might not work, or that the rules they have suggested are inconsistent.

TC has theorized that their blowup with us is a recapitulation of the FSM atmosphere, free speech (without listening to the other side!), etc. He noticed in session of 15 March that one of Ss took ashtray from in front of another, who snatched it back (appropriations).

I want to emphasize the marginally violent aspect of the 17 March session as a clue to the strength of the feelings involved: playing with knife by Dave and Bob; Dave, on entering room, wearing sunglasses, made as if to shoot me with his finger, saying "Bang!" . . .
Dave shoots again; talk about killing radioman, about throwing Chet over the parapet; about chopping up body on space voyage and eating it or putting it in an "opaque sack" (Al) or casting it out of the space ship; Frank's lying down on floor (as if dead), etc.

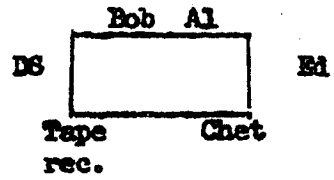
19 March

Yesterday the Director told JB and me that he had spent long period in afternoon talking over C-S-B investigations with Ss. Frank is adamant that he will not cooperate and that they are too disruptive. He acknowledges that this is not a rational response. Dave is evidently willing to go on maybe (wants to be pleaded with?) but also finds them disruptive. He and/or Frank think C and S lack skill in leading the group! Other Ss are willing to go on, but to date have become bored with the debates that get going between Frank-Dave and C-S.

11:45 a.m.--Spoke to Dave and Frank about dropping them from C-8 experiment. In both cases I put it in terms of our dropping them. This seemed to chasten them. Dave was smiley and grasped the situation at once; our conversation was friendly and he immediately picked up on the warning I was having trouble stating: that he and Frank are to stay clear of the other four during our experiment. Frank took it hard; stared at his knees and wouldn't look at me. I told him we did not anticipate that our discussions would be so hard on them, so disturbing. He said he was not disturbed, yet; it was just boring for him. I said I still want to interview him once a week or so about the same topics. He said he wouldn't mind talking to me [!]. Stand-off.

19 March
3:30-4:30

PDIII with the other four. They are most cooperative and agreeable. They inquire whether Dave and Frank will be in on the rest of C-8 experiment. I say another part, maybe. Chet starts to sit down in SE corner chair, then says to Ed that that is his chair; Ed, seating himself at head of table (Frank's old place) says no, go ahead (to Chet).



I explain to them we have had to throw out some of our earlier data for obvious reasons, of the sort that the Director discussed with them yesterday. I reintroduce PD, taking the usual precautions. PDIII is a re-run of PDI and PDII, but for 25 runs each, shifting teams after first 25 runs. Results are perfect cooperation. There had been a vague statement when I called session to order, that they would just divide any money from any games; I put a stop to such talk and said that was up to them, none of my concern. I thought that meant all six would divide it; but no! (see tape) It meant that those four would divide earnings. Bob wrote a sign in block letters: "KEIN ARBEIT, KEIN FRESSEN" and put it on the teapot. From PDIII they get $3.00, i.e., 75 cents apiece. I ask their strategies in PDIII: they are simply to get maximum money for the group. Al (team A boss) and Bob (team B boss) aver that they hit upon cooperate-compete strategy at first try just by chance - would have experimented until they found it, otherwise. But I would note that it is Chet-Al who vote to compete with Ed-Bob; i.e. Ed is more popular leader and tribute money is being paid him (is being taken and then given to him). The tape gives my comments about elaborating PD, resuming our Conciliation game, and my hope and promise that we can avoid disrupting the group, and that we shall try to keep our experiments short and

well defined. They all accept this pretty well. Bob is making noise with the money; this bothers Chet, who is attentive to me. Ed and Bob repeat a couple of jokes from the last meeting, as if to highlight their present cooperation whilst reminding me that they can cut up if they choose.

I mention that the tape recorder is dirty, maybe Frank has spilled something on it; Ed is quick to say that it was beat-up when we brought it. I said I had thought it was new. There were other indications that The Four, and especially Al and Ed, are touchy about Frank and Dave, i.e. loyal to them and concerned about my attitude toward them.

P.S.: After PDIII, Ed was eager to turn on TV, which he did without consulting the others, to see the second half of "Barefoot Contessa." He remarked to Chet sardonically at one point: "That is Humphrey Bogart, <u>not</u> Ava Gardner."

Before PDIII: Chet remarked that we should reward the Ss with food. (He and Al seem to be the ones to talk about food most often.) . . . . .

20 March
10:00-2:00

Bob's KEIN ARBEIT sign is missing. I ask what happened. He says it is probably a "house-cleaning casualty" - doesn't know.

Interview II with Frank, Bob, Dave, and Chet.

I stay around during lunch. Frank is noisiest - singing and talking - dominates conversation. Says at one point it would be a good idea to get rid of Chet. Ed reads from "Wonder Woman" comic. Frank and Bob get in discussion of whether crime is disease. Frank says Chet is the only one who is sick. Chet counters with "Frank is the only one who is healthy." . . .

The head nurse tells me that she and another staff member assigned places at table the first day per S-number. So much for my theory about seating! Except it adds weight to theory that they will not make decisions--e.g., Frank is S_1 and Ed is S_2, so it is with leadership. Precedence.

20 March
3:00-4:00 p.m.

Interview with Al and Ed went rapidly. . . . .

Sat in living room about half an hour waiting for JB. An attendant is telling Frank and Dave about auto rallies. This follows a brief altercation between a staff member and Chet and Frank, she telling them they could not sun selves without underwear tops, they telling here that the Director said it is all right. . . .

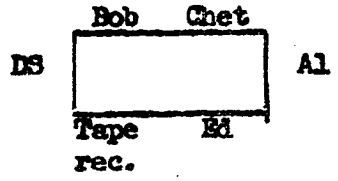
22 March — Conciliation Game in regular session (see tape for details). I am surprised 1) that they all (the Other Four) could assign roles to themselves with such ease, and 2) that they are now so patient and willing to consider complicated and potentially divisive problems of discipline on a simulated space voyage.

23 March 8:45 a.m. — Stopped by to pick up tape recorder. All hands watching the Gemini report on TV (except Chet, on treadmill).

24 March 3:30-4:30 — PDIV and discussion of basic problems and rules for the summer Penthouse crew of twelve men. PDIV was most boring--20 runs in which both sides stuck with "compete" contrary to my suspicion that Ed-Al would vote "coop" at least part of the time, as per earlier theory of tribute to leader. I said afterwards that I was surprised at the results; this seemed to startle them, especially Bob. Nb. the tape, that they give different reasons for the same strategy, e.g. Chet's reason is precedent.

Discussion of 12-man crew and search for realistic discussion problems: Privacy strikes Al and others as a very basic need. I am irritated at their reluctance to talk and at the amount of priming I have to do to keep the discussion going. Ss getting up to make coffee; Bob walked around room for a minute; Ed and Al playing with candlestick. Maybe it is desirable to call on them in turn, or to pressure them with silence. Will try both in reverse order. See tape for record of above discussion.

Before meeting, Al and Ed were playing cards and joking with a staff member about sex. Al continues to mention food--longing for a tuna fish sandwich. Chet seems to be at loose ends. Bob is busy as usual. Frank and Dave are friendly. Ed is still very farouche.

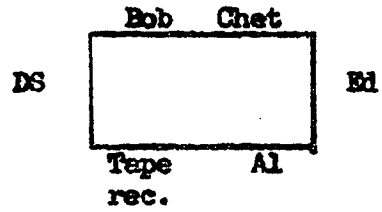


Ed complained at one point that he always loses to Al in cards.

They (Al and Ed) are eager to get session over by 4:30 so as to watch a TV movie; when I say we shall try to keep sessions to 45 minutes they look suspicious but profess pleasure--i.e., they seem basically a bit disappointed. I think they want badly some live entertainment.

26 March
3:30-5:00 p.m.

Regular session. A rather successful discussion of "what basic rules, if any, should a space crew have on the subject of personal privacy?" It is still difficult to get the Other Four to talk. Nb. that Ed was clearly designated as leader (Captain this time--it was Al last time--over his own protests. I am learning to use silence to induce or pressure participation. See protocols.



Participation increased sharply when the Stenorette tape ran out and I had to try to take notes by hand.

Afterwards, a general bull session developed. Al was very much interested in what I had had to eat today. Ed declared that it is getting so bad that he wants either a psychiatrist or tranquilizers or both. . . .

JB comes in to ask Ed to complete a psychological test. Ed says he can't; can't pretend to be in the situation. JB says surely he can imagine something of the sort. . . . Ed becomes very upset, ...

. . .

Chet and I discuss rainy cities. . . . Definite negative when I suggest rainy places where he might get a job: "I don't want a job!"

27 March a.m.

Administered Interview III. All Ss cooperative except Ed, who is still petulant and won't respond to an invitation to talk. Frank is more distant . . . . Al is a bit upset and hasn't been able to paint lately.

Frank mentions that the confinement makes him more of an anarchist; he ended the last experiment, he said, wanting to bomb the police and destroy the whole government to see what would happen. I said that could not be done without killing a lot of people. He said he wouldn't want to kill anyone and never had, to the best of his memory.

. . .

28 March
3:00-4:30 p.m.

. . .

. . . Bob and Al watching TV; Bob made joke at my expense, that it was "East of Eden"; I said it doesn't look like it (it was at that moment a commercial for color TV). Bob is upset about a friend who was arrested . . .

Al and Ed seem cheerful because of visitors. Chet a bit depressed (for lack of visitors?). . . .

Bob showing his friends around Penthouse with much authority and proprietary air.

Frank and Dave swinging from roof and making lots of noise, I surmise that is to attract attention because they have no visitors. Frank is especially noisy, acting like Tarzan. He and Dave burst into living room several times only to burst right out again. Later they are talking to a girl on parapet and are warned by the attendant, to effect that they are not supposed to be on the parapet. They make commotion about this: they do it all the time, the Director knows they do it, no point in the rule.

Note that Bob tends to take over the place with his visitors; Al and Ed tend to entertain in rooms with door closed and sometimes to walk with them around the outside.

29 March
3:00-4:30

Regular session. Played the Fighter-Bomber game. I announced that Al and Bob would be the fighter command and Ed and Chet would be bomber command. Al immediately asked who is in charge of each team.
DS: "That is up to you."

Later: They seemed to cooperate on arriving at strategy, for which they were given ten minutes (and told there would be twenty moves, or runs, with secret payoff schedules); but Bob called out his results and, though Ed wrote down his team strategy and announced the first couple moves, he soon let (or directed, I don't know) Chet do it.

I count it most significant that they assumed that it was a game against me and ignored the explicit instructions that the prime object of the game was to get, or prevent from getting, the maximum number of bombs destroyed. Again, there is a strong tendency to cooperate: In this case the bomber team (Chet and Ed) cooperate in getting shot down over and over. It may be, as in PD, that the tacit leader, whom I theorize is Ed, refuses to compete. (See tape)

Afterwards, Bob forgot his dollar earnings and came back, noticed it, and went through tedium of counting all the money in the teapot to make sure the $1.00 belonged to them and was not "another $1.00" of mine (though I disowned it). (Deserves more or doesn't deserve what we award?)

There is still inattention, e.g. by Ed and Bob, when I try to get a discussion going. I would like to be able to work some variations into the sessions; there is so much resistance to abstract problems that I immediately am given to feel how much I am imposing on them and how ridiculous, from their standpoint, the whole show is.

Nb., in connection with staff report of Frank and Al talking in falsetto voice, at beginning of session today, Al and Chet addressed one another with sarcastic and rather too precious "darling" and "dear."

. . . . .

30 March
4:00 p.m.

Chanced upon a general meeting with the Director, staff, and Ss. A woman had complained that she was sprayed with water from above, i.e., from Penthouse. Guffaws . . . Chet pretends to be taken aback, asks attendant if she was sprayed. She later tells him on second asking that she saw him and it was not funny. He tries to act amused but merely looks perplexed.

All hands tend to think this incident is humorous and to accept as reasonable the injunction that "We can't have water, urine, or whatever coming down on people."

The Director restates rule about wearing underwear, e.g., when sunbathing. That too is accepted, to all appearances. A criticism is passed on from a staff member, which the Director phrases as a "request"--that Ss not wear underwear around the place after, say, 9:00 in the morning. Bob, to whom this is directed, takes a mildly sneering attitude but seems prepared to comply. Frank remarks that he would like to have other underwear or go around sans pants if it gets hot outside. The Director indicates something will be done about that.

. . . . .

Throughout, Chet is restless and mischievous. Bob is amused and adopts a semi- "Oh, come now" attitude. Frank appears chastened, compliant, respectful, but eager to get a word in eventually. Dave is absolutely silent and looks puzzled if not apprehensive. Al looks mature and somber, smoking pipe silently. Ed symbolically flees the scene by staring at TV set (the sound is off), changing channels while the Director is talking, turning on sound whilst the nurse is talking but the Director left room, and complaining at end of meeting that it caused him to miss part of "Fugitive Kind" with Marlon Brando, whom he always liked. Frank allows he always liked Marlon Brando too. Bob volunteers that Joanne Woodward "sluts" around the movie (i.e., in explaining her role to someone). Dave allows in response to Frank that he has seen it and says (I'm not certain of this) meekly that it wasn't that good a movie. Frank says he saw the play and it was OK.

P.S.-- Positioning at TV

TV

Ed (reclined on left elbow)

Dave

Chet

Frank Dave

30 March

. . . . .

. . . We are intrigued by the possibility that leadership among our Ss is a function of participation in a delinquent subculture. I theorize, following Wynne-Edwards, that crowding must increase the level of rivalry; where is it in our Ss? Answer: 1) in who can defy staff most daringly and cleverly and 2) in who can give exciting evidence of participation in some other delinquency.

Nb. that only yesterday (i.e., 30 March) Chet went to such lengths as to shoot water on a passing lady below.

31 March
3:00-4:41 p.m.

Regular session. Discussion of 1) a conciliation problem (the group reached consensus rapidly, but showed reluctance to vote; Al addressed Chet: "You agree, don't you.)

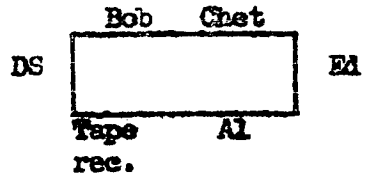
2) What does "Laws are generally behind the times" mean?

3) What would be among the first things to go wrong if twelve people lived in a space the size of this room? (See protocol)

Al's behavior was generally raucous and anarchic, e.g., putting flowers in his hair, smelling the flowers, holding one in his teeth, etc. Ed joined in and put a red band in his nose. Ed was generally more friendly and cooperative. Chet was more cautious and Bob the most civil. At one point Chet poked Bob in the ribs with something, I think a pencil. . . . This touching is unusual in my observation. Also, Al suggested that Chet should take the role of moon maid. After the session, Al responded to Ed in a falsetto voice and walked down hall with hand on Ed's shoulder-- also unusual in light of his violent reaction when Bob touched him several days ago (see above).

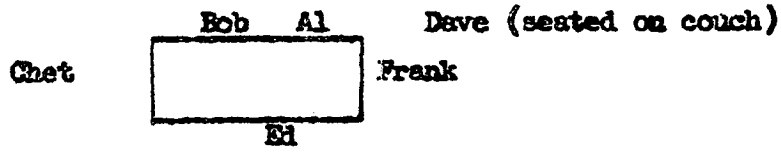
. . . . .

Seating:

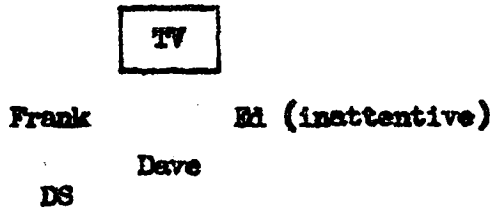


Nb.--I think I have neglected to note references, which began to appear in the second week, to cannibalism. There have been three or four of them and they have originated with Al and (I think) with Frank.

31 March 8:30 a.m. — Stopped by to pick up tape recorder. At breakfast still:



1 April c.4:30 p.m. — Frank, Dave, and Chet interested in dancing (re TV program) and discuss it with staff member and me. Frank's technique for changing TV channels is to make two or three negative comments about the present program and (presumably waiting for confirmation or opposition) then jumps up and changes it without asking others:



2 April 3:30-5:00 — Regular session. Played Klotto and discussed conciliation problems of a) a crew member who is absent-minded and uses wrong coffee cup and b) crew member who leaves Kleenex around. (See protocols) Both discussions become very zany--e.g., Ed saying he would be a forest and Al that he would be a frog in the forest.

Klotto seemed to engage them. Nb. the way in which they volunteered to be Col. Klotto (Ed) and Col. Phineas (Bob), and that, again, the strategy was that Ed's team lost consistently and refused to compete. I note further that they refused to accept my method of scoring (writing down strategy on paper for each move). Al said I have abnormal suspiciousness and project my own desires to cheat onto others. Ed suggested fancifully that they just call out their moves to me (at blackboard)--I agreed. This of course defeated the competitive spirit of the game (see results) and gave the other

team a chance to see what moves the first was making in advance. Bob turned it into a "peace game" (see tape) and Al said wistfully that it would be interesting to see how it would go if they played against one another instead of against me. (Next time, fellas!)

The post-game discussion deteriorated rapidly, owing mainly to Al's very clever ridicule (pretending to be a toad, and croaking randomly while I was trying to be serious). This, sanctioned by Ed, Bob and Chet (in that order) broke me up and I was put in most uncomfortable position of being a party to insanity and calling them back to order. My irritation was doubtless visible.

Another subversive technique was used at the end of the session: Ed, apparently getting a trifle bored, said that the problem I had just posed would make an interesting topic for next time (whereupon, having asserted this manner of JD Leadership, he got up, went to couch, and commenced to read a magazine). Bob also got up and said in joking tones that he would "hang around" until I had brought the meeting to a close. I had some difficulty with my usual ending, "Thank you, gentlemen, next time we shall. . ." but tried to fake it and pretend nothing had happened. I came away, however, with the feeling that I have been told and continue to operate hereabouts only at sufferance.

7:30 p.m.
Watching TV:

Dave

Attendant Frank(floor) DS

Al, Ed, Chet (couch)

Frank (passim): One of the staff members should be pushed over parapet, but not really. I should tell Director, or rather ask the Director, why there are set visitor's hours; no reason why they can't have visitors after 3:30 every day.
Chet gives exhibition of gymnastic skills. Frank too.
Ed is in good humor after talking on phone. . . .
Frank says that I am after power. I say, "me?" (in surprise). He says not really, but it looks that way; no, it is the others. Next time someone is likely to kill the Director or someone in power like me instead of the Director.

Frank says the lions and tigers on TV are all very old and that is why they don't tear the trainer to pieces. He would like to see one of the tigers tear the trainer to pieces. A moment before, when the tiger first came on, he said, "That is me."

. . . . .

P.S. In the above phantasy of Frank (assist or assent from Dave), it was stated by Frank that the psychologist would also get killed "if he tried to do anything."

3 Arpil a.m. Interviewed subjects individually. See Interview IV. Have agreed to take grievances to the Director--this has the makings of union movement.

P.S. One of the staff relates the Steve incident of Penthouse I: Steve was often "absent-minded," e.g., starting to eat Ed's food, and always maintained that he just didn't notice. One morning Frank was going to use urine bottle and noticed there was already a "voiding" in it. Steve was suspect because his was the only bottle still on the shelf in closet, empty. Frank, it seems, also suspected Steve, and kept coming back to staff asking, "Has he admitted it yet?" Steve didn't admit it; and I am unclear whether he was confronted on the score.

5 April 3:30-4:45 p.m. Regular session. Discussion of skit; Ed at once suspects this is to get them to "release tensions." They will do only what is imposed or organized for them. (See protocols) Ed very cooperative. Al jokes . . . . Chet is almost alarmingly eager to play roles in Concilistion Board, and talks about the hypotheticals as if they were bigger than life. Bob absents himself by 1) making place-mat into a pair of horns, 2) making same into a snout, 3) using same to cover face altogether.

My impression is that presence of outside secretary at that session brought out a good deal of cute, and a certain amount of suggestive and off-color behavior.

Nb., I notice, e.g., in TV choice and change on channel, a heavy reliance on preemption: Qui prior tempore est . . .

6 April 7:00 p.m. Chet and Ed watching program on TV re Tahiti. Al phoning in office. Dave and Frank walking on roof in dark. Bob's visitors arrive; he is evidently in room. Chet talking to a staff member and me in kitchen when Ed leaves front room, leaving TV on loud.

I advise staff to take special note of order of coming to table, order of leaving, etc.

7 April
3:00-5:00 p.m.

Regular session

Presented U.S. v. Holmes in a semi-dramatic way. They really went for it! Next time we discuss the decision.

Played PDV (q.v.) with rotating matrix. They didn't get the principle but weird result. Bob told me that both things were very interesting: "You're improving."

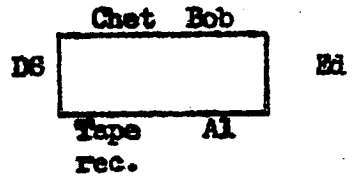
Afterwards, Dave and Frank came into living room. (They want to play too.) They "test" me by drawing things on blackboard. . . . .

Nb.--The other day, for the second time, Frank threw some pebbles at me in play, on roof (the first time JB and I together). It is a bit like baboons.

8 April
4:30 p.m.

Al is making bisexual collages out of old newspapers. Ed on phone. Al painting. Bob reading on bed. Frank and Chet not visible; possibly in Chet's room. Dave and a staff member watching Moby Dick on TV. Al recruits me to get cigarettes as if they were contraband.

Note: Seating in PDV:



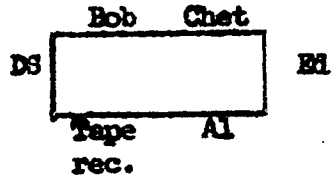
9 April
3:30-5:00 p.m.

Regular session.

See protocol. Rather boring discussion of U. S. v. Holmes and of a Conciliation problem in which Captain-physician wants to inspect everyone's desks and closets. Ed for a time was "absent" reading new copy of Realist. Bob was "absent" almost all the time drawing a cover for a magazine he edits (picture of some narcotic flower). Chet was reluctant to talk. Ed and Al talked a good deal but without much interest.

Frank is eager that I should get him some books on the double.

Seating:



P.S. Before session, Al is eager to talk to me about U.S. v. Holmes: Is it clear that a sailor has special responsibility for passengers' safety? Is it clear that Holmes left the boat in haste, without thinking of the passengers first? Nb.--He voted abstain on the appeal.

10 April a.m.

Long talk with one of the staff. Apropos my theory derived from Wynne Edwards, it seems that noise-making is a standard way of asserting dominion over space. Noted that Frank and Dave have both been complaining a lot about the food. Dave refused to drink his formula as it was lumpy. Frank ditto. Dave drank his later in the day. Chet spilled his and therefore missed a meal. In general, they are beginning to test the physiological constraints. Frank believes the staff member made the formula lumpy because he had complained.

The staff confirm my suspicions that it is Frank who is first at table, talks most and loudest, eats most leisurely. Bob at other extreme.

P.S. Frank's library requests, . . ., have been for books on sin, purity, and martyrdom. I joked a little about this; he did not think it funny.

11 April afternoon

Chet seems a bit morose. Frank and Dave are watching a Boston basketball team on TV. . . . Bob is on patio studying . . . . Others not to be seen.

12 April 3:30

Regular session

Regina v. Dudley and Stephens is introduced! See protocol. Bob did not participate much and halfway through discussion he rolled place mat up and put it on head as if to imitate horns. He was very upset with the group's decision. . . . Ed dominated the discussion and was both inventive and logically forceful. Al tried to cut up a bit by putting flower petals in his ear; but he received very little support from Ed or others. Chet took an extraordinary view (see protocol) that there was no crime; and it may well be that his and Ed's positions "persuaded" the others, i.e., Chet more than Ed even.

When I suggested we discuss going out Ed and Bob at once said they would get Dave and Ed to join the discussion. Frank sat behind Ed on periphery (Ed being in Frank's usual place). Dave sat on the couch. Frank was insistent that he had no preferences and that all he wanted to do was go to Tilden Park. Ed, who had made what he termed his "proposal"--that they go out once every three weeks but default each time they couldn't agree--was quick to initiate suggestion that they all ought to go to Tilden when Dave said it was his understanding from the Director that they could go out once and maybe more if it went well. Frank said those scientists are always

vague. He said he would say no more because his opinion would just make it harder to reach a decision. Frank left at this point, saying we knew his opinion and he would accept any decision. All except Chet said they wanted to go to Tilden the first time. Chet was pressured and seemed to agree without doing so. He then said that parks are crowded and he didn't like being herded around in one. Dave said he was not being herded anywhere. Bob or Dave said it would be nice to go swimming but it is impossible. I said: why? They said nitrogen loss. Dave said it might be possible to go swimming the last few days of the experiment but by then they'd be looking forward to getting out of here and going wherever they want, at least for a while [!]--the wording was more like "getting out of here . . . at least for a while." By then the other subjects (than Dave and Bob) had dispersed.

Nb.--Al complains at beginning of session about ergometer. Vows he will never do it again. Ed tries to laugh it off, but Al is bitter and upset.

After Regina v. Dudley and Stephens, Al remarks that if they go to Tilden Park, Chet might try to eat him; then remarks directly to Chet, "You do want to kill me." Other passing remarks from Frank and I think Bob about violence to one another or to staff. I forget them now.

13 April
11:30-12:00
noon

Isometric exercises sporadic, i.e., each doing them in his own good time. Chet, when he says it is time for them, is met with catcalls. He and Frank do exercises together--others straggle along. Frank and Chet are first at table. Dave last. Chet and Ed and Al sit somewhat back from table. Frank sits far back from table. Bob sits with legs extended under table.

A staff member tries to impose new rule on rinsing out beakers; Frank, and to a lesser extent Bob, and others refuse to comply unless it is an order. General resistance and then say they'll do it after long hassle.

Frank asserts they are all going crazy. I say, "Really?" He says, "Yes." . . .

Bob is first up from table, then Dave, Al, Ed, Chet, Frank.

13 April
5:30-6:30 p.m.

Observing dinner. Frank and Dave came into office and showed me, with great élan, some games I should play with the other four. Frank was adamant that there could be no losses (i.e., negative payoffs) in these games "or they won't work." Dave was for introducing some such negative payoffs. The games had in common that each subject would have to guess what choice the other subjects

would make and if they came to same decision they would get higher payoff. I pointed out why this won't work (i.e., does one trade preferences, or what?) and Dave saw it at once. Frank kept insisting that it would work. Nb.--that it was Frank's choice, Tilden Park, which, per Ed, the group chose yesterday; . . .

Frank and Dave late for dinner. Ed still at table and stayed on to watch news with us. Bob (according to staff) had bolted his "food" and left early. Al and Chet left shortly. Frank sits side-saddle at head of table. Dave sits at Bob's, then Al's place to see TV better.

. . . . .

Frank is furious about psychological tests and says it is none of JB's . . . business who in the group he likes best and (especially!) who he likes least. He says, in Dave's presence, that if it were a question of who he liked best it would be Dave, but he won't write that down. His anger stems in large part from seeing a staff member collect some test . . . I protest that it wouldn't mean much to the staff member in any case; agree to convey complaint to JB.

14 April
3:30-5:00 p.m.

Regular session

Dave hangs around at beginning making "funny" comments into the tape recorder. Frank comes in at the end of the session and makes baleful face, as if he wanted to share in the money (then being doled out).

Blotto II upset subjects a bit because I suggested the two sides would be Segregationists and Integrationists. No one volunteered for either. I suggested Labor vs. Management. Ed and Bob said - why not team A and team B? They were made captains. Chet and Al had to be assigned to teams; neither would volunteer. PD/VI was rather upsetting to subjects when I announced that the matrix was random. They felt (see protocol), and rightly so, that they had been tricked. Al went back to his painting . . . Chet went to reading the New Yorker. Ed glared at me. Bob spent much time explaining: 1) that he had hit upon it and (that failing), 2) that no one could possibly have figured it out. Thereafter Ed and Chet avoided me. Al's behavior became sillier than ever . . . sometimes really bizarre; and Ed laughs despite himself but appears embarrassed for Al. [the usual seating]

14 April
evening

Ed asks me why I come up to Penthouse when I could be out drinking beer. It is wasting my freedom [new definition of freedom!] He also remarks that he can't understand why they are all watching a boring TV program on tornadoes; I say it puzzles me too.

Dave talks to me earnestly about the right of the police to detain you on the street or to enter your house without a warrant. Then Frank joins us and discussion is about the welfare state. . . .

P.S. Al informs me it is fun to watch personal relations in this experiment, especially the way some people (presumably Bob, secondarily, I suspect, Ed) try to be buddy-buddy just because you are in here together. They go to no ends to be your life-long friend.
DS: "That sounds troubling."
D: "Oh no, just amusing. . . . If I ran into them after this, I might like them very much; or I might not. . . .

. . .

Note--If Wynne-Edwards is right, the provision of food-substitute supplies in our situation must be an important evidence of status (also, of course, of dependency). I note that I have been a supplier as follows: cigarettes for Al about every other week; talk* to Al about one-half hour per week; magazines for Ed about twice a week, . . .; talk with Ed about one-half hour a week (increasing sharply of late); various stationery supplies and books for Chet about twice a week, talk with Chet about two hours a week; errand, e.g. magazine, for Dave about once in two or three weeks, talk with Dave about fifteen minutes a week (increasing); errand for Bob about once a week, talk with him about forty minutes a week; book or other errand for Frank about once a week; talk with Frank about one hour a week (increasing).

---

*means informal talk, in addition to regular sessions and interviews.

17 April
3:00-4:30 p.m.

Regular session
Discussion of Rachel v. State and Brown v. U.S.
Ed is slow to participate because he is toying with clay and artificial flowers. Bob, as before, is rather moralistic and irritated when the others don't agree with him (or vice versa, since he is, given the seating, the first one called on).

. . . . .

19 April
3:00-4:00 p.m.

Regular session. See protocol.

Very reluctant to consider other side of King Solomon case. Although it may not come through in the protocol, there was a very intense moment between Bob and Ed over the stomach-pumping case: see Bob's statement that it would be reasonable for the police to take content of Rochin's stomach and Ed's immediate, "What!"

Ed spent early session putting half an egg shell (from Easter decoration) in his eye as if it were a monocle. Al made a small dinosaur out of clay and put it in the egg shell. Chet and Bob were often distracted. Chet has become rather giddy and hebephrenic at times.

A staff member tells me that Frank on Sunday night wouldn't go on treadmill; went to bed very early; then said next morning that he didn't go on because no one bothered to wake him up. (This all occurred in p.m. because treadmill broke down earlier in day.)

20 April
2:30-4:30

A staff member reports that Frank, Dave, and Chet were hanging over outer edge of parapet . . . and said they had a right to because the Director had said they couldn't "walk" on it. [!] The staff member told them to get off; Frank jumped up and down from parapet to roof, imitating her.

. . . . .

Long talk with Dave about going on a lookout for summer. He is uncertain what to do; . . . Wants to come back on September Penthouse experiment, then go to Europe to study.

Talk also with Al and Ed, who enter living room about 3:45. Others do not, except for Bob passing, show selves at all. Al, Ed, and I joke about Sunday School songs; . . . .

Al is concerned with the after-life, wants to know if I believe in God, etc. Ed is generally friendly but does not broach such subjects.

Note: The Treadmill Incident. Bob told me that the treadmill broke down because Al got annoyed and stamped on it. Dave told me that the treadmill broke down spontaneously, while Ed was on it, the belt folding over. Dave is gleeful, it will take several days to repair and, he predicts, it will keep breaking down for the rest of the experiment.
DS: How?
Dave: Mechanical failure, act of God, etc.
DS: No human causes at all?
Dave: (suspicious) No, of course not.

This is part of a general pattern of defeating those rules which, as TC says, are perceived as not being for their own good and not necessary to the scientific validity of the experiment.

21 April
3:15-4:30 p.m.

Regular session, in which TC talks to subjects about our overall aims, simulation, and so on, and poses a problem of claiming a planet for U.N. although manifest and original aim of expedition was solely scientific. See protocol.

I am pleasantly surprised that subjects go along with this with minimum friction. They are impressed with TC's statement and are also hungry for outside contacts.

Frank and Dave are busy at this time taking TAT. Afterwards I am talking with Frank and Dave comes in. They are eager to compare their responses on TAT, as if to reassure one another. . . .

I am still supplying Frank with library books--mysticism--which he alleges are beyond the staff's poor powers to locate.

. . . . .

23 April
6:30 p.m.

Showing of movies. At end of dinner: Al had already left table. Chet and Bob seated as usual (Bob wearing clean white shirt). Frank side-saddle at head of table. Dave is seated at Al's place. All are watching Huntley-Brinkley show. Eager anticipation of movies.

Al refused to look at movies: "I couldn't care less!" This, I surmise, was because he hadn't been feeling well and because Ed had two girls visiting him. As for the others, it was hard to see their reactions as there were so many of us outsiders present. . . .

24 April
10:00 a.m.-
12:30 p.m.

Interviews. Frank is keen on predicting that I am going to be burned by him and Chet in a fire, which will also consume Drs. Margen, Calloway and Bosely. I ask him if I can be excused from that fate. No dice. . . .

3:30-4:15 p.m.

Regular session

Much slightly obscene punning as we play Muscovite Guards and The Lady and the Tiger. Bob and Chet are delighted that the Young Commoner gets eaten twice by the tiger. They stuck to a pattern, contrary to the object of the game, and only voted so as to get the Young Commoner devoured twice, just to show what they could do--first and last moves. In the other game, contrary to my prediction, Ed got shot right off the bat, saying he didn't see any reason to go on living. I thought he would avoid that solution because his heir and second in the game was Bob.

25 April
3:00-4:00 p.m.

Frank and Dave watching TV (a comedy-parody program called POW). Bob has visitors. All others out of sight. Chet on treadmill.

Frank is eager to set date for going to Tilden Park. . . . Note how far the initiative goes.

26 April
3:00-5:00 p.m.

Regular session

Before session, Frank, Dave and Chet do numerous head-stands and yoga tricks, apparently for my benefit - I am trying to write something on dining room table. I make remark that others will have to get same amount of exercise: this is ignored. Chet, puffing and flushed, says this is not exercise. Frank announces he is trying to arrange trip to Tilden Park for tomorrow; . . . . It is quite unclear whether Ed will go; but that does not seem to bother Frank, at least he hasn't determined who is and who isn't going. He predicts I might get killed on this outing. He also says, playing with Chet's light meter, that something like this might blow up the world; or that something inside him might blow up the world. I say that this is all pretty unlikely. . . . .

During session: Bob lies down under table. When I advise him to sit up because we can't hear him, he rests chin on edge of table and talks that way. He won't talk into tape recorder and is generally rude and uncooperative - the first time I have seen him that way. Chet also mutters things and won't repeat them. The session is chaotic (see protocol). Al is also a trifle nasty and goes through a number of his falsetto voices for me. Bob at one point, when asked to vote, stated, "I'm just basically not interested,"--thus echoing the old Frank-Dave battle-cry. Ed is rather silly and impatient. All hands keep getting up from table to make coffee, get mail, etc. The heat is oppressive today.

9:30-10:00 p.m.

Al watching TV alone. He tells me he has just realized that he hasn't <u>done</u> anything, e.g., painting, for several weeks. He vows to lift himself out of his lethargy.

Frank and Dave join us. Frank asks Al about his plans; . . . is quite friendly.

An argument develops - I regret to say started by me - in the following way. Frank is on his blowing-things-and-people-up kick and says that I will have to be assassinated. He and Al and Dave and (now) Chet speculate about what it will be like when there is only one person left alive - Del emphasizes that he can drive any kind of car he wants and eat canned food; Frank wonders what you would do if there were only an 80-year-old woman left with you (says he would quickly have a younger one by her); Chet

is concerned about whether Frank would stay and talk to her, since she might not be found again if you went off and left her; Frank says he would talk to her but that he wouldn't mind being all alone; Al doubts this last statement of Frank's; Dave suggests that Brigitte Bardot would be the only one left with you. . . . .

A few minutes later, conversation has turned to what to do to prevent world from blowing up. Frank begins to cross-examine me: Would you lead a movement to impeach LBJ if he tried to use the Bomb? If that didn't work, would you lead a movement to assassinate him? This deteriorates into a diatribe by Frank on the impending danger of disaster in international politics. I get peeved and tell him firmly that much of what he says is his own imagination and is not a description of reality. He is upset, . . . and begins a . . . diatribe to the effect that everything we see is imagined and there is no world. At this point, Dave starts tipping his chair backwards, asking whether that is just imagination. Unfortunately, the chair goes on over backwards, breaking. Frank is furious. . . .

27 April
noon

Dave reading at table. All others in rooms or outside, alone. Al seems cheerful about going to Tilden Park this afternoon. Frank seems fully recovered from being toppled yesterday. He is business-like about having arranged the trip to Tilden Park.

3:00-5:30 p.m.

Excursion

General sense of excitement at going to Tilden Park. Chet holds us up; Frank says Chet is changing clothes and preening himself before the mirror.

. . .

In the park, we all start up a path. Dave and Frank go far ahead. Chet tries to keep up with them. Al and Ed and I keep up about the same pace. Bob lags behind and goes off on a tangent . . . . Everyone is in good spirits but the climb is hard. Frank and Dave are lost to view, except when they climb a tree and holler to us. On way back, two stray dogs join us. . . . Again, Frank and Dave go way ahead, running part of the way. They climb trees over our path and make gleeful noises as we pass under.

. . .

. . .

There is some reluctance to going back, or rather, a minor change of mood - sobering up, about it. We all wait on elevator for Frank, who says he forgot something in the car and has to go back. On returning to the Penthouse, Bob says "safe again" or "back safe."

(I had expected more of a negative reaction to returning to the confinement. . . .)

Addendum: At the beginning of hike, I remark that everyone is supposed to stay in view of one another. Says Frank: "That will not be necessary." He says this most authoritatively and then makes off with Dave at a fast pace, giving the impression that he is the kid who always used to contradict the Boy Scout leader . . . .

. . .

. . . I get several impressions, which I can't tie down now, that the subjects simply do not feel competent in the outer world.

In deciding who will go in what car, Frank and Dave start off together, saying over shoulders that they need one more passenger. Bob says, "Go with them, Chet." Chet, who had been hanging back, does.

Nb.--I think I forgot to note that last Saturday Al gave me another installment of his feud with Bob. . . .

Addendum 2: . . .

Forgot to note before that one cause of treadmill breakdown was Chet's sticking his shower slippers in the machine. I got him another pair because these slippers were half torn away.

28 April
3:00 p.m.

Subjects fairly active. Dave watching TV. Al sitting on couch next to TC, reading paper. Frank and Chet discussing Chet's Bowie knife. Chet says he is going to use it to scalp us all at the end of the experiment. Frank is afraid of the knife, then plays with it as if he were a samurai. Staff reports Frank's remark that he will throw Bob over the parapet. (It was lunch-time, Frank lying on floor;Bob's "fans" would catch him.)

Dave comes in living room and asks Al if he is watching TV, before changing channels. Al at the time was reading newspaper and paying no attention at all to the TV.

Subjects keeping to their rooms, coming out from time to time and then retreating.

29 April
8:00 p.m.

Subjects generally out of sight. After a few minutes Al and Ed go into kitchen to play cards. Chet engages me in conversation and asks some favors. All except Bob assemble in living room to watch some television show.

30 April
1:30 p.m.

Frank in living room. Talk with him briefly about allergies (he has sinus trouble now). Ed comes in and asks me about something I wrote. Frank looks disgruntled, gives a brief gymnastic exhibition, and leaves. Al is irritated at me too, asks whether I have got a magazine for him; says he is glad I have a cold.

6:15 p.m.

All still at dinner except Al; Ed is sitting in chair at office door, munching cookies and watching TV. Ed engages me in conversation, but after about two minutes Frank interrupts to demand why a staff member didn't get movies for the weekend. I say, don't know. Frank says that I should exert pressure on him to get those movies. I say I can't really do that any better than he can. Says Frank, "If I told him he'd better get those movies, he would throw me over the parapet." It would be, he says, like making such a demand to the Director. . . .

This is the second or third time that Frank has made such a request to me, prefaced by, "You have power . . ." or, "You have authority . . ." He will not believe that I don't, or that he would succeed without an intermediary.

9:00 p.m.

Al, Ed, and Bob entertaining guests. Frank, Chet and Dave watching TV. Dave's guest is sort of ignored and left to watch the TV. (About half the recent programs are fairly high-level, half are very poor quality) This program is a eulogy to Ed Murrow. As it ends, Frank says that it was pretty poor and waits for me to agree or disagree. I say nothing, Frank says he wishes he had watched a program about baseball instead; starts looking through TV guide. Dave says that baseball game is still on: San Francisco versus LA; he switches channels without consulting Frank, Chet, or guest or me. Chet leaves room. Frank makes several remarks about how insane, weird, crazy, maniacal, amusing, or foreign various players are. Dave says nothing. Chet does not return. More guests arrive for Dave and Frank. They too become captive viewers, addressed by Frank in side-saddle fashion (i.e., his body is chiefly aligned with the TV set). Dave the same, casting remarks and glances over shoulder.

1 May a.m. Regular interviews

Dave, after his and in absence of the nurse, walked all the way around the building on parapet, contra legem. Says he is going to ask the Director to let him out for half a day to move into new apartment.

Ed is very abrupt today.

Frank and I have long talk about occupations.

Chet wants to know about renting cars and how to get driver's license.

Bob is happy about fresh flowers that the nurse has brought.

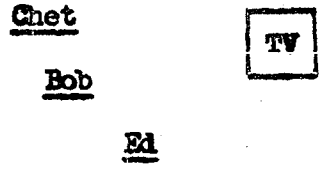
. . .

3 May 1:45 Al and Bob in kitchen chatting with dietitian. Frank and Dave in living room reading TV guides. Al initiates talk about going for another field trip. He says he doesn't care where, so long as it is out. Al wants to go to Tilden Park again. He, Frank and Dave are disappointed when I say I will be out of town this week; Al says the trip is off then. Frank says the trip is off until next week, anyhow.

. . .

5:00 p.m. Ed, Dave and Al (reading magazines) watching a TV show. Ed, in light spirit, says, "The others have all gone home." --Bob is sunning self outside. Frank and Chet are not visible.

9:00 p.m. Chet, Bob and Ed watching TV:



(Ed and Bob lying on floor, on backs) Frank enters room and knocks the TV program; he then says the girls on it are quite something. Al is on phone in office. Dave is sleeping. Al comes out and starts conversation with me about stereo systems, the law re unpaid bills . . ., and whether he should approach Dr. Calloway about going out.

A new program comes on the TV. A man in hospital bed is being fed by a nurse; she takes away the food. Says Ed with irritation, "Why doesn't she feed him more of it, why doesn't she rub his feet?" Then a commercial comes on; a merry group of people bringing pizza and beer to a friend's apartment, bubbly beer is being poured.

Ed gets up suddenly, goes toward room, grabs plaster of paris birthday cake in the hallway, runs through glass doors behind TV, leans over parapet, and hurls cake outward. Then, flushed and defiant-looking, he strides through living room, into toilet, where he emerges a few minutes later with a urine sample.

(Frank, earlier in this scene, had suddenly remarked for no apparent reason, that Chet should be thrown over the parapet.)

Later, Bob is gleefully relating Ed's deed to Dave, who is also delighted. Bob reports (he had run out after Ed and witnessed it at first hand) that the cake lit on top of a car below (where my car is parked). In fact, it had lit on concrete between some cars. Bob, Frank, Dave are intrigued at the damage Ed did and whether the car-owner will get insurance coverage.

4 May
10:00 a.m.

Bob talking with staff. All bedroom doors closed. Ed on treadmill, says he is feeling "all right." Later he is walking around the parapet, around and around.

Frank informs me that I am "a cartoon" in his mind. "So is the Director." He says he knows I won't accept this, but that is the way he sees it.

9:00 p.m.

I tell Frank, Dave and Chet somewhat forcefully, that the janitor says they are to stay off the parapet or he will call the campus police. Chet says nothing. Frank and Dave make much commotion. Frank says if a policeman comes up here, "I will hit him; then he'll probably shoot me." He and Dave both assume at once that they will end up in jail. . . .

. . . . .

. . . . Frank says if he wants to go on parapet, he will. Dave tells me to tell the janitor to "shove it." I tell Dave he can tell janitor just that by picking up phone. Dave says he will do so if he sees the janitor while he is on the parapet.

. . . . .

5 May
9:30 a.m.

Bob and Dave in treadmill room. All others evidently in own rooms. A staff member tells me that Dave was apprehended last night leaving the building. The watchman saw him sneak by window and followed him down stairwell; Dave is coming back up stairwell, according to staff member, because he heard the watchman coming after him. Dave said that he did it just to do it, to see if it could be done, doesn't know why he did it.

11:30 a.m. No one visible. Dave is first to arrive for isometric exercises and lunch. Then Frank, then Chet, then Ed. Other two have to be called. Frank wants me to bring up some of the girls from the Director's lab. A minute later, when I am talking with Chet about helicopters, he interrupts to tell Chet he is going to kill him with an ashtray. . . .

Bob comes and leaves rapidly.

Al gets in bantering argument with Frank and ends by reciting numerous evidences of Frank's hyper-caution and calling him a child. . . .

10 May 9:30 p.m. Returned from Chicago. Stopped by to pick up DOR's. A staff member mentions to me that about a week ago Bob had told her that someone had been here hunting for her, whereas in fact someone had called on telephone asking for her. She thinks she remembers other instances of Bob's distorting messages.

11 May 11:30 a.m. Frank suggests to me, in presence of Mr. Stow, the psychologist, that for $80 he will sell me information about what this group is really like, including illicit things. He later reduces the price to $60 for him and Dave together. . . .

4:30 Ed, Dave, and Bob watching TV. Others not visible.

Nb.--Al mentioned to me that he has resumed painting.

. . .

12 May 3:00-6:00 p.m. Outing No. 2

. . .

Frank and Ed declare that we should follow Dave's directions (in another car) to Ashby Ave. and somewhere in Tilden Park. Ed says (referring to self in third person) that "Ed always gets lost." Frank is confident that Dave knows where he is going. He is not confident that I know how to drive, and keeps warning me against speeding (he says limit is 15 miles per hour, in a 25 mile-per-hour zone) and "tail-gating." . . .

. . .

In Tilden Park, Frank and Ed are articulate in criticizing Dave's plan, he is going too far into area we went last time, etc. I am supposed to honk and tell them to stop (car has no horn). Various sad-sack stunts by Frank and Ed to the effect that the spot we just passed would have been awfully nice. The other car stops and it is an open question whether this site is OK. We stop and all get out, thus deciding.

Order in climbing to top of mountain: Dave, Chet, DS, Frank, Ed, Bob. Al and a female staff member are left far behind. They return to car and creek below. Frank lies down on top of mountain . . . to clear sinuses. Chet, Dave, Ed go on ahead along ridge, Bob lagging behind. I am fatigued and return down mountain to car. Long talk with staff member and Al. Bob finally returns, then Ed, then Dave. Very long wait for others (Chet and Frank), who at last return together.

Return to Penthouse: Al expresses reluctance to enter. He had been concerned about being late, lest they not get to go out again. We are met by staff members. One is angry about cookies which someone left the other day. Asks subjects to let him or staff know who did it, so results can be adjusted accordingly. . . .

Subjects' behavior during outing was fairly infantile. Dave climbing trees. Bob looking for and playing with bugs. Ed's and Al's puns. Al, especially, on re-entry was giddy and talking in absurd falsetto voices. Ed did a bit of this. . . .

8:00 p.m. All hands excepting Ed watching "The Virginian" on TV. At end Bob and Al express wish to watch Sammy Davis, Jr. Frank says forcefully, "Forget it." Al makes wishy-washy statement about not really liking Sammy Davis that much. Dave jumps up and tries several channels, settling on the previous one (an old Western).

. . .

Bob sprawled on floor near Chet's feet, Chet objects. Bob jumps on couch near Al's feet; Al objects violently in graphic terms about protecting his posterior; however, they are chatting in friendly way thereafter.

. . .

13 May 11:30 a.m. Frank and Dave playing cards on couch. Ed in office reading Montgomery Ward catalogue. Frank leaves and Dave plays cards with Al. Chet briefly visible making coffee.

5:00 p.m. Ed, Dave, and Al watching an old movie on TV. Bob phoning in office. Chet and Frank in Chet's room, apparently talking.

6:45 Thanked Dave and Bob for signing up for experimental sessions and they tell me others didn't sign up (after 48 hours) because they didn't see the notice (on a bulletin board which they pass several dozen times a day, and which has notes and the daily schedule). I say OK, and put the sign back up. Dave says: "You don't really want to have the sessions. You just put it up to see what we would do; that's my contention."

Ed makes a monkey of me by asking me to sit down and relax; he gives me a push as I am nearly seated: the chair is broken, and breaks further as I come down on it. I am mad . . . . Chet is smiling at me in an insolent way. It is a kind of "West Side Story" atmosphere, most unpleasant. I surmise that I arrived at a point in which a good deal of hostility had been aroused by imitating some judo seen on TV.

14 May
3:30 p.m.

. . .

Dave is playing cards with Al. Al has to go on treadmill. Ed asks Dave if he will play cards. Dave: "Sure, I'll play with almost anyone." Ed remarks the implication behind this, which Dave in turn minimizes.

Planted the rumor about a radically different readjustment diet with Dave and Ed.

After 48 hours, only Ss Dave and Bob had signed for any experimental sessions. After 72 hours Chet and Al had also signed. Will remove list tomorrow, after 96 hours.

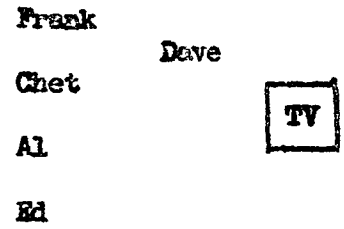
16 May
10:30 a.m.

Ed tells me that he is fairly sure the uneaten cookies are his. He has no recollection of leaving them, but he is sure it would not have been any of the others. Says he sent note to the Director to that effect. I tell him that is helpful. All other subjects excepting Bob join in a bull session about the purposes of the experiment and the next experiment. This I take to be one effect of our inquest yesterday, as to which see transcript. Ed says he has lost all sense of time and his head feels like it is going to split open. He was up at 4:00 this morning because he couldn't sleep; went back to bed until 7:00 a.m.

Dave reminds him that yesterday was the day they decided what to watch on TV by dividing a deck of cards. Frank says there ought to be a psychiatrist on the project. He volunteers to be on the staff next time as an observer. Ed, Dave, and Chet, also Al, are eager to know what the Director has decided, whether the experiment will be terminated or not.

Chet remarks to me that there would have been no difficulty getting the cooperation of the subjects for C-S experiments if they had been <u>told</u> they had to do it. Leaving it voluntary and emphasizing our need for cooperation was, he thinks, a mistake.

8:30 p.m. All subjects except Bob watching Ed Sullivan show:



17 May
3:30-5:00 p.m. Regular session with all except Frank, who comes in to announce that he will not participate. I tell him I shall interview him later in week. He retires to room. Dave is most cooperative and charming. Ed volunteers to join in at last minute, saying that he meant to sign up but I took list down too soon. In the case of Whitney v. Cal., I am amazed that Ed is only one upholding freedom of speech. Then Dave changes vote at last minute to support Ed, leaving other three high and dry; how to interpret that? Ed persuading Dave. How can that be if Dave is really the leader?

Rumor on re-adjustment diet has got back to staff, in person of Al, who asks what it will be.

Al remarks in session that the group gets along well because whenever they disagree about what to watch on TV they just split a deck of cards to decide it. (This is either a new, or a special, decisional technique.)

Ed announces that the Director was up and is satisfied that no one was trying to sabotage the experiment; he appears a bit relieved, though still complaining of boredom.

Dave spoke an obscenity into the tape, which had to be erased. This was thought to be quite a joke (by him, and to a lesser extent, by Al and Ed). He has done this several times before in interviews. I am not clear whether he regards it as an insult to me, a test of tolerance, an invitation to the typist, or what. It is a very basic act of anarchy, done with the sweetest smile.

Re the planted rumor, the staff member says that Chet and Dave wanted to know what the new diet would be. She said, "That's for me to know and you to find out."

. . . . .

19 May
2:00 p.m.

Ed and Al playing cards. Chet and I play a game of chess. Frank is cutting up, pretending to know about chess, ...

. . .

Bob comes into kitchen once in underwear, smiles.

Frank "confesses" in response to my question that he really doesn't know where he'll go at end of experiment. May stick around Berkeley for a while. . . .

He puts on one of his typical acrobat-yoga performances for me and Ed.

7:00 p.m.

Frank, Dave, and Chet watching movie about bombing of Romania in World War II. Frank and I start talking. Dave turns up TV, so loud that we cannot talk. Frank leaves shortly thereafter saying that the bombing movie is stupid.

20 May
5:00 p.m.

No Ss in sight.

5:45 p.m.

Ed and Dave hanging over parapet to get better smell of barbeque going on in patio. Frank tells Director that he is just all excited by the smell and wants to go down there and grab one. Ed comes out with large knife and looks at me and a staff member, saying he will cook one of us. He feels my arm and decides I am too thin. Bob plays with the knife a minute too.

. . . . .

Rumor about re-adjustment diet is still going on. Frank asks when "they" are going to tell subjects; Al chimes in, he wants to know too. I advise investigator to let it go, keep it a secret, and see who reacts and how strongly.

21 May
noon

JB and I are observing subjects, joking with them. Frank and Al are sources of endless off-color stories. Dave and Bob are concerned that the next subjects shall not have visitors; Frank and Dave and Al make caricature out of this; tie them to chairs, etc.; Bob says put cloths in their mouths.

Frank tells JB and me, in discussion of porpoises, that we have closed minds: this has special reference to our disbelief that porpoises know our language.

3:30-5:00 p.m. Experimental games. Frank is asked by me if he wants to play some games for money. He says, "Not really, no," in a way that infuriates me.

Lots of joking with Ed, Dave, and Al. Chet is unusually silent and negative. Bob makes a good deal of distracting noise. Dave makes suggestions to the effect that they will just take my money from me and throw me over the parapet. Chet joins in with this.

In playing Fighter Bomber II, Ed makes all decisions for Ed-Chet team. Dave and Al confer for short time to the relative exclusion of Bob; later Dave talks to Bob first and then gets Al's assent. Initially he addresses Al as "Captain."

Al is very sensitive and leaves room when Ed says his voice is annoying (he was acting as time-keeper).

Good deal of joking about dividing up the money won at PDs. Al and Bob (and Ed to a lesser degree) profess indifference at whether they get exact amount due them. Dave a trifle peeved at not being included in earlier games; suggests games with three teams; I say we would have tried that if we had had more participants. Ed at end of game says he doesn't really want his share; I should give it to the charity of my choice (this is a joke). Frank is nowhere to be seen.

At beginning of games Ed says to me, joking but exasperated and as if to relieve me from thought that I am personally to blame--that they refuse to compete with one another because "we are pals, and you are one of the Others."

At end, Dave remarks in Frank's presence that he thought of throwing his earnings over the parapet to see if the people below would scramble for the money. Bob had thrown a handful of dollar bills into the air, saying something to the effect, "X car agency saves you this many dollars." (a TV ad) They don't want our dirty money!--Much!

Chet complains that he has only been able to study about two hours a day. His compulsion is breaking down. He is eager to get out and get back in "condition." He also complains that he has lost 1 1/4 inches off his biceps; I joked about it; it is not funny. Both he and Frank regard it as a crucial question of personal health.

Frank, playing poker, is very menschlich--though not himself entirely persuaded. Dave some of the same. Chet is gauche and keeps losing money by bluffing when he has nothing at all in his hand.

22 May
10:00 a.m.

Bob engaged with a staff member in office. Frank cursing in living room because he can't find TV guide.

. . .

Dave is in room fiddling with movie films. Al is in room typing letter. Ed on treadmill. Chet reading on bed.

1:00 p.m.

Delivered glass-fiber tape to Chet. Al sitting on couch watching TV with staff member. Bob on floor coloring paper dolls that he has cut out of newspaper. The dolls are all pairs of females, facing one another and linked at the hand and foot. He is coloring one of each pair, filling in hair, lips, eyes, and providing them with bathing suits; the other partner is left shrouded in the mystery of newsprint. He admonishes me to be careful not to step on them. Other subjects not visible.

4:45 p.m.

Ed, Dave, and Al playing cards on couch.

Bob sunning self and reading on deck.

Others not visible.

Bob explains his paper dolls--now pasted over fireplace in a gigantic dance--as "a church." [?]

Out of Bob's presence, Al and Ed ask whether I can guess who did that.

Dave asks me what is going on in the "outside world." Wants to know whether I went to the Vietnam rally.

Bob says on entering the room that he has begun talking to himself.

23 May
noon

Lunch on table. Bob eating his rapidly on couch. Al, Frank, Dave playing cards and come late. Chet a little late. Ed on phone.

Frank says that the stars indicate I'm going to have a romance. Says he can't read his own stars.

Dave repeats request to discuss experimental findings with staff. He suggests Thursday night. General negative reaction to idea that we should get together after the experiment to discuss findings.

9:45 p.m.

Chet watching TV with staff member in living room. Bob said to be on phone in office. Most lights out, doors shut. Staff member says others are playing cards in Frank-Ed's room.

24 May
3:15 p.m.

Ed, Al and Dave playing cards on sofa. Joking with JB. Bob talking with staff member in office. Chet wanders in and out of living room. Ed reading on bed. I tell Ss that we shall have a meeting Thursday night at which we shall be willing to discuss our findings with them to some extent. Al claims to be eager to find out about himself.

. . . . .

25 May
11:00 a.m.

Staff member reports that this morning for first time to her knowledge Ed sat down with others at breakfast (lowering himself). That could be a function of common fate, or it could be an effect of conversation last night in which Al and Dave were in phantasy destroying Ed with acids, sharks, etc. to get insurance money.

Chet says that the new diet is awful, and that he thinks the others "would agree to that." He appears unaware of the problems of re-conditioning the digestive tract.

5:30 p.m.

Got subjects to sign receipt for last experimental games; some joking about whether they ought to. A new status ordering appears to be emerging, with Frank much less dominant and popular, and Al far more assertive and influential . . . . Dave and Al come to the fore as more competent to go out; Ed, Frank, and Chet, and especially Bob, act as if hanging back from the prospect of freedom.

9:30-
12:00 midnight

Visiting night. Ss as usual. I play chess with Chet.

. . .

. . . Talk about letters to mother, about sending dye-sample through mails to friend (Frank), etc. Ed is most indignant at JB's statement that next time there will have to be more rules: "What rules?" Al is outspoken and is especially keen on pointing out that staff put subjects in a bind, too many requests and not enough commands.

26 May
9:15 a.m.

. . . Al is, at least officially, appalled at a possible loss of data in the experiment. Dave and Bob appear chastened. Frank looks depressed but claims he knows where he stands. Ed and Chet not in view. Frank sunning self on patio. Dave on treadmill, reading. Others behind closed doors.

8:30-6:30 p.m. Observing dinner. Al, Dave, and Ed are playing whist. Frank comes and asks to play; Al and Dave say OK, without enthusiasm.

Nurse takes temperatures and pulses, then lays table and announces it is time to eat. Bob and Chet come to table about same time. Dave decides at this time to take a shower. Al, Ed, and Frank continue at cards. About time Bob and Chet are finished with meal, Frank says, "Gee, it is time to eat." He and Al seat selves. Ed takes part of food elsewhere. Dave returns with soap in his ear, freshly bathed and dressed. Ed also seats himself at table. Al and Frank and Chet are last to leave table. Frank, Dave, and Al dominate conversation.

Table conversation and after is about the experiment. Chet says in general way that each of them has been fooling me all along. I say, "Oh?" . . .

Chet makes quite a display of licking his plate clean and other weird table manners.

. . .

Ed is embarrassed at Al's jokes and leaves room. Frank is quick to assert that they are disgusting.
. . .

Dave says the present subjects are crack pots. Frank says, "Ya, 'they' are only going to get hipsters to come on an experiment like this."

9:00 p.m. Subjects watching Hulabaloo, except Bob. Chet wanders in and out. Frank hushes those who talk when certain rock and roll singers are performing. All Ss appear much subdued.

27 May
8:45 a.m. Al and Dave sitting on couch. . . . . Al says he dreamed about assassinating Adolph Hitler, "when he came to power in 1939 [!]. Chet says he dreamed about being attacked by snakes; . . . .

Frank comes in and is friendly. Mostly concerned about his BM's.

Ed in room. Bob on ergometer.

Frank tells me I look "trim and modern" today.

Ed says last night that if the next crew is not permitted to have visitors, they will become aggressive and take it out on the staff, because "people would rather do that than admit they are anxious."

11:30 a.m. Dave, Al, Ed playing cards on couch. Bob looking at the head nurse's slide collection. Others out of sight.

1:30 p.m. Bob talking with the nurse about travel and vacation. Chet on ergometer. Al and Ed sunbathing together. Frank and Dave out of sight.

6:00 p.m. Supper. Al and Dave and Bob first up from table. Dave goes off to take shower. Al finishes meal on couch. Ed asserts that he will take shower before meeting tonight. Ed, Frank and Chet are last at table. All are good-humored. Investigators present, to say goodbye. Joking about my drinking some of the coffee, contrary to earlier rules. Al, Frank, and Ed are recounting childhood games and rhymes.

8:00 p.m. Final meeting with subjects, JB, DS.

Ed, Dave, Frank, and Al are playing cards when I arrive. Dave says, "You want to observe us interact, eh?" I say yes. Frank pushes Al and starts to threaten him. All of them (less so, Dave) jump on Al in a mock wrestling match. Tenor of the conversation during card game is that Al thinks he is pretty hot but is not; he, in turn, outdoes them in wit and banter.

Frank talks most during meeting, plying JB with questions . . . . Dave says at end that it is too bad we didn't come up with any interesting findings or discoveries. Al wants my assurances that nothing bad will go on his "record" . . . . Bob asserts belligerently that we must state in our report that he "negated" the others from the beginning because he had his work to do. I remark that they survived as big as life, considering his annihilation. He says that is the way I would interpret and misconstrue things. Angry and baleaguered. Therefore, it was only a group of five, says Bob. He emphasizes that the nurse has had an extraordinary effect on the group and we ought to be aware of it. I say, we are. He is disappointed because 1) he wants to control our perception of him, and 2) he therefore wants to squeeze out of us our present interpretations and conclusions about his behavior.

28 May
10:00 a.m. All subjects happy at huge breakfast. Al engaged in phantasy about marrying a staff member; this is their engagement breakfast. Al is apprehensive about going "all the way" to San Francisco on the bus alone. Apparently he and Ed leave together. I take Frank and Dave to YMCA. Frank is apprehensive because he had such a rough time last time he was mustered out (he does not specify). . . . Chet, to annoyance of a staff member, has just begun to pack all his stuff; he is also going to stay at the YMCA.

Bob is also slow in packing; as per usual, he is helped out by friends. Bob, Chet, and Frank are their everyday selves. Al and Frank are apprehensive about leaving. Ed appears hopeful, albeit a trifle manic.

Dave says that the Penthouse is a very "safe" place and one hates to leave it.

. . .

Staff member reports that yesterday morning Ed sat down at breakfast but did not begin to eat until all the others had finished eating.

END OF LOG

APPENDIX B

ECOLOGY, LAW, AND ANTI-LAW

It is obvious that the non-social environment constrains human behavior in most important particulars. It is not so obvious that ecological factors fix the limits within which issues and decisions are valid and pertinent. For instance, the insurgent or the rival leader simply has got to come up with relevant issues; he cannot expect to affect Chicago politics by exhibiting concern over New York's water shortage.

What appears less obvious is that the range and saliency of issues in simpler environments--e.g., primary groups or societies in closed environments--can be foreseen in large part. The alternative lines of intra-group disputation can, within certain degrees of likelihood, be predicted and the fate of potential issues (scenarios) in that context foreknown. Within specialized environments, the control of interpersonal disputes of much factionalism and anomie can be built into the social organization deliberately.

* *

The animal ecologist Wynne-Edwards has shown the relation between crowding and rivalry, sexual access, and precedence in feeding.[1] His thesis is that if either crowding or food-shortage occur, there will be an increase in the amount of display, rivalry, and real or symbolic combat,

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[1] V. C. Wynne-Edwards, "Self-Regulating Systems in Populations of Animals," Science, vol. 147, 26 March 1965, p. 1543. See also his Animal Dispersion in Relation to Social Behavior (1962).

especially among the males of the species. We are well aware of the safeguards which are needed to hedge such generalizations about. It is necessary, for example, to keep in mind that in ecological investigations the sequences of cause-and-effect are often baffling. Moreover, there is danger in extrapolating from non-human to human behavior patterns. Nevertheless, such risks must often be ventured. With these caveats in mind, we applied the Wynne-Edwards thesis to the Penthouse situation and inferred that the absence of normal sexual access, the uniformity of diet, and the physical confinement (and relative crowding) would give rise to needs for alternative systems of gratification. In particular, we hypothesized that the basic and essential character of food--and the potential panic that might arise from the fear of losing both food and mobility--would impel the Ss toward substitute "feedings."[2]

In thinking about the analogues in non-human behavior, it is well to keep in mind the kinds of alternative "feedings" that human Ss might seek in partial compensation for Penthouse-type deprivations: verbal reassurances, tobacco, favors, auto- and homoerotic activities, communication with outsiders, reading, passive enjoyment of movies and television, richer phantasies, physical escape, medication, sleep, suicide, submissiveness, penance, restitutive rituals, etc.[3] We actually observed incipient prototypes to all these behaviors in Penthouse II or III.

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[2]As to the profound significance of food to emotional well-being, being loved, being empty, being cared for, caring for, etc., see the works of Karl Abraham, Melanie Klein, and Edmund Bergler.

[3]We include in the notion of 'feeding' the negative aspect: repudiation of tendered aliment and retaliatory "poisonings" of the feeding agent.

A few remarks from the vast literature on the effects of population density on non-humans are offered here to lend perspective. Wynne-Edwards reports several odd behaviors attributable to crowding, among which are the starving to death of toads, when crowded together in a laboratory setting, in the presence of food,[4] and the crowded red deer's killing one another through what he terms "fratricidal accidents."[5] He mentions cannibalism among mice, guppies, and spider-crabs "if confined at densities greater than they are prepared to tolerate."[6]

Zuckerman related that female baboons in the London Zoo were often killed inadvertently by the males who were fighting over them (literally).[7] Red deer crowded in artificial parks were said by Darling to fight in and out of season and to kill calves and strange hinds.[8] The swarming and colonization of bees and ants is a well-known adaptation to crowding.[9] Wild rats, when driven to territorial competition, tend to die from exhaustion rather than from wounding.[10] Calhoun crowded Norway rats in such a way as to create a "behavior sink" where the less dominant animals were forced together and there exhibited various pathological behaviors resulting

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[4]Wynne-Edwards, Animal Dispersions, p. 553.

[5]Ibid., p. 550.

[6]Ibid.

[7]S. Zuckerman, The Social Life of Monkeys and Apes (1932).

[8]F. Fraser Darling, A Herd of Red Deer (1937).

[9]See, for example, Wilhelm Goetsch, The Ants (1957); W. Eric Kelsey, The Spell of the Honey Bee (1945); A. R. Cummings and Margaret Logan, Beekeeping (1950).

[10]S. A. Barnett, "Competition among Wild Rats," Nature, vol. 175, no. 4446, 15 January 1955.

(*inter alia*) in infant mortality as high as 96 per cent.[11] He presents additional evidence that among some animals overpopulation results in sexual deviation, increased infant mortality, and "frenetic overactivity and pathological withdrawal."

A recent report on population density and animal behavior summarizes the findings for various species and links crowding with certain biochemical changes that often result in prostration, convulsions, and sudden death.[12] The same report attributes detrimental effects on learning ability and reproductive and infant-care abilities to crowding.

* *

It seems highly probable that crowding *per se* results with some animals in behaviors that ultimately increase the available space--by outright killing, infant mortality, and fatal biochemical reactions. In other words, such behavior is an attack against intrusions on what must (we postulate) be instinctively felt to be the vital ego-space or existence-space of the animal. Sometimes the attack is deflected or abreacted, so that the animal itself becomes the victim, or becomes exhausted by the chemistry of thwarted aggression or of anxiety. To all appearances, human beings are better able to tolerate crowding--although we pause to note the similarity between 1) schizophrenia and other self-defeating and self-assailing reactions and 2) the *social* behaviors of some animals under conditions of crowding. Since *physical space* seems to be less rigidly allocated and needed by the human animal (*pace* specialists in real and personal

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[11] John B. Calhoun, "Population Density and Social Pathology," *Scientific American*, February 1962, pp. 139 ff.

[12] D. D. Thiessen, "Population Density and Behavior: A Review of Theoretical and Physiological Contributions," *Texas Reports on Biology and Medicine*, vol. 22, pp. 266 ff.

property), we hypothesize that the homologue to the bizarre behaviors of the other animals under crowding is the reactions of humans to intrusions on their Psychic Space.

If the crowding of animals is comparable to intrusions on human Psychic Space, it ought to be the case that such intrusions lead to perturbations in one or more of the primary behavioral systems--sexual allocation; nesting; feeding; the status system (dominance-submissiveness); and group work (grazing, flocking, migrating, colonizing, communal defense, etc.). We hold out, as hypothesis, the idea that physical crowding in human beings increases the likelihood of actual or potential incursions on Psychic Space and must, therefore, produce measurable behavioral disturbances.

One set of reactions noted by Calhoun was what he called the "prober" and the somnambulist types. The latter is self-explanatory and is comparable to what we identified as "cocooning" behavior amongst the Penthouse Ss. The "prober" is a rat whose response to the "behavior sink" is to rush around frenetically, attacked by the others for his intrusions into their space, sexually perverse and cannibalistic, lying in wait for estrus females and violating normal courtship patterns. Prober behavior, although less noticeable than cocooning, was also visible in the Penthouse Ss--localized to certain personality types rather than being a phase that each S went through.

Since human beings can exhibit presence of body without presence of mind, the effects of crowding upon human beings are relatively within their control. At the same time, it seems likely that the added stress of physical crowding and monotonous diet would burden the proximate human behavior systems noticeably, by virtue of the disappearance of much of the insulation

that normally protects Psychic Space (e.g., freedom of movement, or proximity of predictable or subordinate others), and by virtue of the reduced gratification (from sacrificing normal feeding habits and desirable human contacts). These strains might be expected to increase the demands that are put on other aspects of the Penthouse environment. Consider for a moment the substitutibility of the major sub-systems: the change in feeding is a diminution in variety and palatability, a comparative deprivation rather than a threat to the viability of the organism. In the Penthouse, feeding was relatively less gratifying and there was no "unappropriated" food over which the Ss could fight as a test of dominance. However, the social situation of feeding still provided the face-to-face opportunity, periodically, for renewing the social structure (of the peer group) and challenging the position of one another in it. The sexual system was also affected on the level of accessibility; and, without knowing what actual behavioral changes this made for, it left the Ss in a position of having to settle for abstinence or biologically inferior alternatives. This may have meant a dimunition in gratification and the obvious confusion in identity and role. The nesting system was likewise restricted, in that each S was directed where and when to sleep, where to put his gear, where not to go, etc. This constriction of nesting space might have important consequences in the expression of status and in individual opportunities for withdrawal, fantasy, and sleep, i.e., for certain anti-social gratifications. The group work or mutuality system was prescribed, although it left much free time, was relatively light, and featured a good deal of nursing and coaxing. It may be that the group work, compared with the Ss' work relations on the outside, was less unpleasant, provided them with more esteem, and soaked up

some of the needs produced elsewhere in this closed environment.[13] The status system had a built-in ambiguity, for it offered the Ss an opportunity to be experimental objects so important that their very droppings were sought after. Their undoubted low status vis à vis the outside and the staff was thereby made a sort of mockery. Moreover, the amount of care and attention given them far exceeded what they might have got as higher-status adults on the outside. It is plain to see that the chance to become dominant within such a peer group might also appeal to men who shrank from competing on other terms.

In short, the strains of confinement and dietary restriction would have to be compensated, if at all, by substitute "feedings" and substitute "space." From the other available sub-systems, the feedings might have been supplied from exchanges of esteem within the peer group or from exchanges between Ss and staff--a type of gratification progressively reduced by the cocooning effect. The "space" might have been made available by guarding or extending Psychic Space--both by withdrawing more and enriching one's phantasy-life, and also by insisting on more "social distance" during ordinary interactions.

* *

We employed the term "anti-law" to describe the behavior of the Penthouse Ss when they were intent on subverting and defeating a rule. It is not enough to call this range of behaviors "anarchic," because of the crucial ambiguity in the concept of anarchy: anarchy refers to the serious engagement with and contravention of a legal order (i.e., to anti-law), and

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[13] We have good reason to think that most of the Penthouse II Ss had had unsatisfactory work experiences on the outside. See below.

it also refers to a genuine indifference to or absence of a legal order (non-law). Thus, in interpreting violations of rules one must try to distinguish between naive ignorance that a delict was perpetrated and advertent repudiation of the validity and legitimacy of the rule contravened.

The ecology of the Penthouse hampered the development of anti-law in one way, because anarchic projects were hard to conceal and apt (for all anyone knew) to have undesirable repercussive effects throughout this little social system. In another way, the intensity of the personal relations and of the peer group solidarity meant that the Ss could (and did in both Penthouse II and III) skew, isolate, envelope, ridicule, and mutilate the rules with great ease. Their technique in general, as we reported in the narrative chapters, was to create a quondam moral community or consensus the aim of which was to define away, delegitimate, or invalidate noxious rules. This technique of dissolving and nibbling at the rules--informally, unilaterally, or at least without consulting the authorities--is precisely what we mean by anti-law.

Anti-law inclinations are presumably intensified by situational frustrations and by the bruising of expectations. While it is impossible to separate out all the personality factors and congenital pathologies in play here, it is our impression that the Penthouse III Ss, for whom the social situation had been defined more explicitly, were attracted less by anti-law for that reason. An additional, probably very important, consideration was that we deliberately selected for Penthouse III, career-oriented Ss, i.e., men whose role-expectations were well-defined in part, who had some tolerance of authority, and who would not encounter many role-conflicts in the experiment. The Penthouse II Ss, by contrast, were overwhelmingly

anti-careerists (unless we choose to regard them as career experimental subjects) who believed quite consciously in the evils of work, the virtue of religious detachment from the worries of the world, the necessity of being oneself, the gnostic worship of Nature, and such like. Hence, their expectations--especially those who had participated in Penthouse I--toward the Penthouse II experiment were fixed; they resented innovations strongly; they frequently fell into painful role-conflicts when asked to perform tasks that called for responsibility and moral presence (qualities consistent with the role of experimental subject and inconsistent with the attitude of twentieth century romantic, seer, aesthete). Some passages from the protocol of an interview we conducted in the eighth week of Penthouse II on the topic "how did you get here?" suggest the connection (obvious to common sense) between social alienation, anti-careerism, and antecedent anti-law dispositions.

DAS: How does this fit into your aspirations . . .?

Ed: It saves me from working in the store . . . And it's giving me a little money so that--I'm not sure what I'm going to do. I really think I'm going to go to Europe . . .

DAS: How did you get your previous job?

Ed: It was the only job I could find after I quit graduate school. . . . Oh, I really don't have any definite plans . . . I don't like the term 'career' . . .

DAS: Why did you apply . . .?

Frank: Because I don't mind being by myself. [!] I don't mind being inside or not being able to go outside and I need the money, well, I didn't need the money but I wanted the money . . .

DAS: How did this fit in with the plans you had?

Frank: Perfectly.

DAS: How so?

Frank: I didn't have any plans.

DAS: At all?

Frank: None at all, no.

DAS: Well, what were you doing before this?

Frank: Fooling around, mostly.

DAS: That's what you'll be doing afterwards?

Frank: Yeh, probably, fooling around again.

Dave: I don't have any long term ambitions; my big ambition is uh I don't know see uh I don't make any plans beyond the year or a year and a half ahead, because I don't know what's going to be happening then . . .

DAS: Did you have any plans when you were in college?

Dave: No. . . . I went back to _____ and stayed there for about a month, well stayed there and -- for about a month and then, I knew I wasn't doing anything and nothing is happening. I was just sort of getting into a lethargy. So I came out here . . . And this summer I'll go somewhere and eventually I'm going to Europe. . . . I know sometime I'll get tired of just drifting along and changing my place all the time. . . .

* *

If our speculations about the Penthouse ecology are roughly correct, it follows that it impressed on the social relations unique "legal" (meaning normative and regulative) needs. Law, says Fuller in a recent work, "is the enterprise of subjecting human conduct to the governance of rules."[14] The enterprise here is on-going, a job of constant adaptation; and it is an endeavor foredoomed to partial failure, because unambiguous rules are hard to draft and even harder to impose on changing, evading, disingenuous, disillusioned, unregenerate individuals and combinations of individuals. We should thus predict that, from the standpoint of our Penthouse Ss, the rules imposed by the Director and his designates (the exo-legal system) would not be entirely consistent with the rules applied by the Ss among themselves (the endo-legal system). Indeed, we should suppose

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[14] Lon L. Fuller, The Morality of Law (1964), p. 106.

that the endo-legal system will turn out to be, in some degree and from the premises of exo-legality, a delinquent system. The reason, plainly enough, is that no self-respecting primary group can follow corporate rules to the letter without brutalizing its own tissues of affection and esteem.

Now there are two possible delinquent responses to any rule of law: the first is to violate the rule; the second is to insist on its observance beyond all reason. The first tendency we call the "tort-feasor" mentality; the second the "contract-lover" mentality. These mentalities can be expected to adopt congruent ideologies--on the one hand, the endo-legality that justifies avoiding or violating the rules (because they are "manifestly" unfair, unequal, obsolete, etc.); and on the other hand, the endo-legality that justifies aggressions by the use of the rules against superiors, peers, or subordinates (because they neglected "what we all agreed upon," or what "everyone" knows to be fair, customary, sensible, etc.) Obviously, the two ideologies can be worked in tandem to suit the user.

Given this natural tension between exo- and endo-legal systems, and given the strains of confinement and diet in the Penthouse, we anticipated, after Wynne-Edwards, that the Ss' behaviors would reveal increased reliance on substitute feedings and mobility as a function of time in confinement. We believe that the evidence in the narrative chapters supports that anticipation. Moreover, on the basis of this hypothesis and using very fragmentary clues in the early stages of one of the experiments, we predicted the presence of two highly specialized delinquent sub-cultures the details of which, as noted in the Preface, cannot be given without betraying confidence and exceeding the proper scope of this Report.

APPENDIX C

GROUNDWORK FOR A POLITICAL ATTITUDES QUESTIONNAIRE

For lack of a standard instrument to measure the basic political and legal attitudes of our Ss, we decided to design two questionnaires. The products are quite inexpert, and we undertook this venture only because the standard psychological tests, including the tests of authoritarianism and liberalism, impressed us as missing much of what we wanted to know of a S's basic political and legal attitudes. By "basic" politico-legal attitudes we mean the emotional "sets" toward authority, freedom, property, contract, rules, etc., that were sufficiently strong and sufficiently generalized to recur with reasonable likelihood in response to a pertinent politico-legal issue. To some extent, we had in mind dimensions as general as 'rigidity-flexibility'--but not quite. What we were after was something between that kind of personality dimension and current ideological constellations, something, for example, at the level-of-generality of "concerned about political morality" or of "reacts violently to bureaucratic regulations."

One part of this questionnaire, emphasizing more the legal attitudes, is the subject of Chapter VII. The following remarks pertain to the part designed to tap basic socio-political feelings. The strategy here was to try to disguise the question so much that the S probably would not divine which of several possible dimensions was being tested. To do this, we used proverbs and clichéd statements. The test is complicated by the use of tautologies and outright clichés, since we wanted also to measure the reactions of certain personality-types to questions of that order. In addition to disguising the question, our aim was to propound the question in such a

way that the S could not but have declared himself on one of our dimensions by answering the question, even though the manifest meaning of the question referred to something else. That is, we sought to submerge the relevant dimension under an apparently irrelevant decoy; for example, if a S answered Yes to "On a trip I prefer to do most of the driving," we inferred a dominance need (we did not broach the next level of refinement, that the profession of a dominant attitude might mask a stronger tendency toward submissiveness, etc.).

The following questionnaire was given to so few Ss, and with such anomolous results, that we decided not to set out our preliminary findings on it. Nor have we been able to improve it to the point where we would feel justified in correlating its results with those of the standard psychological instruments and with socio- and psychometric data on particular individuals. We have some confidence in it, however, since it pointed out to us the insurrectionaries in Penthbuse II before we had adequate opportunity to form a judgment on the basis of behavioral observations.

Our intention was to identify certain types of attitudes which we discern to be very closely linked. Other investigators may well dissent from the types we propose and from the applications we made to particular questions. Anyhow, here are the clusters; and after each question, in parentheses, we indicate which cluster belongs with which answer.

Type I:	Strong leader bias; elitism.
Type II:	Majoritarian bias; weak leader bias.
Type III:	Dominance; brashness.
Type IV:	Submissiveness; irenic bias.
Type V:	Realism; cynicism; instrumentalism.
Type VI:	Utopianism; moralism; teleology.

Type VII:	Collectivism; extroversion; conformism; cooperation; trust; commutative justice.
Type VIII:	Individualism; introversion; anarchism; competition; distrust; distributive justice.
Type IX:	Innovation; rule-avoidance; tort-feasor mentality.
Type X:	Custom; rule-adherence; contract mentality.

I.P.L.A. TEST

Read the statement and indicate whether you do or do not sympathize with it. If you cannot make up your mind, or if the statement seems trivial or ridiculous to you, mark "sympathetic" or "not sympathetic" arbitrarily. Your answers will be confidential and will not be discussed with the other men.

1. Absolute power corrupts absolutely.
   --sympathize (II) do not sympathize (I)

2. I am uncomfortable in crowds.
   --sympathize (VIII) do not sympathize (VII)

3. Nuclear war is inevitable.
   --sympathize (VIII) do not sympathize (VII)

4. Children need someone to read to them.
   --sympathize (VII) do not sympathize (VIII)

5. Most couples who fight are basically incompatible partners.
   --sympathize (IV) do not sympathize (III)

6. Justice is the interest of the stronger.
   --sympathize (V) do not sympathize (VI)

7. Society creates most of its own troubles.
   --sympathize (VIII) do not sympathize (VII)

8. Out of sight, out of mind.
   --sympathize (VIII) do not sympathize (VII)

9. Constant vigilance is the price of liberty.
--sympathize (VIII) do not sympathize (VII)

10. Haste makes waste.
--sympathize (VI) do not sympathize (V)

11. Give them an inch and they take a mile.
--sympathize (III) do not sympathize (IV)

12. A soldier without discipline will probably get himself killed.
--sympathize (VII) do not sympathize (VIII)

13. In general, people will only do their duty if you push them.
--sympathize (III) do not sympathize (IV)

14. All the world loves a lover.
--sympathize (VI) do not sympathize (V)

15. The more laws, the more offenders.
--sympathize (VIII) do not sympathize (VII)

16. Dogs make nice pets.
--sympathize (VII) do not sympathize (VIII)

17. The child is father of the man.
--sympathize (VII) do not sympathize (VIII)

18. Heaven cannot brook two suns.
--sympathize (I) do not sympathize (II)

19. It is fun to meet other people's families.
--sympathize (VII) do not sympathize (VIII)

20. One should be careful not to disturb the neighbors.
--sympathize (III) do not sympathize (II)

21. Stick by your guns.
--sympathize (II) do not sympathize (III)

22. Geometry is more interesting than poetry.
--sympathize (X) do not sympathize (IX)

23. Virtue is its own reward.
--sympathize (VI) do not sympathize (V)

24. Each man should look after his own interests.
--sympathize (VIII) do not sympathize (VII)

25. I would approve if a child of mine wanted to become a policeman.
--sympathize (VII) do not sympathize (VIII)

26. Strangers are often amusing.
--sympathize (VII) do not sympathize (VIII)

27. The penalty for rape should be increased.
--sympathize (VIII) do not sympathize (VII)

28. Individual sports are more fun than team sports.
--sympathize (VIII) do not sympathize (VII)

29. If people want to sunbathe in the nude, that's their business.
--sympathize (VIII) do not sympathize (VII)

30. When the cat's away, the mice will play.
--sympathize (II) do not sympathize (III)

31. A father should prevent his children from fighting among themselves.
--sympathize (VII) do not sympathize (VIII)

32. Unusual problems require unusual solutions.
--sympathize (I) do not sympathize (II)

33. You always hurt the one you love.
--sympathize (II) do not sympathize (III)

34. Absence makes the heart grow fonder.
--sympathize (VI) do not sympathize (V)

35. There are two sides to everything.
--sympathize (IV) do not sympathize (III)

36. Silence is golden.
--sympathize (VIII) do not sympathize (VII)

37. Variety is the spice of life.
--sympathize (IX) do not sympathize (X)

38. The fewer rules, the better.
--sympathize (VIII) do not sympathize (VII)

39. Spare the rod, spoil the child.
--sympathize (X) do not sympathize (IX)

40. People get away with murder.
--sympathize (X) do not sympathize (IX)

41. Mothers of pre-school children should not hold jobs.
--sympathize (VII) do not sympathize (VIII)

42. People who juggle their income tax returns are unprincipled.
--sympathize (VI) do not sympathize (V)

43. Most people dream about crime fairly often.
--sympathize (IX) do not dympathize (X)

44. Minor infractions often lead to major infractions.
--sympathize (X) do not sympathize (IX)

45. If a marriage isn't working, the partners should see a lawyer.
--sympathize (VII) do not sympathize (VIII)

46. You can expect students to try to cheat on examinations.
--sympathize (V) do not sympathize (VI)

47. It is fun to organize things.
--sympathize (VII) do not sympathize (VIII)

48. Someone always manages to straighten things out.
--sympathize (IX) do not sympathize (X)

49. Watching television is more fun than playing cards.
--sympathize (VIII) do not sympathize (VII)

50. Supermarkets always have to be on the look-out for shoplifters.
--sympathize (V) do not sympathize (VI)

51. If someone crowds in line, give them a dirty look.
--sympathize (X) do not sympathize (IX)

52. Promises change with circumstances.
--sympathize (IX) do not sympathize (X)

53. In bargaining, it's a good idea to "split the difference."
--sympathize (IV) do not sympathize (III)

54. Move with the times.
--sympathize (VII) do not sympathize (VIII)

55. On a trip, I prefer to do most of the driving.
--sympathize (III) do not sympathize (IV)

56. Democracy means "one man, one vote."
--sympathize (II) do not sympathize (I)

57. If your friends get in an argument, you should smooth it over.
--sympathize (III) do not sympathize (IV)

58. Property is theft.
--sympathize (VII) do not sympathize (VIII)

59. Democracy requires strong leaders like DeGaulle and FDR.
--sympathize (I) do not sympathize (II)

60. Arms races usually end in war.
--sympathize (IV) do not sympathize (III)

61. It is better to be patient and let things work themselves out.
--sympathize (IV) do not sympathize (III)

62. Husbands should help with the dishes.
--sympathize (IV) do not sympathize (III)

63. Nuclear war is inconceivable.
--sympathize (VI) do not sympathize (V)

64. Children are happier if you stick by a few basic rules.
--sympathize (X) do not sympathize (IX)

65. When the majority comes to a decision, debate should stop.
--sympathize (II) do not sympathize (I)

66. To get to know someone is to get to like them.
--sympathize (VII) do not sympathize (VIII)

67. One man's meat is another man's poison.
--sympathize (VIII) do not sympathize (VII)

68. As he brews, so shall he drink.
--sympathize (VIII) do not sympathize (VII)

69. Consistency is the hobgoblin of little minds.
--sympathize (IX) do not sympathize (X)

70. In union there is strength.
--sympathize (VII) do not sympathize (VIII)

71. The buyer should get his money's worth.
--sympathize (VII) do not sympathize (VIII)

72. Society is like a big insurance company.
--sympathize (VII) do not sympathize (VIII)

73. Justice is necessarily harsh and awesome.
--sympathize (X) do not sympathize (IX)

74. In Rome, do as the Romans do.
--sympathize (VII) do not sympathize (VIII)

75. Vengeance is sweet.
--sympathize (III) do not sympathize (IV)

76. Put not your trust in Princes.
--sympathize (II) do not sympathize (I)

77. Evil begets evil.
--sympathize (VI) do not sympathize (V)

78. Trust in God.
--sympathize (I) do not sympathize (II)

79. Beware of Greeks bearing gifts.
--sympathize (VIII) do not sympathize (VII)

80. The State exists for the good life (Aristotle).
--sympathize (VI) do not sympathize (V)

81. People act according to their private interests.
--sympathize (V) do not sympathize (VI)

82. Latin should not be taught in high schools.
--sympathize (IX) do not sympathize (X)

83. Democracy means that interest groups cannot thwart the majority.
--sympathize (II) do not sympathize (I)

84. When your friends get into an argument, pitch in.
--sympathize (III) do not sympathize (IV)

85. Little League baseball is a good thing.
--sympathize (VII) do not sympathize (VIII)

86. Rules should be written down clearly.
--sympathize (X) do not sympathize (IX)

87. It is admirable to be willing to die for your convictions.
--sympathize (VI) do not sympathize (V)

88. Most couples who fight are just getting something off their chests.
--sympathize (III) do not sympathize (IV)

89. Many people are phony and overbearing.
--sympathize (VIII) do not sympathize (VII)

90. Most people are better off sticking with tried and tested solutions.
--sympathize (X) do not sympathize (IX)

91. A father should see that his children get good medical and dental care.
--sympathize (VII) do not sympathize (VIII)

92. To thine own self be true.
--sympathize (VIII) do not sympathize (VII)

93. All men are born equal.
--sympathize (II) do not sympathize (I)

94. Don't inconvenience your friends.
--sympathize (IV) do not sympathize (III)

95. Justice has to be tempered with mercy.
--sympathize (IX) do not sympathize (X)

96. People who won't do their share are a pain in the neck.
--sympathize (VII) do not sympathize (VIII)

97. One good deed deserves another.
--sympathize (IV) do not sympathize (III)

98. Force is no argument.
--sympathize (VI) do not sympathize (V)

99. Like father, like son.
--sympathize (X) do not sympathize (IX)

100. Justice is giving each man his due.
--sympathize (VIII) do not sympathize (VII)