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**EFFECTS OF INTERACTION OPPORTUNITY  
ON TASK-ORIENTED SMALL GROUPS**

by

**Charlan Lee Graff**

**A DISSERTATION**

**Presented to the Faculty of  
The Graduate College in the University of Nebraska  
In Partial Fulfillment of Requirements  
For the Degree of Doctor of Philosophy  
Department of Sociology**

**Under the Supervision of Professor Alan P. Bates**

**Lincoln, Nebraska**

**July, 1973**

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**EFFECTS OF INTERACTION OPPORTUNITY**

**ON TASK-ORIENTED SMALL GROUPS**

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The experiment, which was conducted during three semesters and a summer session in 1967 and 1968, could not have been carried out without the cooperation of the Department of Family Economics and Management in the College of Home Economics where the author was employed. At that time, Dr. Virginia Y. Trotter served as dean of that college with the department chaired by Dr. Dorothy Larery and the home management laboratories supervised by Peggy Whan. During the data collection phase, the author accepted a full-time position in the Department of Equipment and Family Housing in the School of Home Economics at Purdue University. The project could not have been successfully completed without the assistance of the advisors in the home management laboratories who administered and collected the data forms. The analysis of the data was completed at Purdue University using the facilities of the computer center there.

## TABLE OF CONTENTS

CHAPTER	Page
I. INTRODUCTION . . . . .	1
Pieces of the Puzzle	
Theories, Models and Concepts . . . . .	2
Predictions . . . . .	23
II. PROCEDURE . . . . .	25
Objectives of the Study . . . . .	25
Operational Definitions . . . . .	25
Hypothesis . . . . .	30
Design of the Experiment . . . . .	31
Methods of Analysis Used . . . . .	33
III. FINDINGS . . . . .	37
Interaction Opportunity Controlled for Prior Acquaintance . . . . .	37
Multiple Regression Analysis . . . . .	86
Levels of Integration . . . . .	97
IV. SUMMARY AND CONCLUSIONS . . . . .	107
LIST OF REFERENCES . . . . .	112
APPENDIXES	
A. Tables . . . . .	114
B. Forms Used in Data Collection . . . . .	127

## LIST OF TABLES

Table	Page
1. Socio-Economic Status, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	39
2. Family Size, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . .	41
3. Prior Group Participation, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	42
4. Prior Achievement, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	44
5. Rating of Spranger's Values, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	46
6. Perceived Value Difference, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	47
7. Before and After Indices of Friendship, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	49
8. Close Friends, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	50
9. Number of Persons Previously in the Same Class, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	51
10. Lack of Integration, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	52
11. Casual Friends, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	56
12. Intentions of Maintaining Contact, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	57

Table	Page
13. Integration and Interaction Opportunity in 22 Task-Oriented Small Groups Controlled for Prior Achievement and Participation in College Activities . . . . .	60
14. Instructors' Ratings of Goal Attainment, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	64
15. Members' Ratings of Goal Attainment, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	65
16. Index of Productivity, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	67
17. Number of Decisions, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	69
18. Decision Making Interaction, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	70
19. Agreement on Role Differentiation and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	73
20. Instrumental Roles, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	77
21. Expressive Roles, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	78
22. Positive Roles, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	79
23. Negative Roles, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	80
24. Instrumental and Expressive Role Differentiation, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	81
25. Total Role Differentiation, Prior Acquaintance and Assigned Opportunity for Interaction in 22 Task-Oriented Small Groups . . . . .	82



Table	Page
26. Multiple Regression Analysis of Goal Attainment, Adaptation and Integration in 22 Task-Oriented Small Groups . . . . .	90
27. Multiple Regression Analysis of Two Measures of Integration in 22 Task-Oriented Small Groups . . . . .	92
28. Correlation of Measures of Friendship with Prior Attributes and Value Orientations in 22 Task-Oriented Small Groups . . . . .	103
29. Correlation of Measures of Friendship with Adaptation, Goal Attainment and Interaction in 22 Task-Oriented Small Groups . . . . .	104

PREVIEW

Appendix  
Table

## Page

1. Socio-Economic Status and Assigned Interaction Opportunity . . . . .	115
2. High School Size, Participation in High School and College Activities and Assigned Opportunity for Interaction . . . . .	116
3. Prior Achievement and Assigned Opportunity for Interaction . . . . .	117
4. Ranking of Spranger's Values for Self, Perceived Ranking of Others and Assigned Opportunity for Interaction . . . . .	118
5. Perceived Value Ranking of Others Compared with Self and Assigned Opportunity for Interaction . . . . .	119
6. Prior Acquaintance with Members and Assigned Opportunity for Interaction . . . . .	120
7. Friendship at the End of Five Weeks and Assigned Opportunity for Interaction . . . . .	121
8. Productivity and Assigned Opportunity for Interaction . . . . .	122
9. Role Differentiation and Assigned Opportunity for Interaction . . . . .	123
10. Expressive and Instrumental Adaptation and Assigned Opportunity for Interaction . . . . .	124
11. Means and Standard Deviations of Measures of Prior Attributes, Value Orientations and Friendship . . . . .	125
12. Means and Standard Deviations of Measures of Goal Attainment and Adaptation . . . . .	126

## LIST OF FIGURES

Figure	Page
1. System Models . . . . .	4
2. Pattern Variables Associated With the Functional Problems of the Action System . . . . .	7
3. A Pyramid Model . . . . .	10
4. Operationalization of Variables--Action System Format .	26
5. Experimental Design Used for the Two-Way Analysis of Variance . . . . .	35

PREVIEW

## CHAPTER I

### INTRODUCTION

Everybody knows that when a group has a job to do, it usually gets the job done. And sometimes, the members become "best friends" in a relationship that outlasts the lifetime of the group while some groups disintegrate and no member sees any of the others again. Nobody knows exactly why not all groups work, or why in some groups the members become better friends than in others. Durkheim, over one-half century ago, said concerning the performance of a group and the development of friendship:

Everybody knows that we like those who resemble us, those who think and feel as we do. But the opposite is no less true. It very often happens that we feel kindly towards those who do not resemble us, precisely because of this lack of resemblance. . . . Difference, as likeness, can be a cause of mutual attraction. . . . Only certain kinds of differences attract each other. They are those which, instead of opposing and excluding, complement each other. . . , there is a type of difference which repels, another which attracts, one which leads to rivalry, another which leads to friendship. . . . As richly endowed as we may be, we always lack something, and the best of us realize our own insufficiency. That is why we seek in our friends the qualities that we lack, since in joining with them, we participate in some measure in their nature and thus feel less incomplete. So it is that small friendly associations are formed wherein each one plays a role conformable to his character, where there is a true exchange of services. One urges on, another consoles; this one advises, that one follows the advice, and it is this apportionment of functions or, to use the usual expression, this division of labor which determines the relations of friendship (1933: 54-56).

About one-third of a century ago, there was a renewal of interest in the small group as an arena for research endeavor in which relationships could be identified or established. In the latest edition of the Handbook of Social Psychology (1969) the length of the list of references at the end of the chapter pertaining to group structure was over 400 items. Obviously then, a substantial amount of energy has gone into trying to put together the pieces in the puzzle of how groups work.

### Pieces of the Puzzle

No attempt is being made here to systematically review all of the potentially relevant published work, but instead to focus on a selective consideration of primarily theoretical rather than empirical work with implications for an investigation of the influences of interaction and integration on the functioning of small groups. For operational techniques pertaining to the related concepts, a number of empirical works were reviewed.

### Theories and models

Two theories that propose for the study of groups a system of relationships rather than a single relationship are Homans' (1950) internal-external system and Parsons' (Parsons and Shils, 1951; Parsons, 1960) action system, but these have not formed the bases for many empirical studies. A larger body of research has been two-variable studies stimulated by more specific formulations such as the cohesiveness-attraction theory by Festinger, Schachter and Back (1950). A considerable amount of research effort has also been inspired by Bales' (1950; 1965) hypotheses concerning interaction process, adaptive and integrative

strains and the equilibrium problem of groups; but again, the approach is specific or focused on a limited aspect of group structure or a single relationship rather than being concerned with a system of inter-relationships.

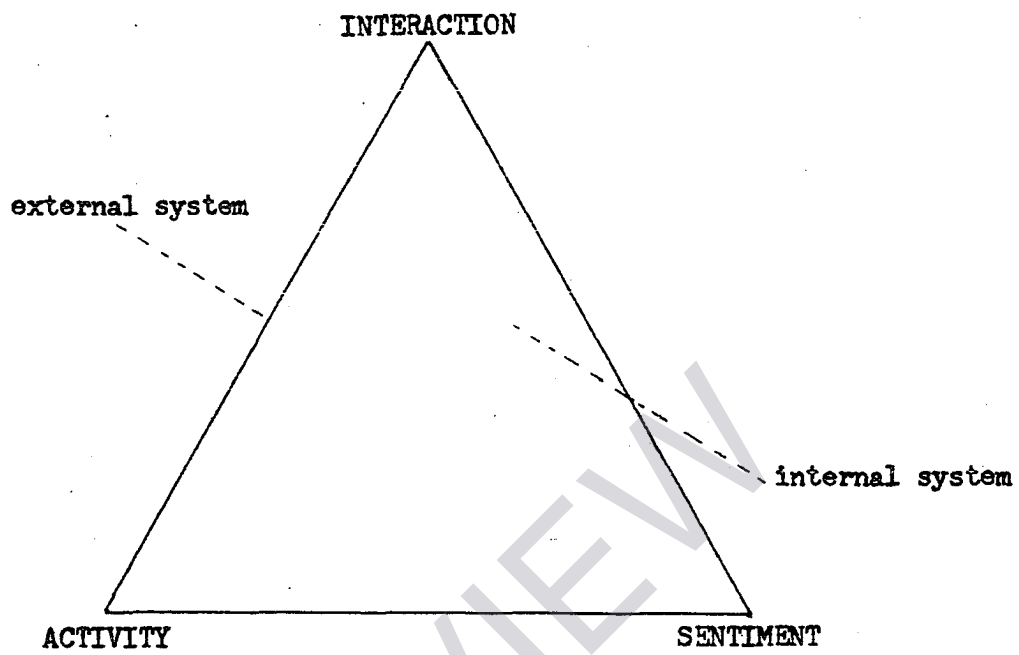
#### Homans' Internal-External System

One of the simplest theories proposed for the study of group behavior is that by Homans presented in The Human Group (1950). He postulated three interdependent elements of social behavior: activity, interaction and sentiment (see Figure 1A). Interaction refers to a unit of activity of one stimulated by some unit of activity of another. Sentiment pertains to internal states of the human body such as feeling or liking, while activity refers to the things people do which involve the movements of muscles. Homans suggests that interactions "map out" a group and that external to the boundary of the group is the environment, which presents problems to be solved by the group if it is to exist in that environment. The elements of group behavior directed toward solving problems stemming from the environment is the "external system." Group behavior directed toward solving environmental problems generates an "internal system" which (composed of the same elements of behavior--activity, interaction and sentiment) is directed toward solving problems developing within the group.

The most general or simplest hypothesis derivable from the elements of this theory is the one of mutual dependence. In other words, an increase in one element, interaction, is followed by an increase in the other elements--sentiment and activity; or conversely a decrease in one is followed by a decrease in the other elements. An acknowledged problem in the use of this model for research is that the

Figure 1. System Models

A. Homans' Internal-External System



B. Parsons' Action System

A ADAPTATION	G GOAL ATTAINMENT
L PATTERN MAINTENANCE	I INTEGRATION

interrelation of the internal and external systems is such that operationalization which keeps the two systems separate is extremely difficult.

#### Parsons' Action System

One of the most frequently discussed theories (although not as often used) is Parsons' (1951; 1960) "action system" consisting of four functional problems (adaptation, goal attainment, integration and pattern maintenance) based on the "pattern variables" (see Figures 1b and 2). The orientation base or pattern maintenance of a system can be described in terms of the pattern variable dimensions "affectivity-neutrality" and "specificity-diffuseness." The dimensions of "quality-performance" and "universalism-particularism" describe modality or goal attainment. The adaptive and integrative functions are composed of combinations of all of the pattern variable dimensions obtained by systematically rotating the axes. Those variables most frequently associated with problems of integration are particularistic, affectivity, diffuseness and quality, while the opposite ends of the dimensions (universalistic, neutrality, specificity and performance) are most frequently associated with adaptation (Parsons, 1960).

In discussing the applications of the pattern variables, Parsons contrasts specificity as referring to the "specific, discretely differentiated object" or as "interest in instrumental utilization" with diffuseness as "generalization to a broader category of objects" or "not contingent on fluctuations in their specific performances or properties" (1960: 472-475). Universalistic refers to being categorized independently of actual or potential inclusion in a system or "having



properties not dependent on its inclusion in the system," while particularistic is "defined as belonging to the system" (1960:476). In terms of the dimension of "performance-quality," the latter refers to identification of objects in terms of what they are, or "a given state of affairs or order," while performance refers to the object's potential for gratifying in terms of "doing something." Affectivity implies that an actor "cannot be emotionally indifferent," while neutrality refers to a state of being "not alterable as a function of specific situational rewards," or existing as "independent of their potentialities for gratifying the actor" (Parsons, 1960:476). The possible combination of pattern variables given by Parsons in "Pattern Variables Revisited" are listed in Figure 2. A restriction imposed by Parsons is that both ends of a single pattern variable dimension cannot occur simultaneously in one cell of a system problem.

According to Parsons (1960), both the pattern variables and the four system problems are conceptual schemes, or sets of categories, for classifying the components of action. They provide a frame of reference within which such classification can be made. Parsons has been severely criticized for producing a sterile theory leading merely to a classificatory scheme, or filing system rather than a tool for stimulating research. Karl Deutsch, in defense of Parsons, claims that even if Parsons "had done no more than this, it would be no mean achievement," and goes on to say:

but Parsons has done more. An efficient conceptual scheme, like any truly efficient system of organizing information, highlights relevant connections and plays down less relevant ones (1964: 180).

Figure 2. Pattern Variables Associated with the Functional Problems of the Action System

Functional Problems		Pattern Maintenance	Integration	Goal Attainment	Adaptation
		L	I	G	A
(a) Categories of		Pattern Variables			
Structure	L	neutrality diffuseness	affectivity diffuseness	affectivity specificity	neutrality specificity
	I	quality neutrality	particularistic diffuseness	performance affectivity	universalistic specificity
Process	G	universalistic quality	particularistic quality	performance particularistic	performance universalistic
	A	diffuseness universalistic	affectivity quality	specificity particularistic	neutrality performance
-----					
(b) Outputs to the Environment		L	quality neutrality	universalistic quality	diffuseness universalistic
Responsible action	I	affectivity diffuseness	particularistic diffuseness	particularistic quality	affectivity quality
Expressive action	G	affectivity specificity	performance affectivity	performance particularistic	specificity particularistic
Instrumental action	A	neutrality specificity	universalistic specificity	performance universalistic	neutrality performance

Deutsch emphasized the utility of Parsons' conceptualization for examining structural properties.

Parsons has proposed thinking of all social systems as fulfilling a minimum of four basic functional requirements. One can ask what does a system do, or what ordinarily does a system have to do in order to continue as a system? (Deutsch, 1964: 181).

Parsons in his re-examination added direction to the action system composed of the four sub-systems: pattern maintenance (L), integration (I), adaptation (A), and goal attainment (G).

Within each column the cells in turn are arranged from top to bottom in the order L-I-G-A. This constitutes a cybernetic hierarchy of control, that is each cell categorizes the necessary but not sufficient conditions for operation of the cell next above it in the column, and in the opposite direction the categories of each cell control the processes categorized in the one below it. For instance, definition of an end or goal controls the selection of means for its attainment (Parsons, 1960: 477).

#### Synthesis--a Pyramid Model

Where diagrams have been previously used to represent theories, they have generally been two-dimensional and lacking in perspective. These do have the advantage of focusing sharply on the clarification of concepts in terms of a relationship simple enough to study easily. But this over-simplification can lead to the type of problem illustrated by the well known story told about the description of an elephant by six blind men.

Both the theories of Parsons and Homans have the advantage of a system approach and a high level of generalization. In addition, definitions indicate that when applied to a group of individuals rather than to a unit act, (a level of generalization for which Parsons has claimed he was aiming) the concepts of the two theories are compatible.

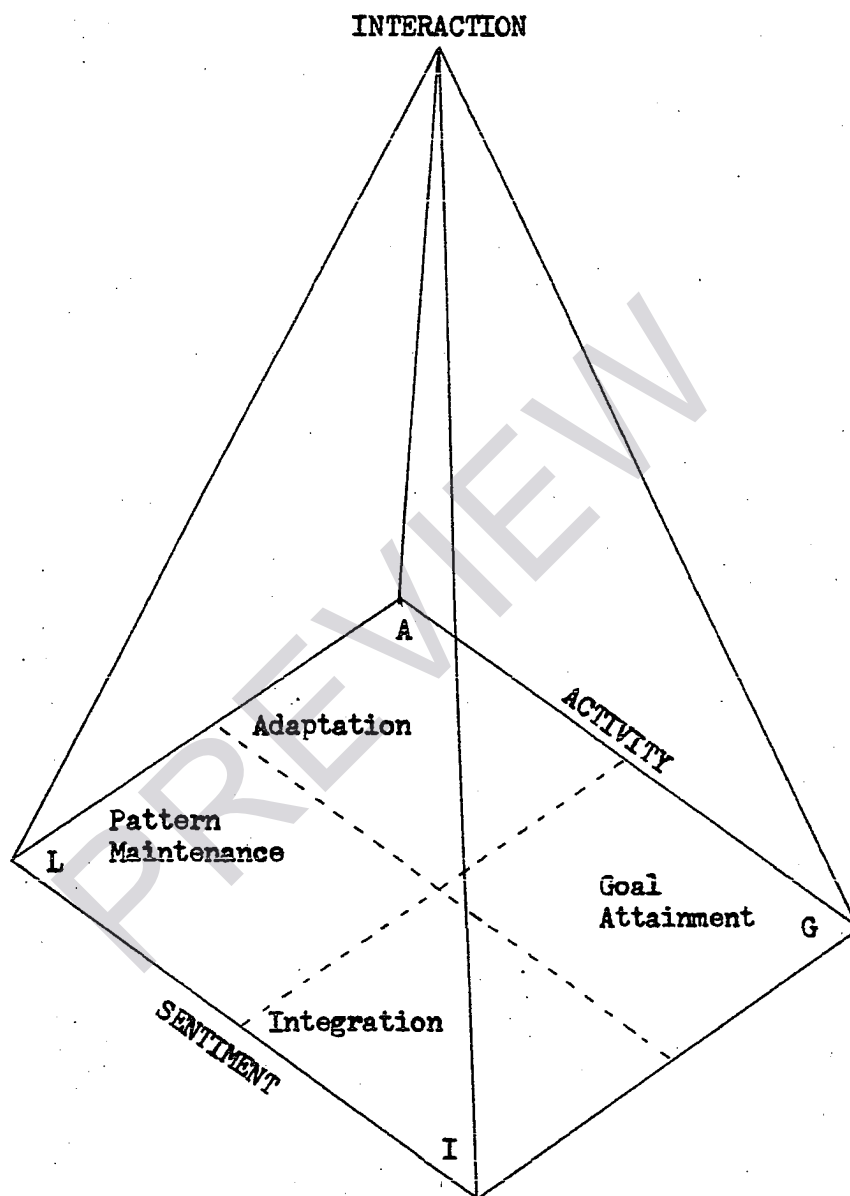
It appears that operationalization of Parsons' functional problems of pattern maintenance and of integration for the study of a group of individuals would require measurement of variables that would also satisfy Homans' definition of sentiment such as a measurement of feelings or attitudes implying "should" or "ought" (pattern maintenance) or feelings of liking (integration). The operationalization of Parsons' adaptation and goal attainment as functional problems would include measures covered by Homans' definition of activity as "the things people do."

Superimposing the triangular figure representing Homans' theory onto Parsons' four functional problems of a system produces for the examination of the functioning of a group, a three-dimensional model in the shape of a pyramid on a rectangular base (see Figure 3). Each edge of the pyramid indicates a potentially interesting relationship for investigation. As illustrated in Figure 3, interaction is the focal point at the apex of the figure with the major relationships of interest being those of interaction and the four functional problems: pattern maintenance, adaptation, integration and goal attainment. The potential use of this model is dependent upon concepts defined operationally for use in investigating hypotheses.

#### Hypotheses Suggested by the Pyramid Model

A general hypothesis of the mutual dependence of the five elements with the assumption that the direction is positive would generate the following list of hypotheses:

Figure 3. A Pyramid Model



1. Integration is positively associated with interaction.
2. Goal attainment is positively associated with interaction.
3. Adaptation is positively associated with interaction.
4. Pattern maintenance is positively associated with interaction.
5. Integration is positively associated with pattern maintenance.
6. Integration is positively associated with goal attainment.
7. Integration is positively associated with adaptation.
8. Goal attainment is positively associated with pattern maintenance.
9. Goal attainment is positively associated with adaptation.
10. Adaptation is positively associated with pattern maintenance.

The pyramid model also points toward the importance of multivariate rather than two-dimensional studies. For example, the diagram indicates that interaction, pattern maintenance, adaptation and goal attainment would be expected to simultaneously influence integration. Similarly, interaction simultaneously influences pattern maintenance, adaptation, goal attainment and integration. Using the multivariate approach, a general hypothesis of mutual dependence would generate the following hypotheses:

1. Integration is influenced by interaction, goal attainment, adaptation and pattern maintenance.
2. Adaptation is influenced by interaction, goal attainment, pattern maintenance and integration.
3. Goal attainment is influenced by interaction, pattern maintenance, integration and adaptation.
4. Pattern maintenance is influenced by interaction, integration, adaptation and goal attainment.
5. Interaction is influenced by pattern maintenance, integration, adaptation and goal attainment.

In the operation of groups, the interaction is probably not equally distributed across the A-G-I-L set of functional problems at any given point in time; but is directed first toward one point or dimension and then toward another until a balanced state is eventually achieved. A static, as opposed to dynamic, examination of points in the process of change or of structure would look at slices from the pyramid model. Diagonal slices indicate unbalanced or unstable states subject to change while parallel slices represent balanced or stable situations. A study focusing on the processes of change from one to another point or dimension would look at the spiral or helix formed within the limits of the pyramid by the series of unbalanced states. Homans, in speaking of the processes of feedback going on continuously said, "beneficient or vicious circles-- 'spirals' would be a better word are characteristic of all organic phenomena" (1950:153).

A further examination of Parsons' clarification of the relationships between the pattern variables and the paradigm of four functional problems indicates some modification for the hypotheses stated above. Parsons arranged the A-G-I-L action system in different columns and rows to show direction of response to environmental stimulation, direction of implementation, direction of limiting conditions and direction of control. Figure 2A illustrates the arrangement of pattern variables for investigations of structure in terms of properties of the actors (L), and integrative standards (I), or of process in terms of symbolic representation of external objects (A), and the

internal meanings of objects (G).<sup>1</sup> Figure 2B is ordered in terms of outputs to the environment; instrumental action (A), expressive action (G), and responsible action (I). Parsons does not consider pattern maintenance as making an output to the environment. The direction of control is from top to bottom, L-I-G-A, while the direction of limiting conditions is from the bottom to the top, A-G-I-L (Parsons, 1960).

One of the theoretical propositions stated by Parsons pertains to the direction of processes categorized as "performance processes" compared with those described as "learning processes."

A "law of inertia" may be stated: Change in the rate or direction of process is a consequence of disturbance in the relations between an actor or acting system and its situation, or the meanings of objects. If this relational system is completely stable, in this sense there is no process which is problematical for the theory of action. Whatever its source, such disturbance will always "show up" in the form of "strain" or difficulty in the attainment of valued goal states.

- a) "Performance" processes: These are processes by which the disturbance is eliminated or adequately reduced through adaptive mechanisms, leaving the integrative standards--the most directly vulnerable aspect of the structure of the system--unchanged. . . . the directionality of such process is clockwise relative to the goal focus, from A to G.
- b) "Learning" processes or process of structural change in the systems: . . . whereas in performance processes goals are given, in learning processes they must be redefined. Relative to the goal-focus, then, the directionality of such process is counter clockwise, from I to G (Parsons, 1960: 483-484).

The implication for the mutual dependence hypothesis is that the effects of each element would not necessarily be equal. Where

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<sup>1</sup>Parsons usually orders the problems as L-I-G-A or the reverse, A-G-I-L except in terms of the progression from structure to process where he reverses the position of A and G (L-I-A-G).