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Freshman Socialization: The Psychological Contract

Between
The Individual and the Institute*

Irwin M. Rubin

M.I.T. Working Paper #534-71 June, 1971

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*This research reported in this paper is part of a larger study of Freshman Socialization at M.I.T. supported by funds from the Edwin P. Land Fund. Computation was done at the M.I.T. Computation Center. My colleagues, Ed Schein, Dave Kolb and Marc Gerstein provided helpful comments on earlier drafts of this paper.

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Organizational theorists have begun to study the ways in which organizations recruit and socialize new members. Evidence is mounting which emphasizes the importance early organizational socialization experiences have on the individual's future life in the organization (in terms of productivity, of satisfaction, and turnover). One result of this study has been an increased emphasis on the nature of the "psychological contract" which develops between an individual and an organization. ¹

The notion of a contract carries with it the implication that both parties, the individual and the organization, have certain assumptions about appropriate behaviors, attitudes and values. In this light, the socialization process becomes characterized by the need to define mutual expectations and needs and to anticipate and resolve major conflicts. Furthermore, the extent to which this psychological contract has been meaningfully negotiated can be expected to influence future satisfaction and productivity. For example, turnover, in an organization, like divorce in a marriage, can in part be attributed to a poorly negotiated psychological contract during one's early socialization experiences.

Although the psychological contract is, ideally, dynamic and capable of change over time as individuals grow and develop, one's initial or early socialization experiences are assumed to be of prime importance. One comparable period of early socialization in education is a student's Freshman year at college. Students from diverse cultural, educational, and family backgrounds come together during the Freshman year to meet each other and the "system." Taken together, these individual preconditions and early experiences will significantly influence an individual's sense of being meaningfully connected to or joined up with the college or university. It is hypothesized that the more positive is this sense of connection, the more satisfied the individual will be. The focus in this paper will be upon the process of socialization and the nature



of the psychological contract which develops between a student and the educational community of M.I.T.

Our objective, therefore, is threefold:

- 1) to develop a conceptual framework for understanding "meaningful connectedness" in an educational community;
- 2) to relate measures of connectedness to measures of individual satisfaction and performance;
- 3) and to explore ways in which a student's first year at M.I.T. can be managed to increase the likelihood of the development of a meaningful psychological contract.

The Ideal Learning Community - Meaningful Connectedness

M.I.T.'s image of an ideal learning community can be seen most clearly in Paul Gray's recent remarks to the Commission on M.I.T. Education:

The general problem seems to me to be that of creating at M.I.T. an academic environment in which the primary task focuses on the objective of individual growth and the development of real capacity for self-education, for self-sufficiency, and for self-renewal -- for asking meaningful questions as well as for providing meaningful answers. Second, we want an academic environment in which individual differences in preparation, in needs, in style, in expectations, and in capacity are recognized, developed, and exploited in the educational process.

The ideal learning community, in other words, is one which fosters in its members the capacity for self-directed learning.

Our understanding of what this implies in terms of a sense of meaningful connection can be enhanced if we step back for a moment and explore the ways in which an individual can be involved with any organization. Etzioni (2) defines three forms of individual involvement with an organization:

- 1) alienative which means that the person is not psychologically involved, but is coerced to remain a member;
- 2) calculative, which means that the person is involved to the extent of doing "a fair day's work for a fair day's pay;"

3) moral, which means that the person intrinsically values the mission of the organization and his job within it, and performs primarily because he values it.

In each of these "pure" cases, the individual does, in a certain sense, become a socialized member of the organization. He does behave in accordance with the salient norms but need not, in our terms, feel meaningfully connected. A prisoner, for example, follows the rules and regulations of the prison because the punishment for not doing so is severe. In other words, what differentiates the three cases is the underlying reasons or motivation for behaving in accord with the prescribed norms. As Schein elaborates: (3)

If power is imposed by physical force or by control of rewards and punishments (as in prisons), the involvement of members tends to be "alienative." If power rests on control of economic incentives (as in business), the involvement of members is usually "calculative." If, however, power rests on a consensus about goals and methods of the organization, the members' involvement may be defined as "moral." They belong because membership enables them to achieve their own goals and express their own values.

This conceptual distinction between type of involvement and underlying motivations can help to sharpen our understanding of an ideal learning community and meaningful connectedness. The coercive-alienative model is highly unlikely to produce self-directed learners - the goal of an ideal learning community. It is, furthermore, difficult to conceive of a person feeling meaningfully connected to an organization which holds the threat of physical force over his head. Within an educational community, the analogy to "economic incentives" are grades and the future value (real or perceived) of grades and a degree from M.I.T. in terms of higher paying, more prestigious jobs and careers. Paul Gray's earlier quoted remarks clearly imply that this instrumental-calculative model does not reflect M.I.T.'s image of an ideal learning community.

The ideal learning community, therefore, becomes one in which member involvement is moral. The individual performs because he intrinsically values the mission of the organization and his job within it. Intrinsically valuing the mission of the organization implies that the individual has internalized the relevant norms and goals - he owns them as his own. As a result of membership in the organization he experiences a sense of meaning in his own life, he feels a sense of community. It is hypothesized, therefore, that a key element in being meaningfully connected is experiencing a sense of purpose or community as a result of one's membership and involvement with the organization.

Two additional conditions are hypothesized to facilitate the development of a sense of moral involvement. One concerns the individual's attitudes toward the political-decision making structure of the organization. The individual must, it is hypothesized, believe that those in power - the decision-makers who set the organization's mission, goals, and methods - are making decisions and taking actions which he feels are legitimate. To the extent that this condition exists there is an implied (at least) consensus about goals and methods.⁽⁴⁾

The final hypothesized condition concerns intrinsically valuing one's job within the organization. A prisoner can not intrinsically value his job because someone else is forcing him to do it. An assembly line worker may not intrinsically value his job if he does it just to earn an income. The morally involved person intrinsically values his job, in part, because he can feel personally responsible for his achievements⁽⁵⁾ This sense of personal responsibility or control over his own destiny should result in greater internalization of norms and moral involvement.

To summarize thus far, an ideal learning community is one in which members feel morally or meaningfully connected. Meaningful connection results from:

- 1) feeling a sense of purpose or community as a result of one's interactions with the organization;
- 2) feeling that those in power are behaving in ways seen as legitimate;
- 3) and, feeling a sense of personal control or responsibility over one's ability to achieve things of personal value or importance.

Measures of Performance - Two Sides of the Psychological Contract

The concept of a psychological contract, referred to earlier, emphasized the fact that both the individual and the organization have expectations about appropriate behaviors, attitudes, and values. Performance, therefore, can be viewed from two perspectives - the individual's and the organization's; the ideal situation being characterized by an absence of any major unresolved conflicts between the two perspectives.

From the individual's point of view, we are most concerned with his sense that M.I.T. is or is not the "right place for him." Does he feel he belongs here? How certain would he be to return, given the opportunity to choose again? The issue is whether or not, from the student's point of view, his goals, needs, reasons for attending M.I.T. in the first place, are being met by his experiences at M.I.T. Some breakdown in the socialization process is clearly implied to the extent that a person exhibits uncertainty about whether he belongs at M.I.T. The uncertain student can not, it is hypothesized, feel meaningfully connected to M.I.T.

The institutional - M.I.T.'s-side of the psychological contract raises several dilemmas. High performance, in terms of the stated characteristics of an ideal learning community at M.I.T., is reflected in developing a "real capacity for self-education, self-sufficiency, and for self-renewal..."

The only available institutionally-oriented measures of performance are grade point average (cum) and units accumulated toward the completion of degree requirements.

We do not yet have the tools to measure the extent of an individual's growth, capacity for self-renewal, etc. Grades and units are, in all likelihood, at best only a partial reflection of self-directed learning. In fact, it is possible, for the two to be in conflict. For example, the self-directed learner who actively explores his environment and avails himself of non-required educational opportunities - special projects, guest lecturers, trips to museums, etc. - may well be trading on his ability to get good grades. McClelland's extensive research on achievement motivated people, who possess traits very similar to the self-directed ideal learner under discussion, points to the conclusion that these people are much more likely to define their own standards for success and are less likely to rely upon externally imposed measures.⁽⁶⁾ Snyder's⁽⁷⁾ research, conducted within the M.I.T. community, clearly points to the possible conflicts inherent in an institutional double-message: "You should be self-directed and you should do lots of problem sets and get high grades."

The question then becomes: why be concerned about grades and units at all? There are two reasons for concern at this point. The objective fact is that ultimate "success," in terms of graduation and certification, will not occur without minimum adherence to both. The catalog is very specific about minimum requirements for graduation in terms of units accumulated and required number of passing grades.

The second reason is less "objective" but possibly just as real in its consequences. The a priori aura of M.I.T. as a hard place to get into, ac-

cepting only the brightest students (in terms of high school grades and college board scores), where one has to work hard to succeed certainly contributes much to the importance of these measures. The environment contributes to this situation via insurance companies who provide reduced rates to people with high grades, via employers who ask to interview the top 25% of the class, and via parents and friends who ask, "How are you doing?" which invariably means, "What kinds of grades are you getting?" All of these forces contribute to the importance of these indicators - units and grades.

The important issue, from our point of view, is that some breakdown in the socialization process and consequently the learning process is implied in unsuccessful adaptation to the norm of academic performance as manifested by low grades and fewer units accumulated. Our primary interest at this point is in exploring ways in which an individual's sense of being meaningfully connected to M.I.T. reflects itself in these two behavioral measures of adherence to the norms of learning and academic excellence.

An Organizational Response - Pass/Fail (P/F)

One further issue of importance is the pass/fail system of grading which characterizes the Freshman year. The P/F system can be viewed as an institute-wide experiment aimed at fostering many of the behaviors associated with an ideal learning community.⁽⁸⁾ M.I.T.'s expectations - as reflected in the Freshman Handbook - clearly indicate a focus on increased personal responsibility, more meaningful student-faculty interactions, etc. An underlying assumption is that a structural change in the reward/evaluation system will enhance a change in attitude and learning

behavior.

The transition from freshman to sophomore year carries with it a return to the formal grading process. Those people for whom their freshman year, particularly the assumed benefits of the P/F system, still leave them relatively unadapted to the Institute may well experience more difficulty in their sophomore year. Unit taking behavior, as will be discussed later, may well be substantially different in the first two semesters - under the P/F system than in the third semester. It will be difficult, for example, to distinguish between two possible reasons for taking many units; (1) a reflection of productive search behavior - a self-directed posture or (2) taking "advantage" of the P/F system to build one's bank account and beat the system. Although the impact of the P/F system is not our primary focus, where possible we will speculate on the transitional effects of moving into the traditional grading process and in the conclusion to this paper comment upon the general goals and structure of the experiment.

DEFINITION OF VARIABLES AND RESEARCH DESIGN

Meaningful Connectedness

As discussed earlier, meaningful connection results from:

- 1) feeling a sense of purpose or community as a result of one's interactions with an organization;
- 2) feeling that those in power are behaving in ways seen legitimate;
- 3) and, feeling a sense of personal control or responsibility over one's ability to achieve things of personal value or importance.

A search of the literature yielded three measurement instruments which purported to measure concepts similar to those mentioned above.

The items in each scale were adopted to reflect specific feelings and attitudes toward M.I.T. and modified to make their format uniform. The responses to these scales were then factor analyzed and the three most relevant resulting factors were chosen for use in this study. The anomie factor reflects the extent to which a person feels a sense of purpose or community at M.I.T. (dimension 1 above). The extent to which a person feels that those in power are behaving in ways he feels are legitimate (dimension 2) is reflected in the political alienation factor. Finally, a sense of control over his own destiny (dimension 3) is reflected by the personal responsibility factor.⁽⁹⁾ The items comprising each factor are reproduced in Table A. A single scale score for each variable was developed by summing individual item scores and dividing by the number of items making up the factor. Means and standard deviations are summarized in Table B.

Two Sides of Performance

The institutional side of the psychological contract will be measured in terms of an individual's grade point average and units accumulated toward graduation. Due to the P/F system, grades are available at this point, for the first semester of the sophomore year only.⁽¹⁰⁾ Measures of unit taking behavior are, however, available for each semester. Performance, in this report, is thus defined as grade point average (first semester sophomore year) and units accumulated toward graduation (during first three semesters). Means and standard deviations are summarized in Table C.

In addition to this institutionally oriented measure of performance, there is the question of the individual's side of the psychological con-

Table A

Questionnaire item used to measure anomie, political alienation, sense of personal responsibility.

Quest No. Anomie

- 62. With everything in such a state of disorder at MIT, it's hard for a student to know where he stands.
- 66. I often feel awkward and out of place at MIT.
- 61. What is lacking in the university today is the kind of friendship that lasts for a lifetime.
- 68. It seems to me that other students at MIT find it easier to decide what is right than I do.
- 67. Students were better off in the days when everybody knew just how he was expected to act.
- 63. Everything changes so quickly these days at MIT that I often have trouble deciding which are the right rules to follow.
- 65. The trouble with the university today is that most people don't believe in anything.

Political Alienation

- 71. It seems to me that MIT often fails to take necessary actions on important matters even when most people favor such actions.
- 70. For the most part MIT serves the interests of a few organized groups and isn't very concerned about the needs of people like myself.
- 72. As MIT is now, I think it is hopelessly incapable of dealing with all the crucial problems facing the university today.
- 58. MIT is run by the few people in power and there is not much the student can do about it.
- 59. It is difficult for people to have much control over the things officials do in office.
- 69. These days MIT is trying to do too many things, including some activities that I don't think it has a right to do.

Personal Responsibility

- 45. In my case getting what I want at MIT has little or nothing to do with luck.
- 43. It is impossible for me to believe that chance or luck plays an important role in my life at MIT.
- 31. Becoming a success is a matter of hard work. Luck has little or nothing to do with it.
- 50. MIT students' misfortunes result from the mistakes they make.
- 28. There is really no such thing as luck in the university setting.
- 27. What happens to me at MIT is my own doing.
- 49. There is a direct connection between how hard I study and the grades I get.
- 48. The average student can have an influence in institute's decisions.
- 57. In the long run, students at MIT get the respect they deserve.

Table B

Means and Standard Deviations for Anomie, Political Alienation
and Personal Responsibility

<u>Variable</u>	<u>Mean</u> *	<u>Standard Deviation</u>
Anomie	2.66	0.815
Political Alienation	3.50	0.98
Personal Responsibility	3.86	0.717

* Response format used was a six point scale. Scores were adjusted such that the lower the mean (closer it is to 1.0), the lower is the level of anomie, for example.

Table C

Mean and Standard Deviations for Grade Point Average (Cum) and
Units Accumulated Over Three Semesters

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>
Cum 3	4.07	0.749
Units 1	56.6	13.90
Units 1 and 2 *	109.1	20.04
Units 1, 2 and 3 *	155.3	28.00

* It should be noted here that the average units accumulated drops substantially in the third semester to 46 units (155-109), at the same time that grades are reinstated. The average units accumulated first semester was 56.6, second semester was 53 (109-56) - during which time P/F was in effect. In other words:

P/F effect	}	Units first semester: 57.0
		Units second semester: 53.0
No P/F effect		Units third semester: 46.0

tract. Given the socialization orientation of this paper, we are most concerned with an individual's sense that M.I.T. is or is not the right place for him. The extent to which, from the individual's point of view, a meaningful psychological contract has been developed was measured in the following way:

"If you could choose a university all over again, knowing what you know now about M.I.T., would you choose to come here?"

	<u>Frequency</u> [*]
1. Definitely Yes	44%
2. Probably Yes	35.4%
3. Undecided	12.1%
4. Probably not	4.4%
5. Definitely not	3.4%
	<hr/> 100.00%

We will label this variable individual satisfaction. It must be emphasized, however, that satisfaction, in this study, is taken to reflect the individual's assessment that, for whatever reasons, M.I.T. is the right place for him. Within our conceptual framework, those people who are less satisfied - less certain that they would choose M.I.T. again - it is assumed, have not yet developed a meaningful psychological contract with the Institute and cannot, therefore, be "morally" involved. The 44% of their peers who would definitely choose to come again have found M.I.T. to be the right place for them - they are more satisfied.

* Percentage of respondents who choose each of the response categories.

Research Design

Questionnaire data were collected in mid-February 1970 of the students' Freshman year. As a result of some combination of background factors (11) and experiences during their first semester at M.I.T., individuals exhibited in Feb. 1970 different levels of anomie or normlessness, political alienation, personal responsibility, and certainty about their choice of M.I.T. These measures of individual's attitudes and feelings about M.I.T. can then be related to future academic behavior - grades and units accumulated. The longitudinal quality of this design will enable us to draw causal inferences. If, for example, a relationship is found between feelings of anomie in Feb. 1970 and grades received in Jan. 1971 (after first semester sophomore year) - the causal direction is more clear.

Whether the feeling states measured in Feb. 1970 are the results primarily of the first 4 months of socialization at M.I.T. or reflect a priori expectations and personality styles will remain less clear. In one sense, it makes little difference. If an individual comes to M.I.T. feeling, for example, non-efficacious and in Feb. 1970 is still non-efficacious, his first semester at M.I.T. has, presumably, done little to help build his sense of personal responsibility. Conversely, an individual might have come to M.I.T. feeling efficacious but had that feeling mitigated as a result of his first semester. In either case, if the goal is to create an ideal learning community, and sense of personal responsibility is seen as a crucial element, some steps would have to be taken.

RESULTS

The results section will be organized into three parts, flowing from the longitudinal design described above. First, we will examine the relationship which exists between feelings of anomie, political alienation, and personal responsibility and satisfaction with M.I.T. ("Choose M.I.T. again"). Next, we will examine the relationship between academic performance - units and cum - and feelings of anomie, political alienation, and personal responsibility. Finally, we will explore the extent into which varying levels of individual satisfaction reflect themselves in varying levels of academic performance.

Individual Satisfaction and Feelings of Connectedness

There is a clear and markedly linear relationship between an individual's satisfaction with M.I.T. and the extent to which he feels: (Table D)

- 1) a sense of purpose and meaning at M.I.T. (anomie);
- 2) those in power are making decisions which he feels are legitimate (political alienation);
- 3) and, a sense of personal control over his own destiny at M.I.T. (personal responsibility).

Those people who feel highly anomic relative to their peers, highly politically alienated, and not personally responsible are clearly undecided about whether they would choose to come to M.I.T. again. For example, 73% (72 of 99) of those who are uncertain fall into the highly politically alienated (defined as scoring above the median) category while only 34% (70 of 209) of their highly certain counterparts are so categorized. In each case, there is a 2 to 1 difference of this sort between the

Table D

Mean Anomie, Political Alienation and Personal Responsibility

Scores for Different Levels of Satisfaction with M.I.T.

(Numbers in parentheses reflect sample sizes and standard deviation = S.D.)

Individual Satisfaction with M.I.T.	Anomie *	Political Alienation *	Personal Responsibility *
<u>HIGH</u> (Would definitely choose M.I.T. again)	(N=209) (SD=.90) 2.5	(N=207) (SD=.90) 3.2	(N=209) (SD=.60) 4.1
<u>MODERATE</u> (Would probably choose M.I.T. again)	(N=169) (SD=.90) 2.9	(N=169) (SD=1.00) 3.7	(N=169) (SD=.70) 3.9
<u>LOW</u> (Undecided to defi- nitely not choose M.I.T. again)	(N=97) (SD=1.10) 3.2	(N=99) (SD=1.10) 4.1	(N=99) (SD=.80) 3.6

Significance Test: (t-test of differences in means)

1) Anomie

- a. high vs. moderate, $t = 4.3$ $p < .001$
 b. moderate vs. low, $t = 2.4$ $p < .02$

2) Political Alienation

- a. high vs. moderate, $t = 5.1$ $p < .001$
 b. moderate vs. low, $t = 3.04$ $p < .01$

3) Personal Responsibility

- a. high vs. moderate, $t = 2.99$ $p < .01$
 b. moderate vs. low, $t = 3.21$ $p < .001$

* Original scale scores have been reversed such that a high absolute score reflected a high level on the variable.

most and least certain students.

In a conservative sense, these relationships serve as a validity check, reinforcing our a priori theoretical expectation that the dimensions, anomie, political alienation, and personal responsibility are important indicators or measures of the process of socialization and adaptation which occurs between an individual and an educational institution. An individual can not be effectively socialized into or adapted to the Institute - he can not be meaningfully connected - if he feels that, given the opportunity, he would be unlikely to choose to come to M.I.T. again.

Feelings of Connectedness and Institutional Performance

We are using two measures of institutional performance. One is grade point average or cum. Due to the P/F system these data are available, at this point in time, for the first semester sophomore year only (Cum 3). Data on unit taking behavior is available for all three semesters* and we are focusing upon:

- 1) units accumulated at the end of the first semester - Units 1.
- 2) units accumulated at the end of first two semesters - Units 1 and 2.
- 3) units accumulated after three semesters - Units 1, 2 and 3.

The results are summarized in Table E.

Grades received during the first semester sophomore year bear no observable relationship to feelings of connectedness to the Institute. The personally responsible student is just as likely to do well or poorly in terms of grades as is his less personally responsible counterpart. The situation is similar with respect to anomie and political alienation.

* Cum and units accumulated are significantly related although not perfectly overlapping.

Table E

Mean Performance Scores (Cum 3 and three indicators of units accumulated) for Differing Levels of Anomie, Political Alienation and Personal Responsibility

PERFORMANCE MEASURES

	Cum 3	Units 1	Units 1 & 2	Units 1, 2 & 3
<u>ANOMIE</u>	(N=121) (SD=.733)	(N=133) (SD=13.24)	(N=139) (SD=22.05)	(N=128) (SD=30.2)
<u>HIGH</u>	4.04	54.44	106.96	152.53
	(N=173) (SD=.742)	(N=178) (SD=13.8)	(N=188) (SD=17.89)	(N=180) (SD=26.09)
<u>MED</u>	4.12	57.16	111.20	157.31
	(N=130) (SD=.776)	(N=135) (SD=13.6)	(N=143) (SD=20.76)	(N=135) (SD=28.27)
<u>LOW</u>	4.04	57.91	108.75	155.53
	No significant difference (N.S.)	high vs. med: t=1.72 p <.08	high vs. med: t=1.90 p <.06	high vs. med: t=1.48 p <.15
		high vs. low: t=2.06 p <.05		

* High, medium and low split is based on approximately 30% high, 40% medium and 30% low.

Table II
(cont)

POLITICAL ALIENATION	PERFORMANCE MEASURES			
	Cum 3	Units 1	Units 1 & 2	Units 1, 2 & 3
<u>HIGH</u>	(N=125) (SD=.780) 4.08	(N=135) (SD=14.29) 56.68	(N=139) (SD=20.80) 108.80	(N=129) (SD=28.65) 155.65
<u>MEDIUM</u>	(N=145) (SD=.727) 4.09	(N=154) (SD=14.28) 55.93	(N=161) (SD=20.37) 108.08	(N=154) (SD=28.12) 154.33
<u>LOW</u>	(N=154) (SD=.747) 4.04	(N=157) (SD=12.75) 57.39	(N=168) (SD=19.20) 110.60	(N=160) (SD=27.50) 156.09
	N.S.	N.S.	N.S.	N.S.

Table E

(cont)

PERFORMANCE MEASURES

PERSONAL
POSSIBILITYHIGH 1MEDIUM 2LOW 3

	Cum 3	Units 1	Units 1 & 2	Units 1, 2 & 3
	(N=149) (SD=.750)	(N=153) (SD=13.49)	(N=160) (SD=20.20)	(N=152) (SD=27.11)
	4.09	57.51	111.00	159.85
	(N=136) (SD=.800)	(N=147) (SD=13.64)	(N=153) (SD=16.98)	(N=145) (SD=25.17)
	3.99	54.57	106.84	150.47
	(N=144) (SD=.718)	(N=152) (SD=14.47)	(N=160) (SD=22.35)	(N=152) (SD=30.38)
	4.10	57.22	109.33	155.22

N.S.

high vs. med:
t=1.87 p<.07high vs. med:
t=1.97 p<.05high vs. med:
t=3.00 p<.01

In addition, the number of incompletes or fails during the third semester is also unrelated to feelings of connectedness (data not shown).

The picture with respect to unit taking behavior is mixed and by no means clear-cut. There is a tendency for highly anomic students to accumulate fewer units in each of their first three semesters at M.I.T. This trend is most clear in comparison to their moderately anomic peers. The medium and low anomic groups are not significantly differentiated by their unit taking behavior.

Concerning personal responsibility, the picture is similarly mixed but suggestive. The most personally responsible students tend to accumulate the most units in each of their first three semesters, particularly in comparison to their moderately responsible counterparts. This difference is most marked with respect to units accumulated after three semesters.

In summary, there is a tendency for the most anomic students to accumulate fewer units during their first three semesters at M.I.T. and for students who feel most personal responsibility to accumulate more units. No trends appear at all with respect to political alienation.

Individual Satisfaction and Academic Performance

Whereas the picture with respect to the relationship between feelings of adaptation and academic performance was mixed, at best, the picture which emerges when we examine individual satisfaction and academic performance is quite clear (Table F). Those people who, in Feb. of their Freshman year, were highly satisfied with M.I.T. got significantly higher grades in their first semester sophomore year than did their unsatisfied counterparts. This highly satisfied subgroup accumulated more units at the end of their first semester, at the end of their first year, and after three semesters than did the unsatisfied subgroup. In fact, somewhat

Table F

Mean Performance Scores (Cum 3 and three indicators of units accumulated) for Differing Levels of Individual Satisfaction with M.I.T.

INDIVIDUAL SATISFACTION	PERFORMANCE MEASURES			
	Cum 3	Units 1	Units 1 & 2	Units 1, 2 & 3
<u>high</u> (<u>definitely</u> choose again)	(N=191) (SD=.687) 4.12	(N=200) (SD=13.24) 58.11	(N=209) (SD=18.33) 112.68	(N=198) (SD=25.88) 160.70
<u>moderate</u> (probably choose again)	(N=153) (SD=.78) 4.08	(N=156) (SD=14.29) 55.56	(N=166) (SD=20.41) 107.07	(N=160) (SD=30.02) 151.95
<u>low</u> (uncertain to definitely not choose again)	(N=82) (SD=.85) 3.85	(N=94) (SD=13.80) 54.60	(N=97) (SD=22.21) 104.16	(N=88) (SD=27.75) 147.56
	high vs. mod: t=2.70 p <.01	high vs. mod: t=1.74 p <.08	high vs. mod: t=2.79 p <.01	high vs. mod: t=2.96 p <.01
	med vs. low: t=2.08 p <.05	high vs. low: t=2.09 p <.05	high vs. low: t=3.53 p <.001	high vs. low: t=3.87 p <.001

analogous to a horse race, the gap between them in terms of units accumulated tends to increase the longer the race continues. The moderately satisfied subgroup accumulated significantly fewer units than their highly satisfied counterparts, but were not significantly differentiated from the highly dissatisfied subgroup.

Summary of Results

Feelings of adaptation to the Institute, yielded no clearly consistent relationships to measures of academic performance, particularly grade point average. These same feelings of adaptation were, however, clearly and markedly related to an individual's level of satisfaction with the Institute - the more anomic, the more politically alienated, and least personally responsible being the most uncertain as to whether M.I.T. was the right place for them.

This global measure of satisfaction with M.I.T. pulls together, in ways we will discuss in more detail in the next section, the three separate indicators of feelings of adaptation. In terms of our results, it appears to be a powerful early warning indicator of future behavior with respect to academic performance.

We turn now to an expanded discussion of these results and their implications for the development of an ideal learning community.

DISCUSSION AND IMPLICATIONS

We began this paper by developing a conceptual framework which defined an ideal learning community as one in which member involvement was "moral" in nature. People performed because they intrinsically valued the organization's mission and goals. This sense of moral involvement or meaningful connectedness would be most likely to occur, it was hypothesized, to the extent that three conditions existed:

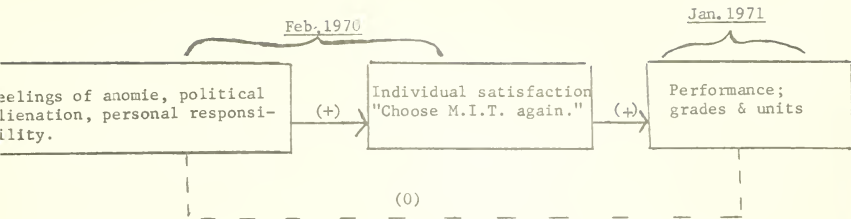
- 1) the individual experienced a sense of meaning or purpose in his life at M.I.T. (anomie);
- 2) the individual felt those in power were acting legitimately (political alienation);
- 3) and, the individual experienced a sense of personal control over his ability to achieve things of personal value and importance (personal responsibility).

In addition, we introduced the concept of the psychological contract. The notion of a contract implied that both the individual student and the Institute have expectations as to what constitutes appropriate behavior or attitudes within the M.I.T. community. Grades received and units accumulated were taken to reflect, in part, the Institute side of the contract - they are behavioral manifestations of the student's ability and willingness to adhere to the norms of academic excellence. The individual's side of the psychological contract was assumed to be reflected in his sense that M.I.T. was the right place for him (certainty to return). Whatever goals or expectations a person had for attending M.I.T. in the first place, and they are undoubtedly many in number and complex in nature, if, in mid-Feb of his first year, he reports that he is uncertain about whether he would choose to

come back again, a meaningful psychological contract has not yet been developed.

The data clearly supported the conclusion that individual satisfaction and feelings of connectedness are markedly intertwined; the most satisfied students (in terms of their definiteness about choosing to come to M.I.T. again) experience a greater sense of purpose and meaning (lower anomie), feel less alienated from the political structure of M.I.T. (political alienation), and feel more personal control over their ability to achieve things of importance (personal responsibility). Within our original conceptual framework, individuals who feel from their point of view that a meaningful psychological contract exists between themselves and the Institute (they would definitely choose M.I.T. again) are also more likely to feel morally involved - meaningfully connected - to the Institute.

With respect to the Institute's side of this psychological contract - at least as it is reflected in grades received and units accumulated - the data are less clear cut. Individual feelings of satisfaction (one side of the psychological contract) - measured in the middle of the Freshman year - were clear predictors of performance in future semesters in terms of grades achieved and units accumulated (one aspect of the Institute's side of the contract). However, we found few consistent correlations between a given feeling state of meaningful connectedness - anomie for example - and future performance in terms of cum and units. This situation can be depicted graphically in terms of the following three variable model:



(+) = strong correlation found to exist

(0) = no consistent correlation found to exist

There are several possible explanations for the situation depicted above. One is statistical in nature and rests upon the longitudinal quality of the research design. Individual satisfaction may be an intervening variable in a sequential chain - linking feelings of anomie, for example, to measures of performance. One might not, under these conditions, expect to find any consistent direct correlations between feelings of anomie, for example, and future performance. (12)

A second argument is, in a sense more important, for it points to the inappropriateness of simplistic assumptions (as reflected in single correlations between individual variables). One has to do with the question of expectations. Some students, for a variety of reasons, may not expect to experience a sense of personal responsibility, for example, in their interactions with M.I.T. (13) Depending on the opportunities they have found at M.I.T., such individuals could be very satisfied and work very hard to get good grades. The factors which contribute to performance - in terms of grades and units - are obviously numerous.

The inappropriateness of simplistic assumptions is further reinforced by Gerstein's research (14) which focused on the same population of students. He showed various combinations of feeling states exist within any given individual and the particular combination for a particular individual defines his style of

adaptation. The four adaptive styles which he defined were:

<u>Adaptive Style</u>	<u>Anomie</u>	<u>Political Alienation</u>	<u>Personal Responsibility</u>
Withdrawn	High	High	High
Rebel	High	High	Low
Conformist	High	Low	High
Self-directed	Low	Low	High

For example, a self-directed person feels a high sense of personal responsibility and low levels of anomie and political alienation - he is "morally" involved. This typology, combination of feeling states, clearly differentiates future performance levels - the withdrawn being least successful and the self-directed being most successful. Thus, in examining the performance of people high in anomie we have been mixing types of people on adaptive styles - each with markedly different performance levels.

These complexities point to several important dilemma. As Paul Grey noted, individual students will differ in preparation, in need, in style, in expectations and in capacity. This clearly implies that a range of choices need to be provided - all students will not be attracted to or benefit equally from the same kind of educational opportunities. Sweetwood's research strongly supports the importance of effectively matching individual expectations with educational opportunities. (15)

Providing opportunities, although a necessary and important first step, is insufficient. The dilemma is perhaps most clear with regard to the development of self-directed learners. Most students, given the nature of their part educational experiences, are ill-prepared to think in terms of individual growth, self-education, self-sufficiency, self-renewal, etc. The point is - and this may seem circular - students need to learn how to be self-directed. To refer back to the issue of the P/F system referred to earlier in this paper, our data

strongly suggest that a substantial number of students enter their sophomore year without the self-directed moral orientation which 1) the P/F system was designed to help develop and 2) which seems consistent with the characteristics of the ideal learning community M.I.T. is striving to develop. Providing the structure or the opportunity, in this case P/F, is necessary but insufficient.⁽¹⁶⁾ Programs need to be developed which help students learn how to set personally meaningful goals and how to most effectively use their own resources and the resources available in the environment to achieve these goals.⁽¹⁷⁾

The other side of this dilemma focus upon M.I.T. as an organization and the faculty, in particular, as the group who transmit and reinforce norms for appropriate behavior. As teachers, we come from educational experiences not unlike those of our students. We are accustomed to "managing our classroom organizations" against reading lists, course outlines, and examination schedules. Just as students need to learn how to self-directed, programs are needed to help faculty learn how to manage their classrooms in ways which foster self-direction.⁽¹⁸⁾

Footnotes

- (1) a. Schwitzgebel, R. and Dave Koib, Behavior Change, McGraw-Hill, Inc., 1971, See especially section on Behavior Change in Transitional Roles.
b. Schein, E., "How to Break in the College Graduate," Harvard Business Review, Nov-Dec, 1964.
c. Schein, E., Organizational Psychology, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1965.
d. Rubin, I., et al., "The Process of Joining-Up: Individuals and Organizations," Educational Opportunity Forum, Vol. 1, No. IV, Fall 1969, pp. 55-65.
- (2) Schein, E., Organizational Psychology, op cit.
- (3) Schein, E., "The Reluctant Professor: Implications for University Management," Sloan Management Review, Vol. 12, No. 1, pp. 35-49.
- (4) Recent student and faculty protests concerning M.I.T.'s posture on defense related research reflected a lack of consensus over legitimate missions, goals and methods. Individual members could not be "morally" involved - intrinsically value - certain of the organization's missions.
- (5) McClelland, D., "Achievement Motivation Can Be Developed," Harvard Business Review, Nov-Dec., 1965; Myers, M. Scott, Every Employee A Manager, New York: McGraw-Hill Book Co., 1970.
- (6) McClelland, D., op cit.
- (7) Snyder, B., The Hidden Curriculum, Alfred Knopf Publisher, 1971.
- (8) To be distinguished from several smaller, more local experiments in education like ESG and USSP which also have as one of their goals the development of self-directed learners.
- (9) a. McClosky, H. and J.H. Schaar, "Psychological Dimensions of Anomy," American Sociological Review, 1963, 28 (1), 14-40.
b. Olsen, M. in Robinson, J.P. and Shaver, P.R., Measures of Social Psychological Attitudes, Institute for Social Research, University of Michigan, August 1969, pp. 181-183.
c. Rotter, J.B., "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs, 1966, 80, whole No. 609, pp. 1-28.
- (10) The number of people receiving F's through their freshman year - a very gross approximation to cum - proved to be so small (less than 6% first semester and 3% second semester) as to make meaningful comparisons impossible.

Footnotes (cont.)

- (11) Bumstead, Dennis, "Freshman Socialization: The Influence of Social Class Background on the Adaptation of Students," M.I.T. Working Paper #537-71, June 1971.
- (12) For more detail on the logic of three variable correlations as a way of demonstrating causal chains see:
- Blalock, H.M., Social Statistics, New York: McGraw-Hill, 1960.
 - Rubin, I., Sensitivity Training as a Means of Reducing Prejudice, Ph.D. dissertation, M.I.T., 1966.
- The relationship between anomie, political alienation, personal responsibility and performance, controlling for different levels of individual satisfaction has been examined. No clear results emerged. Further work is underway to attempt to unravel what, if any, direct correlations exist between performance and measures of connectedness.
- (13) See Bumstead's research, op. cit., for a discussion of the possible effects of social class background in this regard.
- (14) Gerstein, Marc, "Styles of Student Adaptation: Outcomes of the Psychological Contract," M.I.T. Working Paper # 536-71, June 1971.
- (15) Sweetwood, H., "Expectational Complementarity, Freshman Seminars, and Student Involvement with M.I.T.," unpublished M.S. thesis, Sloan School of Management, M.I.T., Spring 1971. This research also focused on the same population under discussion in this paper.
- (16) In a forthcoming paper we will focus specifically on the relationship between various methods of feedback and evaluation and the development of self-directed learners.
- (17) See:
- Kolb, D. and Boyatzis, R., "Goal Setting and Self-Directed Behavior Change," Human Relations, Vol. 23, No. 5, pp. 439-457.
 - Rubin, I., "Managing the Learning Process: An Experiment in Education," M.I.T. Working Paper #460-70, September 1970.
 - Rubin, I., et al., "Individuals and Organizations", op. cit.
- (18) For an excellent introduction to this issue see: Mager, R.F., Developing Attitudes Toward Learning, Palo Alto, California: Fearon Publishers, 1968.

