      College students involved in initiating curricular change demonstrate a receptivity
to the use of certain kinds of environmental conditions in an educative manner. These
students are self directed, exploratory and have the ability to create their own
opportunities for satisfaction. Most college students, however, are not part of this
group, and have not developed "educative" response patterns. Redesigning our
campuses into "educational environments" would make them more responsive to the
needs of this larger group. Such environments would include the following features:
(1) provisions for diverse stimuli for students, (2) discouragement of traditional
responses, (3) encouragement of new kinds of responses, (4) encouragement of
active and analytical participation of students in the environment, (5) increases in the
anxiety threshold when low levels threaten to paralyze adaptive behaviors, (6)
acceptance of normal student "identity crises", (7) opportunities for students to test
their new selves and knowledge, (8) appropriate feedback to students as they
change, and (9) sympathetic resources for students when necessary. (LS)

CAMPUS CUES TO EDUCATIVE BEHAVIORS*

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The very idea of "initiation" by students of a change which affects their own lives is at once indicative of the tremendous sources of energy students possess, of the pressures put on them by their college environments, and of the wide variety of outlets those energies can take in those environments. Though there is considerable selection and admissions screening so that student characteristics on any one college campus may in many respects be expected to be relatively homogeneous, there remain, thank God, amazing diversities in student potentials and modes of striving toward the realization of those potentials. The consequent problem of designing college environments which can accommodate the wide range of variations in needs, drives and behaviors is enormous. The even greater problems of so structuring the environment so that something called growth or learning takes place is the puzzle which has occupied educators since man became aware of the need and responsibility for guiding those processes.

The University of California at Berkeley has in recent years acquired a reputation for student activism which, though deserved in many respects, masks an important feature of the campus, a feature which in many ways no doubt contributes to its academic excellence – and that is the great pluralism of subcultures which co-exist there. To try to isolate the "typical" Berkeley student would be like attempting to point out the "typical" physiognomy of the human race. Berkeley students are as varied as their noses.

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Still, given the resources available to an educational institution, educators <u>can</u> <u>not</u> deal with each individual completely as a separate entity - however we might want to. Some organization of the faculty, curriculum and other elements in the college or university environments seems to be required - some way of grouping the resources so as to aid the growth processes of as many students as possible. What principles of organization are best seems to be a central question for educators. And it is one which in part sparked the interest of two of us to do some research on students who initiated their own courses at Berkeley. For, we reasoned, here was a group of students - a sub-culture, if you will - which probably was manifesting, behaviorally, a common set of needs, perhaps a common stage of development or maturation, perhaps a similarity of backgrounds and/or personality traits, maybe a common group of attitudes and beliefs. Perhaps also they had followed similar paths through the curricular offerings or chosen extra-curricular activities together. Finally, it could be, we mused, that their feeling about all of this - their expected rewards, their satisfactions and frustrations - could tell us something about the effectiveness of the Berkeley environment in their education, particularly about the ways it had been structured, hopefully to suit their needs.

And so, last spring, with these thoughts in mind, we set out to see if we could get at some answers to these questions. We found that there were about six hundred students enrolled in courses initiated by students in part through a special faculty board established the previous year and concerned with by-passing the regular course-approval processes. The subject matter of the courses was varied, including, for example, Afro-American Literature, Non-Violence and Revolutionary Change, Innovations and Alternatives in Education

and Community Involvement, Theory and Practice of Meditation, etc. With
some exceptions, the pedagogy was fairly traditional. We designed a questionnaire
to collect our data, and it was distributed in class. To provide some basis
of comparison in our study, we also mailed the questionnaires to a random
sample of Berkeley undergraduates.

Let me give you just a few of our findings about the students
enrolled in these special courses. For simplicity, we will call them "CPE"
students, the CPE standing for Committee for Participant Education, the name
of a student group formed to facilitate the setting up of the courses. Since
we suspected many differences attributable to sex alone, we separated each
group into male and female components. Though I will cite differences between
CPE students and the control group, please bear in mind that the latter
represents the Berkeley undergraduate population, so you can either exaggerate
or diminish the reported differences depending on how you compare Berkeley
with your own campuses.

The proportion of men to women enrollees in the CPE courses was 60:40,
roughly the equivalent of the split on the Berkeley campus at large. But
though the cross-section by class year was representative for the women, for
some reason, fewer freshmen men than would be expected were enrolled. The
CPE men came from higher SES backgrounds, and more came from families with
fathers in professional occupations. For the women, the situation was
reversed - they came from lower SES backgrounds. We found also that 43% of
the CPE men (compared with only 30% for Berkeley men in general) were
transfer students, mostly from California junior colleges and universities,
rather than from more prestigeful liberal arts colleges around the country,
as for the control group. Again, for the women, the situation was reversed -
almost half of the Berkeley women were transfers, but only 36% of the CPE
women were. More CPE students lived in private residences than the control

group which was distributed more in dorms and fraternities and sororities. As far as formal coursework is concerned, more CPE students were majoring in the social sciences and humanities than the control group where the concentration was more in the natural sciences and professions. CPE students earned higher grade point averages, despite, incidentally, their spending relatively less time studying for formal courses.

Outside of class, CPE students were more active politically (and had more liberal or radical attitudes), were more active socially and were more involved in community service. They also spent less time in fraternity activities, in athletics and in academic societies. When we measured the personalities of both groups by means of three abbreviated scales of the Omnibus Personality Inventory[1] developed at the University of California, we found no significant differences in the degree of "thinking introversion" or in "social extroversion" exhibited by the groups (though both CPE men and women and control women seemed to differ from the control males). We did discover substantially more "autonomy" in the CPE group.

We also measured student attitudes toward the university and found for the most part that the CPE students were less satisfied with the bases for evaluation and recognition of their work, with the challenge the university provided and with the relative degree of freedom to vary from prescribed routines. They were more satisfied, on the other hand, with their opportunities to make friends. Both groups had disagreements with the priority of the university's goals, as they rated "social change" higher than "research" as a desireable function of the university.

Relative concern with the war in Vietnam was different for the two groups. Not unexpectedly, the CPE group was more in favor of our withdrawing our troops immediately.

Finally we were especially interested in finding out why CPE students enrolled in student student-initiated courses and why the control group did not. The CPE students said they took the courses because the subject matter interested them and because they wanted a course suited to their individual needs and relevant to everyday life. The control group noted that they did not enroll in student-initiated courses because of lack of time, because they were unaware the course was being offered, because other courses were satisfactory, and because they had to fulfill requirements.

Let me try now to summarize briefly the picture we have of this group of students. They are for the most part active, intelligent, self-directed and socially-concerned young men and women. They are unhappy with the university environment, especially with its rigidity and its inadequate - for them - system of rewards, its lack of challenge and the paucity of formal course work related to their individual needs and interests. They seem to have found ways of finding each other, however. They live off-campus, and get many of their kicks off-campus, and are more active in and satisfied with their social relationships with each other.

We could not help but notice (as you no doubt have) the similarities of this group to the FSM activists of some five years ago. Watts and Whittaker, for example, reported that the most obvious characteristics of the FSM group were that they were "adaptable, adventurous, assertive, idealistic, outspoken, unconventional, and so on."[2] Certainly this is descriptive of many in our sample.

In a larger sense, perhaps we need not - at this point in our professional understanding of the functions and effects of a college education - be too concerned with the CPE kind of student. Though often frustrated and unhappy

in the present environment, his particular personality and strength of

character <u>will</u> permit him to benefit from it and hopefully to take from it

some wisdom with which to reconstruct himself and his post-graduate world

(even as he has exercised that initiative as an undergraduate). These students

are, in short, not Keniston's alienated youth,3 but rather what Roy Heath

has described as "reasonable adventurers" - persons who have developed

the ability to create their own opportunities for satisfaction and who have

both a "flare for change and a world relatedness".4 No. What is of greater

concern is how to modify our college environments so as better to serve the

students like those in our control group and who comprise, we would estimate,

a larger percentage of the undergraduate population. Let me in the few minutes

remaining sketch out a few approaches to the redesign of our campuses which

would enable us to be more responsive to the needs of this larger group.

First, a brief word about environments in general- what they do and

how they can be characterized. Most of you are probably familiar with the

work of Pa ͻ and Stern and of Astin5, and others in assessing the various kinds

of college presses - both as perceived by students and as observed by

outsiders. To state the obvious, it is clear that alternative kinds of press

can have different kinds of impacts on different kinds of students. As

George Stern notes:

> The studies...strongly suggest that the
> selective student preferences and per-
> formances observed are related to differ-
> ences in response which the same environ-
> ment elicits from each of several distinct
> subgroups of students.6

Robert Merton, the sociologist, has hypothesized that <u>individual</u> adaptive

responses can take place in any of five modes - conformity, innovation,

ritualism, retreatism and rebellion.7 Unfortunately, not much research

has been done on the particularistic ways in which the environment impinges

on the student - on the specific points of tangency between the student's

inner state and the physical environment which evokes these particular

adaptive modes of response. This interaction process, however, is vital to

an understanding of the educative process. For as Dewey noted, education

or growth takes place when the individual "undergoes" an experiénce in which

he is able to reconstruct himself and environment as they coexist and change

together from an indeterminate or problematic situation to one that is

warrantably settled or determined.[8]

Thus, it is extremely important that the environment have within it

a rich variety of indeterminacies which students not only feel but can respond

to in the most educative mode of Merton's categories mentioned earlier. But

variety is not enough. To state the obvious, our environmental worlds are

extraordinarily complex and need some kind of ordering. B. F. Skinner, for

example, has noted that:

> In addition to the physical environment to
> which he is sensitively attuned and with
> which he carries on an important interchange,
> we have (as he has) to contend with social
> stimuli, social reinforcers, and a network
> of personal and institutional control and
> counter-control - all of amazing intracacy. [9]

Another writer, S. B. sells, in a book, Stimulus Determinants of Behavior,[10]

had developed a taxonomy to describe stimulus "situations" and has arranged

categorically some 500 stimulus items which one might think about as manipulable

in a college environment.

But how are we to select from and group these stimulus items those which

are educational (or instrumental toward education)? By what principles do we

arrange them, especially given the happy diversity of students I mentioned at

the outset of this paper? It seems to me to make sense to start with a

description of appropriate or hoped for behavioral responses. Then one can

think about the kinds of stimulus units which have a high probability of

effecting them.   Though educators for centuries have been attempting to set educational objectives, it is only recently that psychologists have given us some insights about the developmental and maturation phases young people of college age go through.   We now can think about and look for behavioral sequences and changes which have a basis in theory.   We have been enormously aided by the works of Erikson,[11] Anselm Strauss,[12] Sanford[13] and Rokeach[14] on a macro scale, and by others such as White,[15] Esther Raushenbush[16] and Roy Heath[17] in case studies, and by Heist and McConnell[18] and others who developed sophisticated measures of nonintellective development.   Central themes in all of these works seem to be the idea of enabling the student to move out of his unexamined, habitual modes of response to his environment. Dewey would call this a constructive blocking of energies usually routed into habits which do not serve to promote further growth.[19]   I can illustrate this with the two groups we studied on the Berkeley campus.   Our control group, for example, for a number of reasons, have fastened on pictures of themselves in some vocational characterization which often closes them to environmental stimuli which are not apparently relevant to their future occupational goals. Their problem-solving mode is "algorithmic" - formula-like in its instrumentality toward envisioned long-term objectives.   They tend to "satisfice", to use Herbert Simon's phrase to describe the kind of search behavior which selects the first satisfactory solution in a sequence, rather than looks for optimum or excellent solutions.[20] Students in the CPE group, on the other hand, use a "heuristic" mode of problem-solving - a mode which is improvisational, serendipitous, novelty-seeking, curious and exploratory.   Erikson might say these students have declared a "psychosocial moratorium"[21] on goal formation. Now, though we might have many other objectives, it would seem that the CPE behaviors in this case have a higher probability of being "educational" (no matter whose educational philosophy one espouses) than those of the control

group. How to get from desired <u>behaviors</u> to appropriate stimuli involves, however, some theoretical considerations in the psychology of perception and learning. One has a rather bewildering assortment from which to choose today - Gestalt theories, concepts of reinforcement, field theories, psychoanalytic theory, role theory, etc., etc. But regardless of one's theoretical preferences in either education or psychology, it seems evident that in order for the environment to make any difference at all, its intentionally educative subparts must be <u>discriminated</u> by the student. If he is not aware of what we set up as stimuli, he can not respond to them. We must, in other words, find ways of penetrating the perceptual walls with which students have surrounded themselves. We have to figure out ways of getting into their behavior or life spaces, of increasing their ability to discriminate among cues in the environment, so as better to use it to their education advantage.

Let me now simply list some features of what I would call an educative environment - at least insofar as it might lead to the problem-solving modes our CPE students have adopted. First, as noted above, it should be rich enough to provide an assortment of cues and thus weaken rigid "perceptual hypotheses"[22] to use Krech's terminology. Second, it should <u>discourage</u> standard responses from the student's habit backlog. Third, it should <u>encourage</u> responses which are deviations from the traditional reportory. These first three characteristics might be termed simply stimulus and response generalization, if we want to use that terminology. A fourth aspect of the environment has to do with students' engagement with it. The environment should encourage "field independence" as Witkin[23] puts it. Students should, in other words, be encouraged to be actively and analytically oriented toward the environment, not passively dependent on it. Their search strategies should be "probing" rather than "scanning" in Sarbin's[24] terms. The student's perceptual apparatus

thus does more than just sweep over the surface of the college ecology to find _familiar_ objects, but instead scratches below to elicit responses which answer his hypotheses about the problem in which he is engaged. Student needs must also be attended to. Thus a fifth characteristic of the environment should attend to the satisfaction of what Maslow labels lower-order needs[25] - those same practical needs which Tolman suggests distract from cognitive curiosity.[26] The environment should, along these same lines, raise the anxiety thresholds where low levels threaten to paralyze adaptive behavior in Soddy's terms.[27] The sixth characteristic of the educative environment takes cognizance of Erikson's theories of epigenetic development. The environment must legitimize and give value to the "psychosocial moratorium" mentioned earlier - that is, to the natural confusions associated with identity formation. As a corollary, it must encourage what Kris calls "regression in the service of the ego"[28] - the movement backward to an earlier stage in ego development in cases where identity formation has been premature. And, it should permit and even encourage certain types of educative failures through the imaginative use of positive sanctions. Such an environment would, of course, have a multitude of legitimized values. In such a system, the inevitable conflict which arises should be of the non zero-sum type - that is, conflict which does not lead to mechanisms which are defensive of the status quo. The seventh aspect of this ideal environment provides a variety of flexible, short and long-term _opportunities_ for students to carry out their testings of new selves and new knowledge. Eighth, the environment must contain the means for giving students continuing and appropriate feedback about themselves as they change. Ninth, and last, the college environment should, as Sanford warns, provide sympathetic resources when it has been overstimulating or overstressful given the student's stage of readiness for challenge and change.

Well, those are rather formidable requirements for a potentially "educative" environment. I could not possibly in the short time remaining even outline the most efficient "cue arrangements" one might develop from among the assortment of 500 stimuli I noted earlier. In passing, let me just suggest that we might think about grouping them into four categories: arousal, orienting, informational, and value cues and within them into Wohlwill's dimensions of novelty, complexity, variation, supprisingness and incongruity.[29] But more on that some other time.

Let me once again reiterate the theme of this notion of environmental design. We must work out stimulus situations which can cater to a wide diversity of students, particularly those whose habitual response patterns are not educative. As Dewey insisted, learning is problem-solving, and problems start with a perplexing situation - an indeterminacy in the environment, a paradox, a puzzle, a dilemma. Students need a variety of stimuli from which their individual and personal styles - their peculiar needs, drives and perceptual apparatuses - can select. In the process of moving toward the solutions to his selected problems, each student manipulates and rearranges his environment. Those same stimuli now become tools in the analysis. Our concern today is with student-initiated curricular change. I have suggested that the very notion of "initiation" by students is evidence of their receptivity to the use of certain kinds of environmental conditions in an educative manner. What I have tried to stress is the need for designing our environments so as to penetrate into the lives of the majority of students so as to get them moving in a similar direction. Hopefully, the nine environmental characteristics I have outlined today represent a start.

FOOTNOTES

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