

THE MULTI-DIRECTIONALITY OF STUDENT CHANGE¹

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From 1965 through 1970, thirteen small colleges with enrollments of 1500 or less cooperated in a study of institutional characteristics, student characteristics, and student development. Diverse instruments and multi-level studies documented dramatic differences among the colleges--in goals; climate; rules and regulations; curriculum, teaching, and evaluation; sense of community and student-faculty relationships, and in the concrete experiences and behaviors of students and faculty. Students also differed widely from campus to campus: in their orientations to college, intellectual interests, attitudes and values, religious beliefs, autonomy and personal integration, complexity of ambiguity, and desire for material success.

In addition, the characteristics of the students and of the colleges fit comfortably together. Apparently self-selection and admissions practices operated with both precision and power so that certain kinds of students entered certain colleges and not others, and little overlap occurred among colleges that were substantially different from one another.

What developmental outcomes follow from these associations between particular kinds of institutions and particular kinds of students?

Does Change Occur? In What Areas?
At What Colleges? ²

The students changed on all but one of the fourteen scales of the Omnibus Personality Inventory. More significantly, despite the major differences among institutions and among the entering students, the direction of change was basically the same in all colleges.

Table 1
Mean Scores for Students Pooled from Twelve Colleges
Omnibus Personality Inventory
1965 - 1969

Scale	All Students N = 585		Men N = 254		Women N = 269	
	Fall 1965	Spring 1969	Fall 1965	Spring 1969	Fall 1965	Spring 1969
Autonomy	48	55	48	55	47	55
Practical Outlook	52	47	52	47	51	47
Impulse Expression	48	52	49	54	45	50
Complexity	48	50	48	51	47	49
Estheticism	49	52	46	50	52	55
Thinking Introversion	48	50	47	50	49	50
Masculinity-Femininity	49	48	55	53	43	42
Personal Integration	50	54	51	54	50	54
Anxiety Level	49	50	50	52	48	49
Religious Orientation	46	50	47	51	45	49
Theoretical Orientation	46	47	48	49	43	44
Altruism	51	52	49	50	54	54
Social Extroversion	47	47	46	46	48	48
Response Bias	47	48	48	49	46	47

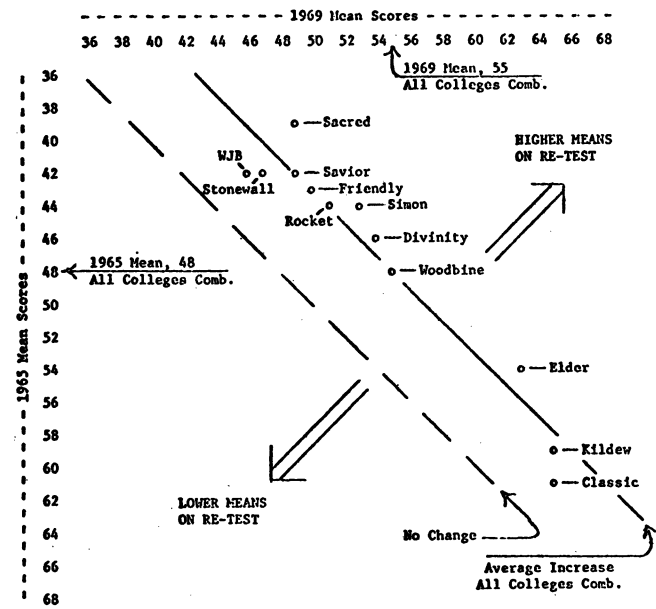
NOTE: Underlining indicates that the differences in scores were significant at the .05 level or beyond and therefore likely to occur by chance less than one time in twenty.

Pooling the individual colleges yields 168 pairs of mean scores--12 colleges times 14 scales. The differences between sixty-eight of these pairs was statistically significant beyond the .01 level, and seventeen more fell between the .05 and .01 levels. Of these eighty-five cases, only two were contrary to the typical direction,

and different scales were involved in each case. Ignoring statistical significance, and setting aside the Social Extroversion scale on which no general change occurred, among 154 comparisons, only 16 were contrary to the usual direction. Seven of these atypical changes occurred at Kildew, where the mean scores of entering students were often near the extremes, leaving little room for change in the directions typical of most other students. (see Table 2, Mean Scores for Individual Colleges).

All the colleges changed in the same direction on Autonomy, Practical Outlook, and Impulse Expression, and those changes were consistent when men and women were analyzed separately. Eleven of the twelve colleges changed in the same direction on Personal Integration and Estheticism, and ten reflected similar change on Complexity, Thinking Introversion, and Religious Orientation (Liberalism).

Figures 1 and 2 present the findings for Autonomy and Estheticism and show the relative positions of the twelve colleges, mean scores and average change when all colleges are combined. The results for Estheticism vividly illustrate the consistency among the institutions. Even though institutional means spanned a wide range, and even though the extent of change was small, change at each college--except at Kildew where no change occurred--was close to the average.



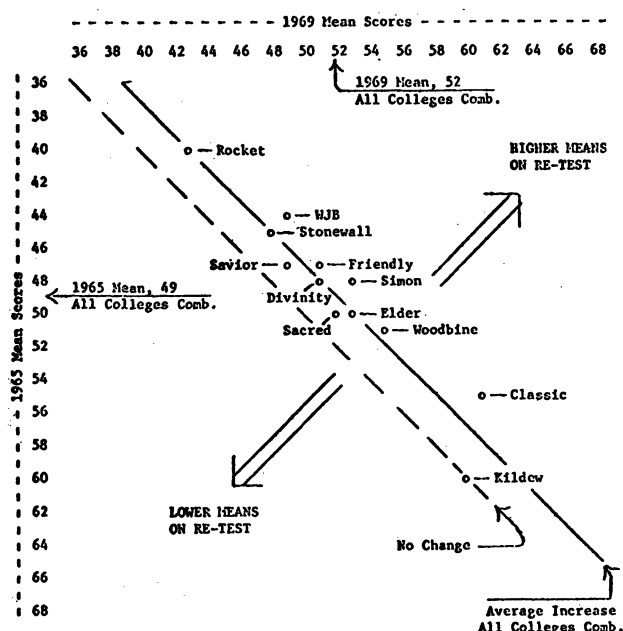
Note.--Numbers indicate standard score intervals. Mean scores for norms group of 7,283 freshmen = 50.

Figure 1. AUTONOMY (OPI)
1965-1969 Mean Scores for Individual Colleges

Table 2
Mean Scores for Individual Colleges
(Same Students Tested in 1965 and 1969)
Omnibus Personality Inventory

College	N	Autonomy 65 69	Practical Outlook 65 69	Impulse Expression 65 69	Complexity 65 69	Estheticism 65 69	Thinking Introversiion 65 69	Masculinity Femininity 65 69	Personal Integration 65 69	Anxiety Level 65 69	Religious Orientation 65 69	Theoretical Orientation 65 69	Altruism 65 69	Social Extroversion 65 69	Response Bias 65 69
WJB	33	<u>42 46</u>	<u>55 51</u>	<u>42 45</u>	<u>43 46</u>	<u>44 49</u>	<u>44 49</u>	50 50	54 56	52 53	37 37	<u>43 45</u>	51 53	47 49	47 50
Savior	38	<u>42 49</u>	<u>57 52</u>	<u>42 49</u>	44 45	47 49	<u>45 44</u>	<u>51 49</u>	<u>49 52</u>	49 49	<u>39 41</u>	<u>45 41</u>	50 49	<u>43 46</u>	48 47
Sacred	29	<u>39 49</u>	<u>57 50</u>	<u>46 53</u>	<u>42 48</u>	50 52	<u>45 51</u>	47 46	49 51	48 47	<u>41 47</u>	<u>43 47</u>	51 53	51 50	47 49
Stonewall	49	<u>42 47</u>	<u>56 54</u>	53 55	47 48	<u>45 48</u>	<u>43 47</u>	53 52	<u>45 53</u>	<u>46 50</u>	48 49	<u>45 47</u>	<u>43 48</u>	<u>46 49</u>	<u>43 48</u>
Simon	76	<u>44 53</u>	<u>54 48</u>	<u>42 47</u>	<u>43 49</u>	<u>48 53</u>	<u>48 51</u>	48 47	<u>54 57</u>	51 52	<u>38 44</u>	<u>42 45</u>	55 54	49 48	<u>48 50</u>
Divinity	51	<u>46 54</u>	<u>52 46</u>	<u>43 48</u>	<u>46 49</u>	<u>48 51</u>	47 48	49 49	<u>53 58</u>	<u>52 54</u>	<u>39 43</u>	45 44	53 53	49 48	49 51
Friendly	61	<u>43 50</u>	<u>54 51</u>	<u>44 46</u>	45 45	<u>47 51</u>	45 46	47 46	<u>50 55</u>	<u>49 51</u>	<u>42 45</u>	42 43	52 52	48 48	46 47
Kildew	36	<u>59 65</u>	41 39	<u>57 61</u>	62 62	60 60	<u>60 55</u>	43 44	<u>48 53</u>	48 50	62 60	52 52	54 53	47 47	46 47
Classic	13	<u>61 65</u>	42 39	<u>54 61</u>	58 62	<u>55 61</u>	58 61	<u>54 48</u>	51 52	50 49	55 58	54 56	51 52	44 47	50 51
Elder	123	<u>54 63</u>	<u>47 42</u>	<u>49 55</u>	<u>50 54</u>	<u>50 53</u>	<u>51 52</u>	<u>49 47</u>	<u>50 52</u>	50 50	<u>52 58</u>	49 48	53 54	<u>46 45</u>	47 46
Woodbine	56	<u>48 55</u>	<u>53 45</u>	55 57	50 51	<u>51 55</u>	<u>45 49</u>	<u>47 44</u>	<u>46 51</u>	<u>44 48</u>	<u>53 58</u>	<u>45 49</u>	48 50	47 48	<u>43 46</u>
Rocket	20	<u>44 51</u>	<u>54 52</u>	<u>50 55</u>	47 50	40 43	<u>41 45</u>	60 57	51 50	49 48	<u>49 53</u>	51 51	43 46	44 47	51 51

Note: Underlining indicates that the differences in scores were significant at the .05 level or beyond and therefore likely to occur by chance less than one time in twenty.



Note.--Numbers indicate standard score intervals. Mean scores for norms group of 7,283 freshmen = 50.

Figure 2 ESTHETICISM (OPI)
1965-1969 Mean Scores for Individual Colleges

The consistencies across the scales and the colleges are somewhat exaggerated because these measures are not entirely discrete and independent; some of the scales have items in common and many of them are inter-correlated. Nevertheless, the data appear sufficiently clear to justify the general conclusions. Several major areas of change were shared by virtually all the colleges. Students became more autonomous, more aware of their emotions and impulses and willing to express them, more integrated personally, more esthetically sensitive and interested in the arts and humanities, more tolerant of ambiguity and of complexity, more liberal in their religious views, and less concerned about material possessions and practical achievements.

These changes occurred among authoritarian students attending highly structured institutions where there were many rules and regulations and where adults kept a close eye on the students. They occurred among anti-authoritarian students attending loosely structured institutions where the rules and regulations were few and where students were left fairly much on their own. Two traditional colleges--one of them relatively unknown, financially poor, lacking facilities, and the other prestigious, affluent, having ample facilities and resources--changed in the same ways; so did two nontraditional colleges, one which gave the student considerable freedom in selecting his courses and carrying out independent study, the other which had a formal curriculum, many required courses, and a complex system of comprehensive examinations.

Do Specific Changes in Attitudes, Beliefs, and Behaviors Underlie the Main Scores?

Analysis of individual items indicated the proportions of students at each college whose responses as seniors had, or had not, changed. For each college, items on which 27 percent or more of the students had changed their responses were culled from the 390 items of the Inventory. For most colleges, this cut-off point produced between fifteen and twenty-five "high-change" items--particular attitudes, beliefs, and behaviors which had changed for substantial numbers of students at each college.

A number of these high-change items were common to several colleges. For example, at eight colleges 27 percent or more of the freshmen who agreed that "no man of character would ask his fiancée to have sexual intercourse with him before marriage" no longer agreed with that statement as seniors. At six colleges a similar shift occurred for the item "I believe it is the responsibility of intelligent leadership to maintain the established order of things." At five colleges there was an increase of 27 percent or more in the number of students who agreed that "there is nothing wrong with the idea of intermarriage between different races" and that "women ought to have as much sexual freedom as men."

Table 3
High-Change Items Common to Several Colleges

Common Items	Direction of Change
Common to Eight Colleges	
No man of character would ask his fiancée to have sexual intercourse with him before marriage.	-
Common to Six Colleges	
I have never done any heavy drinking.	-
I believe it is a responsibility of intelligent leadership to maintain the established order of things.	-
Common to Five Colleges	
There is nothing wrong with the idea of intermarriage between different races.	+
I believe women ought to have as much sexual freedom as men.	+
Common to Four Colleges	
I prefer people who are never profane.	-
The surest way to a peaceful world is to improve people's morals.	-
Perfect balance is the essence of all good composition.	-
When science contradicts religion it is because of scientific hypotheses that have not been and cannot be tested.	-
In the final analysis, parents generally turn out to be right about things.	-
I like modern art.	+
I go to church or temple almost every week.	-
Common to Three Colleges	
Our way of doing things in this nation would be best for the world.	-
I like short, factual questions in an examination better than questions which require the organization and interpretation of a large body of material.	-
At times I have been so entertained by the cleverness of a crook that I have hoped he would get by with it.	+
I often feel that the people I meet are not interested in me.	-
Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.	-
Every person should have complete faith in a supernatural power whose decisions are obeyed without question.	-
It is a pretty callous person who does not feel love and gratitude for his parents.	-
Every person ought to be a booster for his own home town.	-
Nothing about communism is any good.	-
I dislike test questions in which the information being tested is in a form different from that in which it was learned.	-
I dislike women who disregard the usual social or moral conventions.	-
Trends toward abstractionism and the distortion of reality have corrupted much art in recent years.	+
I like worldliness in people.	+
I never attend a sexy show if I can avoid it.	-
We should respect the work of our forefathers and not think that we know better than they did.	-
I like to talk about sex.	+
When I go to a strange city I visit art galleries.	+
I like to work late at night.	+

+ indicates more frequent agreement over time; - indicates less frequent agreement

These shifts on particular items are thought-provoking and worth further scrutiny and reflection. The significant point for our present purposes, however, is this: Not only are the general changes among the colleges consistent at the level of scale score means, but also changes in particular attitudes, behaviors, and beliefs are common to many diverse types of students attending diverse types of institutions.

Do Students Become More Similar?

The standard deviations associated with initial and final testing show whether the distributions of individual scores on the various scales becomes narrower or wider after four years. If students become more similar, re-testing will show that individual scores are less widely dispersed--standard deviations will have become smaller. If students become increasingly different from one another, individual scores are more widely dispersed and standard deviations will increase. Table 4 indicates that on every scale, standard deviations were larger after four years. Therefore, even though students at Project colleges spanned a wide range as freshmen they had become even more diverse as seniors.

Changes in the standard deviations within each college are generally consistent with the changes when students were pooled. Table 5 reports 168 pairs of standard deviations--12 colleges times fourteen scales. In one hundred and four pairs standard deviations are higher after four years, 39 show no change, and 24 are lower. The twenty-four cases where lower standard deviations occur are scattered across all the scales, so increased similarity is not concentrated in a single area. Ten of the 24 cases occur at Kildew and Classic, the two colleges where students scored closest to the extremes as freshmen. Individuals scoring close to the extremes at entrance could not move further out, but because change typically is in their direction, more moderate classmates could move toward them, decreasing the differences reflected by the Inventory. Under these conditions of measurement it cannot be determined whether "true" change toward similarity occurred or whether the smaller standard deviations result from the limitations of the instrument. Standard deviations did increase on seven scales at Kildew and on six at Classic, so in any event there was no highly generalized trend toward increasing similarity at these two colleges.

In general, students did not become more similar during their four years of college. Diversity increased for the total group and more often than not, diversity increased within each college.

No Mean Change ≠ No Change

But it was hard to believe that such dramatic institutional differences did not affect at least some of the students. Because mean scores might mask underlying changes for certain kinds of persons it seemed desirable to examine individual changes within some of the groups.

Several OPI scales were selected for more detailed study; on some, statistically significant change had occurred; on others, mean scores were identical at both testings. A person's scores at first testing were subtracted from his

Table 4
Standard Deviations, 1965 - 1969
Students Pooled from Twelve Colleges

Scale	F/65	S/69	Difference
Autonomy	9.71	10.24	+.53
Practical Outlook	8.60	9.34	+.74
Impulse Expression	10.82	11.43	+.61
Complexity	10.01	11.00	+.99
Estheticism	9.55	10.13	+.58
Thinking Introversism	10.05	10.38	+.33
Masculinity-Femininity	9.70	9.90	+.20
Personal Integration	9.85	10.72	+.87
Anxiety Level	9.76	10.16	+.40
Religious Orientation	10.03	10.29	+.26
Theoretical Orientation	9.37	9.87	+.50
Altruism	9.51	9.87	+.36
Social Extroversion	10.14	10.53	+.39
Response Bias	9.13	9.64	+.51

Table 5
Standard Deviations for Individual Colleges
Same Students Tested in 1965 - 1969

College	N	Autonomy	Practical Outlook	Impulse Expression	Complexity	Estheticism	Thinking Introversism	Masculinity-Femininity	Personal Integration	Anxiety Level	Religious Orientation	Theoretical Orientation	Altruism	Social Extroversion	Response Bias
WJB	33	8.8	7.9	8.8	8.9	9.10	9.10	9.11	9.8	9.9	3.5	7.8	9.7	12.10	8.8
Savior	38	6.8	7.9	9.11	9.9	9.9	10.11	10.10	11.12	10.12	6.7	9.10	9.10	11.11	9.10
Sacred	29	6.9	7.9	10.14	7.11	8.10	8.8	8.10	10.11	10.9	4.7	7.9	8.8	9.13	9.11
Stonewall	49	8.9	9.9	7.10	9.9	9.10	9.9	8.8	9.11	10.11	8.8	9.10	9.10	9.11	7.11
Simon	76	7.9	7.9	9.12	8.11	9.11	9.10	9.10	9.9	9.10	4.7	9.9	7.9	10.10	9.9
Divinity	51	7.7	7.7	10.11	8.11	9.10	9.10	10.9	8.9	9.8	5.7	9.10	10.12	9.10	8.9
Friendly	61	8.9	8.9	10.10	8.10	8.9	9.11	10.10	10.11	9.10	6.7	9.9	10.10	11.10	9.10
Kildew	36	11.9	6.7	11.9	11.8	8.8	8.9	7.8	8.12	9.10	6.6	10.9	9.11	10.9	6.7
Classic	13	7.5	8.7	8.9	10.12	8.9	10.7	11.11	9.11	10.13	10.7	11.9	10.10	9.11	8.8
Elder	123	8.7	8.7	10.10	9.10	9.9	9.10	10.10	10.10	11.11	9.7	9.9	9.9	10.10	10.10
Woodbine	56	8.10	7.8	11.12	9.12	8.10	10.11	8.10	8.11	9.10	8.8	8.11	9.11	9.10	9.10
Rocket	20	5.6	5.7	11.9	7.10	7.8	9.11	7.6	12.13	11.10	9.8	9.10	9.9	12.14	9.10

retest scores, and the resulting distributions of individual change scores were examined.

The distributions of individual changes underlying the mean differences revealed four major patterns:

1. On some scales where significant increases had occurred, scores for practically all the students rose, but usually only a small amount.
2. On other scales where significant increases occurred, scores of a substantial number of students dropped, but the relatively large increases among the majority

outweighed the decreases among the contrary minority.

- On some scales where the mean scores were identical at both testings, very few students made identical scores at both testings; many scores increased substantially, and many others dropped. Though the net effect was zero, many students had changed as much as half a standard deviation or more. (See Figure 3)
- Finally, of course, on several scales where means were identical, individual scores changed little.

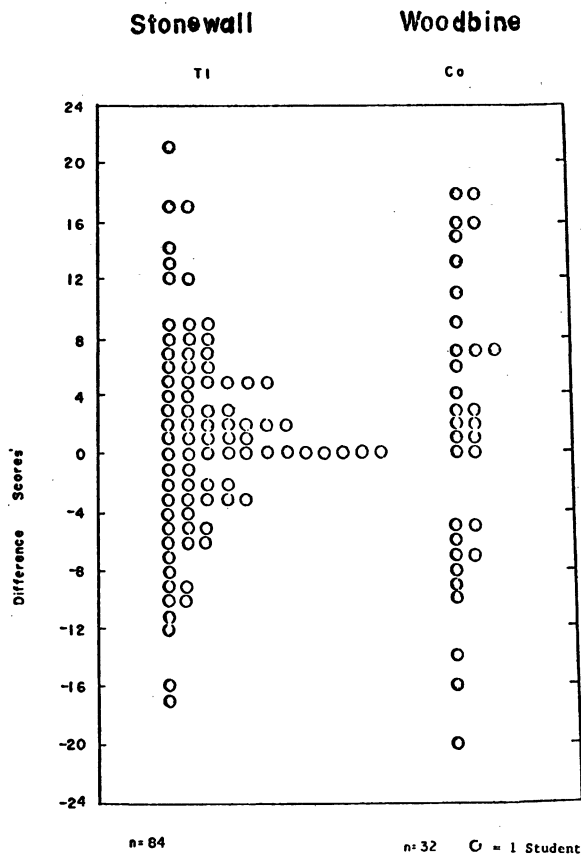


Figure 3. Distributions of Difference Scores

In effect, three different patterns of change lay behind the mean scores. First, on some scales all students changed in the same direction. Second, most students changed in the same direction but a substantial minority changed in the opposite direction. Third, most students changed in one direction or the other, but increases and decreases cancelled each other out, yielding similar mean scores.³

These exploratory studies suggested that despite the appearance of similarity suggested by mean differences, changes at one college might be quite different from those at another.

Do Similar Students at Different Colleges Change Differently?

Two studies examined change in subgroups of students who had similar OPI scores at entrance but who attended different colleges. Attention focused on the five scales which reflected the most substantial change: Autonomy, Impulse Expression, Practical Outlook, Complexity, and Estheticism. For each scale, groups of students

with similar scores at entrance were selected. Because entering students differed so widely from one college to another and because scores were relatively homogeneous within each college, the analyses were necessarily restricted to six of the twelve colleges, and even then the number of students from each college was small. Examining change at both two-year and four-year intervals further complicated matters. At both intervals students having similar scores at entrance were chosen, but different students and a slightly different group of colleges were involved.

Once the subgroups had been selected, retest means were computed for each group to see whether the extent and direction of change would once again be similar in diverse colleges. Table 4 gives the score intervals, the colleges, the mean scores, and the differences, for two- and four-year intervals.

These analyses revealed substantial differences among the colleges, both in the directions and the extent of change. Furthermore, the colleges maintained roughly similar relationships to one another on each of the scales and over the two-year and the four-year periods. Students at Kildew showed the greatest increases in autonomy, awareness of impulses and ability to express them, and tolerance of ambiguity and complexity; they also manifested the greatest decrease in drive for material success. Elder students, and--for the two-year interval--Classic students, changed in similar ways but to a lesser degree. Simon students, in contrast, consistently changed only

Table 6
Change for Similar Students at Different Colleges
(Selected OPI Scores)

College	Two-Year Change for Selected Subgroups:					Scale- and Score Intervals				
	Ethicism 52-57	Complexity 57-62	Autonomy 53-58	Impulse Expression 52-57	Practical Outlook 42-47	Ethicism 52-57	Complexity 57-62	Autonomy 53-58	Impulse Expression 52-57	Practical Outlook 42-47
Stonewall	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2
Kildew	5 55 59 4	5 60 68 8	5 56 66 10	8 55 58 3	5 44 38 -6	5 56 66 10	5 60 68 8	5 56 66 10	8 55 58 3	5 44 38 -6
Classic	5 54 59 5	5 59 57 -2	6 55 63 8	6 54 57 3	5 46 45 -1	6 55 63 8	5 59 57 -2	6 55 63 8	6 54 57 3	5 46 45 -1
Elder	14 55 58 3	10 59 57 -2	14 56 60 4	15 55 56 1	17 45 44 -1	14 56 60 4	10 59 57 -2	14 56 60 4	15 55 56 1	17 45 44 -1
Stonewall	11 55 54 -1	11 59 52 -7	10 54 50 -4	26 55 57 2	6 46 48 2	10 54 50 -4	11 59 52 -7	10 54 50 -4	26 55 57 2	6 46 48 2
Friendly	12 55 57 2	7 60 62 2	5 55 55 0	12 54 54 0	11 45 46 1	5 55 55 0	7 60 62 2	5 55 55 0	12 54 54 0	11 45 46 1
Simon	25 55 56 1	7 59 55 -4	7 54 55 1	9 54 50 -4	17 46 47 1	7 59 55 -4	7 54 55 1	9 54 50 -4	17 46 47 1	17 46 47 1
Four-Year Change for Selected Subgroups: (Same scales & scores intervals, different students)	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2	N '65 '69 X_1-X_2
Kildew	5 56 56 0	8 60 64 4	11 56 65 9	9 55 62 7	11 44 38 -6	11 56 65 9	8 60 64 4	11 56 65 9	9 55 62 7	11 44 38 -6
Elder	35 54 60 6	25 58 58 0	32 55 62 7	21 54 58 4	29 44 42 -2	32 55 62 7	25 58 58 0	32 55 62 7	21 54 58 4	29 44 42 -2
Woodbine	25 55 57 2	8 59 59 0	13 54 58 4	7 55 58 3	8 46 40 -6	13 54 58 4	8 59 59 0	13 54 58 4	7 55 58 3	8 46 40 -6
Friendly	17 54 57 3	5 60 50 -10	6 55 56 1	8 54 56 2	10 45 40 -1	6 55 56 1	5 60 50 -10	6 55 56 1	8 54 56 2	10 45 40 -1
Divinity	12 54 56 2	7 58 58 0	7 54 56 2	4 56 54 -2	9 45 43 -2	7 58 58 0	7 54 56 2	4 56 54 -2	4 56 54 -2	9 45 43 -2
Simon	20 55 60 5	4 60 56 -4	9 55 57 2	6 55 56 1	10 46 43 -3	4 60 56 -4	9 55 57 2	6 55 56 1	6 55 56 1	10 46 43 -3

Note.--The study of two-year change was carried out by Kenneth Carter for his doctoral dissertation. Though membership overlaps, the student groups differed from scale to scale.

slightly and sometimes in the opposite direction. At Stonewall, Friendly, and Divinity, the pattern of change was closer to the Simon pattern than to the Kildew, Elder, or Classic pattern. No clear patterns of change emerged for the Estheticism scale.

Perhaps these changes simply reflect regression effects for the sub-groups of students within the different score intervals. Several considerations suggest, however, that such effects could not operate with much force. Regression effects represent changes from initial responses attributable to "chance." The assumption is that extreme initial scores are most likely to have been influenced by chance errors and that later scores for the same persons are less likely to include these chance errors. But the fact is that the score intervals were not initially extreme; in only eight of the thirty scale-college comparisons do the sub-groups differ from their college means by as much as one standard deviation. Furthermore, the three colleges in which differences between subgroup means and college means are greatest show least change in the regressive direction. These considerations do not mean that regression effects were entirely absent, but they do suggest that such effects did not seriously distort the results.

These results, then, suggest (a) that the extent and directions of change for selected sub-groups of students vary from college to college, and (b) that these intercollegiate differences are consistent for both two-year and four-year change and for several different dimensions of development. Apparently a college's characteristics do make a difference to student development. Even though mean changes are similar for diverse students and diverse institutions, similar students who enter different kinds of colleges change differently.

Discussion

The varied findings indicate that most students develop along the same general lines during the college years. But they also demonstrate that for particular groups of persons at particular colleges, such development may be accelerated or retarded. The results make it clear that research concerning student development and institutional impacts must go beyond simple measures of central tendency and simple examination of net change. Averages obliterate individuals and fail to reveal the complex interactions which influence events and their developmental consequences. Both standard deviations and underlying frequency distributions are required for accurate understanding and sound judgements.

It is clear that the college student is no tabula rasa; he is no clay for the potter, no vessel to be filled, no lamp to be lighted. He's already lit. When he moves into college as a freshman he brings with him--along with his Webster's Collegiate Dictionary and his Tensor lamp--his mother, father, two older friends of the family, a girl friend, and a set of high school buddies. He also brings strengths and weaknesses, prides and prejudices, clarities and confusions, and a lot of unfinished business. The unfinished business typically includes not only improving intellectual and interpersonal

competence, but also achieving autonomy, learning better ways to manage sexual and aggressive impulses, becoming freer with diverse kinds of persons, clarifying identity, sharpening purposes and developing integrity.⁴

Most students move toward institutions whose purposes and programs fit their own interests and inclinations and whose students and faculty hold values and attitudes similar to their own. In many cases, the processes of self-selection and institutional admissions practices creates a comfortable fit between the college and the person. Though the college may no longer act in loco parentis, it does act in loco uterus, providing a warm and supportive setting which insulates students from unduly disruptive outside influences.

Under these comfortable conditions, personal development proceeds along the vectors of change set by the general cultural and genetic forces operating in our society; most students in most colleges work on the seven major areas of unfinished business mentioned above. Across the country there are a variety of student-college types; in each type these common developmental tasks are pursued in somewhat different fashion. But because the institutional differences correspond with differences among the students, the patterns of general development are about the same for the different types.

One major model for college influence, therefore, is the womb. The diverse colleges provide safe havens and proper nourishment for the diverse students in our pluralistic society. Persons who attend college become more autonomous, more flexible, more complex, less materialistic, more aware of their own emotions, and better able to express them in thought and action; more tolerant of ambiguity, less dogmatic, more intellectually curious. Persons who do not attend college change less, and sometimes even move in contrary directions. So wombs are good things. Without them, most of us would not be here. And without the protection and nourishment many colleges offer, most seniors would not have become what they are at graduation.

But there is another kind of college influence, and for it the term impact is appropriate. Every institution has two different kinds of deviants, two kinds of uncommon or atypical students. The first kind is the student whose development has not yet reached the general level of his peers and of the college; the second kind is the student whose development has gone beyond the level of the college and of the other students. Deviation can occur in many areas. A student's intellectual competence and breadth of information may be so limited that he finds it difficult to cope with the academic program. Or his competence and store of information may be so high that he gets little stimulation from classes, study requirements, and his fellow students. Some students may be more liberal than most students at his college, others may be more conservative; some may be more culturally sophisticated or less, more autonomous or more dependent.

By examining subgroups of similar students at different colleges, we were, in effect, studying persons who were deviants at some colleges but not at others. Students who belong to these subgroups, who deviate from the norms within the different

colleges, change according to the relationships between their characteristics and those of the college. These students are apparently influenced by institutional differences in general atmosphere and student characteristics, in educational practices, in student-faculty relationships, and in the nature of relationships among friends and acquaintances.⁵ For these persons, the choice of a college and the subsequent experiences may have significant consequences.

Footnotes

¹This research was undertaken in the context of the Project on Student Development In Small Colleges, supported by PHS Research Grant #MH14780-05, National Institute of Mental Health. Credit is also due the American Council on Education, Office of Research, for critical comments and secretarial assistance. Education and Identity (San Francisco: Jossey-Bass, 1969), describes the theoretical framework behind these studies and summarizes prior pertinent research.

²Although the findings reported here come

only from the Omnibus Personality Inventory, the general areas of change and the general principles suggested by these results are supported by test-retest data from other Project instruments. Some of these other results are reported in College Impacts on Political Liberalism and College Impacts on Cultural Sophistication, listed among the Project publications.

³For more detailed information, see A.W. Chickering, "FD's and SD's: Neglected Data in Institutional Research" (paper presented at the Eighth Annual Forum of the Association for Institutional Research, Detroit, 1968).

⁴For further information about these major areas of development in college, see A.W. Chickering, Education and Identity (San Francisco: Jossey-Bass, 1969).

⁵For evidence concerning these relationships see Chickering, A.W., College Experience and Student Development, paper presented at the 137th Meeting of the American Association for the Advancement of Science, December, 1970.