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ABSTRACT

Students who were candidates for teacher certification at the University of Wisconsin-Platteville were administered the Bogardus Social Distance Scale to determine the effect of a state mandated human relations course on their attitudes toward ethnic and racial groups. The scale was administered to these students and three control groups which included general underclassmen, non-education major seniors, and education major seniors. The scores of these groups were compared among the groups and also with a 1956 survey by Emory Bogardus. A high degree of agreement was found between the student samples and the Bogardus sample. Among the student samples two patterns emerged. First, mean scores declined between a sample of one underclassmen and one of non-education major seniors. Second, mean scores declined between the underclassmen sample and the human relations pretest sample, declined further between the human relations pretest and human relations posttest, but then increased between the human relations posttest and the senior education major sample. A high degree of agreement was found among the scores of all of the student samples. An analysis of variance of the means for the racial and ethnic groups included in the scale suggested that the human relations program does produce measurably lower social distances among its students. (Author/APM)

PROGRAMS FOR CHANGING ATTITUDES:

SOCIAL DISTANCE AND THE DEPARTMENT OF PUBLIC INSTRUCTION'S HUMAN RELATIONS PROGRAM

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In the Fall of 1979, I serendipitously began a project to test the effects of a class I teach on students' attitudes towards several ethnic, racial and sexual groups. This paper traces the course of that project. It is divided into several sections. I place the project within a context of the Wisconsin Department of Public Instruction's requirements for programs to increase beginning teachers' awareness of the multi-ethnic character of our society. The actions of the College of Education of the University of Wisconsin-Platteville to implement such a program are next sketched in. This is followed by a discussion of Bogardus's Social Distance Scale, data from the administration of that scale to five samples drawn among the students of the University at Platteville, and various analyses of those data.

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THE DPI HUMAN RELATIONS REQUIREMENT

In 1972 the Department of Public Instruction (DPI) of the State of Wisconsin created a new requirement for students preparing for initial certification in education (Wis. Adm. Code [1972] section PI 3.03(1)). This addition to the certification requirements, which was to take effect in 1973, stated that "Preparation in human relations, including intergroup relations, shall be included in programs for all professional school personnel required to hold an initial license. Institutions of higher education shall provide evidence that preparation in human relations, including intergroup relations, is an integral part of programs leading to the initial license..." (Wis. Adm. Code [1980] section PI 3.07(b)). The "human relations requirement" was designed to guarantee that licensed teachers have an increased understanding of the "values, life styles, and contributions of racial, cultural and economic groups in American society" and of the "forces of racism, prejudice and discrimination in American life (Wis. Adm. Code [1980] section PI 3.07(b)1.b and c). Further, the programs designed to meet the requirement were to give prospective teachers "opportunities to examine their own attitudes and feelings about issues of racism, prejudice and discrimination" which would lead to the "development of attitudes..." appropriate to teaching professionals (Wis. Adm. Code [1980] PI 3.07(b)1.d and a).

As Dr. Harold Hutcheson, then Vice-Chancellor of the University of Wisconsin-Platteville, later put it, neither the DPI nor the University "wanted to send out people who were racists." Thus while the primary focus of the "human relations requirement" was cognitive, emphasizing knowledge, study, analysis, examination, and evaluation, the requirement has always included an attitudinal, affective component. Not only were potential

teachers to understand the forces of discrimination, but they were also to "develop" their attitudes, lessening their own prejudices and increasing their acceptance of others.

THE UWP HUMAN RELATIONS PROGRAM

The faculty of the College of Education of the University of Wisconsin-Platteville (UWP) moved quickly to implement a program to meet the DPI's requirement in human relations. Prompted by Dr. Hutcheson, then also Dean of the College of Education, a plan was submitted to DPI on June 5, 1972 (Hutcheson, 1972). The UWP human relations program, which has remained largely unchanged since 1972, requires each student majoring in education to complete a package of three courses. Each student must take Teaching 322, Education in a Multicultural Society (2 credits); Sociology 323, Human Relations (3 credits); and one of the following three courses: English 303, Black Literature in America (3 credits); History 304, the Black Experience in America (2 credits); or History 322, Ethnic and Minority History (2 credits) (Undergraduate Catalog: 84).

The human relations program at UWP was approved by the DPI in April, 1974 (Rodman, 1974). It was the first in the state to gain DPI approval and remains, according to Jackie Johnson, Associate Director of Teacher Education, DPI, "one of the strongest programs being offered" (Johnson, 1980).

AN ACCIDENTAL RESEARCH PROJECT

The DPI human relations requirement has been in existence for 8 years. Programs implementing the requirement have been in existence for at least 7 years. The DPI requires each program to be evaluated and submitted to the DPI for approval. But few evaluations of these programs around the state have been reported in the scholarly literature. This paper reports on a project

to test the effect of one program on students' attitudes toward various racial, ethnic and sexual minority groups. The origins of this project are largely accidental, so I should take a moment to trace its history.

I have been teaching Sociology 323, Human Relations, at UWP since fall semester, 1977. While I have long wondered if the course had any effects on students' attitudes, I had made no attempt to measure such effects. Rather, I had relied on measures of students' cognitive and analytic skills. In the fall of 1979, I decided to use Emory Bogardus's Social Distance Scale (Bogardus, 1933) as a way of demonstrating to my students a method for measuring prejudice. At the beginning of a class early in the semester, I handed out mimeographed copies of a revised Social Distance Scale (See Figure 1, page 5), read the instructions, promised anonymity, and asked the students to fill out the scale. I gave no other description of the scale, but waited for the students to finish and return the questionnaires to me. As I collected the questionnaires, I was surprised to notice much greater variation among the student responses than I had expected. Although I was convinced that racism, sexism and ethnic prejudices remained an important problem in our society, I had assumed that upper-division university students in Wisconsin would report low social distances between themselves and various racial, ethnic and sexual groups. At the moment I saw the returned questionnaires, I decided to use the just-completed questionnaires as something more than a teaching tool. We were only about three weeks into the semester. So, I decided, I would use these data as a pre-test measure of my students and would administer the same scale at the end of the semester as a post-test. I would use the Social Distance Scale as a way to measure the effects of my course on students' attitudes towards members of various groups. Thus, I did not discuss the Bogardus scale with my students, but moved on to another topic. Later that day, I administered the scale to my other Human Relations class, with the same instructions.

Figure 1. Social Distance Scale Instrument, Revised from Krout, 1943.

Directions: Place one check to indicate the closest degree to which you would be willing to admit a member of each of the groups listed below. Make sure that your reactions are to each race or ethnic group as a whole, not to the best or worse members you may have known.

1. Close knship by marriage
2. Membership in my club
3. As neighbors on my street
4. Work beside in an office
5. Speaking aquaintance only
6. Citizenship in my country
7. As visitors to my country only
8. Exclude from my country

ETHNIC GROUP	SCORE 1	2	3	4	5	6	7	8
1. Italian								
2. Jewish								
3. Korean								
4. Canadian								
5. Chicano								
6. Indians from India								
7. Turk								
8. Polish								
9. Black								
10. Chinese								
11. German								
12. Native American Indians								
13. Czech								
14. Puerto Rican								
15. Ghanian								
16. Homosexual								
17. English								
18. Pyrenian								
19. Pakistani								
20. Russian								
21. Japanese								
22. Australian								
23. Hawaiian								
24. Greek								
25. Vietnamese								
26. Venezuelan								

MID-STREAM METHODOLOGY

Later, in my office, I thought further about my project. If there were a measurable diminution of reported social distance over the period of a semester, there were also three factors other than participation in my course that could be highly probable explanations of that reduction. First, the reduction could be a function of maturation or history. Second, the reduction could be an effect of the liberal education afforded by the university. Third, the reduction could be an effect of the liberal education afforded by the university. Third, the reduction could be produced by the general professional training offered by the College of Education. To control for these three factors, I gave the Social Distance Scale to three other samples of UWP students. For the first control group, I passed the scale out to a class in the Principles of Sociology. This group of students was predominantly (80%) freshmen and sophomores (See Table 1). I then chose two groups which were predominantly

Table 1. Summary Comparison by Academic Class Composition of Five Samples

	N Freshmen	% Freshmen	N Sophomores	% Sophomores	N Juniors	% Juniors	N Seniors	% Seniors	N Graduate	% Graduate	N No Answer	% No Answer	Mode	Median	Total N
Group 1, Principles of Sociology	18	38	20	42	2	4	3	6	1	2	4	8	So	So	48
Group 2, Psychology of Human Sexuality	–	–	–	–	1	5	21	95	–	–	–	–	Sr	Sr	22
Group 3, Education Evaluation	–	–	1	4	–	–	20	87	2	9	–	–	Sr	Sr	23
Group 4, Human Relations Pre-test	2	4	13	25	19	37	13	25	2	4	3	6	Jr	Jr	52
Group 5, Human Relations Post-test	–	–	4	7	23	40	20	35	8	14	2	3	Jr	Sr	57

Source: 1979 UWP questionnaire data.

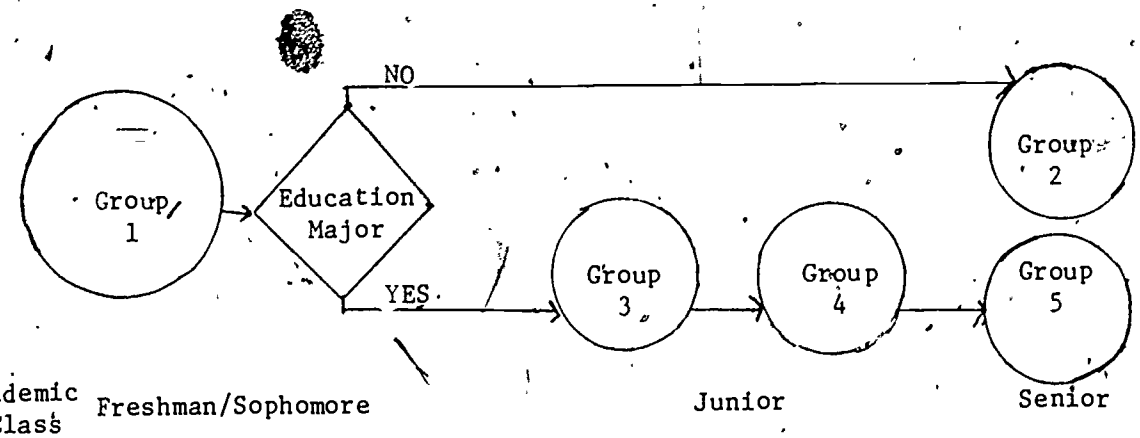
seniors. The second control group, a class in the Psychology of Human Sexuality, was widely representative of all the majors offered by the University, with an over-representation of majors in the College of Arts and Sciences. This group was 95% seniors. The third control group consisted exclusively of education majors, and was 96% seniors or graduate students. Most of the members of this class had completed the Human Relations class. The students in the two Human Relations classes were predominantly juniors (36% and 40%), with nearly equal but smaller percentages of sophomores (25% and 7%) and seniors (25% and 35%). I thus gathered data from seven samples (two sections of Human Relations, pre-test and post-test; one of Principles of Sociology; one of Psychology of Human Sexuality; one of Educational Evaluation). In the analysis of the data, I eliminated one of the pre-tests and one of the post-tests from the Human Relations sections. The pre-test and the post-test thus come from samples that approximate independence. The elimination of those two sections left five samples for the analysis. Table 1 provides a summary comparison of the final five samples.

The Social Distance Scale was administered to the three control groups within one week of the pre-test in the Human Relations classes. The post-test was gathered from the Human Relations classes during the last week of the semester.

The five samples are located at several different points in the careers of students at UWP. The sample from the Principles of Sociology class represents underclassmen, fairly early in their career, meeting their general university social science requirements. As such, these students are fairly representative of most underclassmen at the university. The large percentage of freshmen and sophomores in this sample would indicate that effects by their majors on their attitudes would be minimal. The students in the Psychology of Human Sexuality

are in the last two semesters of their undergraduate work. But like the Principles of Sociology, this class is used by most participants to fulfill their general university requirements, so includes representatives of most majors on campus. The students in Educational Evaluation are entirely education majors, at the end of their professional training in education. The students in Human Relations are generally somewhat earlier in their careers. The five samples thus provide points in a temporal and a career model. This model is depicted in Figure 2.

Figure 2. Temporal and Vocational Model of the Five Samples



Group 1: Principles of Sociology
Group 2: Psychology of Human Sexuality
Group 3: Human Relations, pre-test
Group 4: Human Relations, post-test
Group 5: Educational Evaluation

The five samples thus allow us to test several different points in this model. We can compare the underclassmen's scores with those of the non-education seniors; this comparison should indicate either the effects of maturation or history or the effects of liberal education on students' social distance scores. But there is no way to distinguish whether any change in the scores is a

product of education or of history.) We can compare the scores of the two groups of seniors to test the effects of majoring specifically in education on students' social distance scores. (This comparison also provides an indirect test of the effects of the entire human relations program on social distance.) We can compare the pre-test and post-test groups of students in the Human Relations course to indicate the effects of that course on social distance. This comparison provides one direct test of the effectiveness of UWP's human relations program.

A NOTE ON THE SOCIAL DISTANCE SCALE

The Social Distance Scale developed by Emory S. Bogardus in 1925 (Bogardus, 1925) is one of the oldest and most widely used measures of the degree of social acceptance that exists between given persons and certain social groups (See Figure 1). The scale is simple, quick and easy to administer. The scale's validity is based, first, on inter-judge agreement on the items of the scale (Bogardus, 1933); second, by its agreement with "other scales that in certain particulars are more exact" (Newcomb, 1955:158); and on its "perfect...hierarchical unidimensional set of items" required by Guttmann scale analysis (Campbell, 1952:323).

A simple, reliable method of scoring the scale is to count the numbers of the "nearest" (lowest) column that is checked. That is, if one seeks the distance quotient for a specific group, then the arithmetic mean of the total number of nearest columns that are checked by all the subjects for each race is obtained (Miller, 1977:261). This is the method I used.

The scale in this project is based on Krout's scale with eight response-categories (1943:342).

ANALYSIS OF THE DATA: 1956 and 1979

As a first step in understanding the social distance scores of my respondents,

I decided to compare their scores with those reported by Bogardus himself. In 1956, Bogardus conducted the third of a series of decennial social distance surveys (Bogardus, 1958). His 1956 sample included 2053 respondents, mostly in the 18-35 age-range from across the United States. Though his sample is not directly comparable to mine, a comparison may be illustrative. Bogardus's 1956 questionnaire listed 30 racial and ethnic groups; my questionnaire listed 26 racial, ethnic and sexual groups. Only 17 groups are on both my instrument and Bogardus's. Here, I will consider only those 17 overlapping groups. Since Bogardus does not list the frequencies nor variances for the items on his questionnaire, we can compare only the mean social distances. Nevertheless, an examination is instructive. The means for the 17 ethnic and social groups by the Bogardus sample and my five samples are given in Table 2 (Page 11).

The grand mean social distance of the 17 groups from Bogardus's 2053 respondents is 2.22. This is much lower than the grand mean social distance of these groups from the 46 UWP underclassmen; their grand mean equals 3.139. The means for the individual groups by Bogardus's respondents range from a low of 1.16 for Canadians to a high of 2.83 for Koreans. The UWP underclassmen give Germans the lowest mean (1.978) and Indians from India the highest (3.913). It appears that the students from my underclassmen sample report greater social distance in 1979 than did Bogardus's respondents in 1956. Has the level of prejudice increased in the last 23 years?

A comparison of the means of the 1956 respondents and of UWP 1979 seniors in the Psychology of Human Sexuality also gives unexpected results. The grand means social distance in 1956 (2.22) is lower than that of 1979 seniors (2.467). The results are somewhat more encouraging when the 1956 sample is compared to the senior education majors. The education majors produce a slightly lower grand mean (2.072 compared to 2.22). It is rather puzzling, though, that the students

Table 2. Mean Social Distance Scores from 17 Racial and Ethnic Groups by Bogardus's Sample (1956) and 5 UWP Samples (1979).

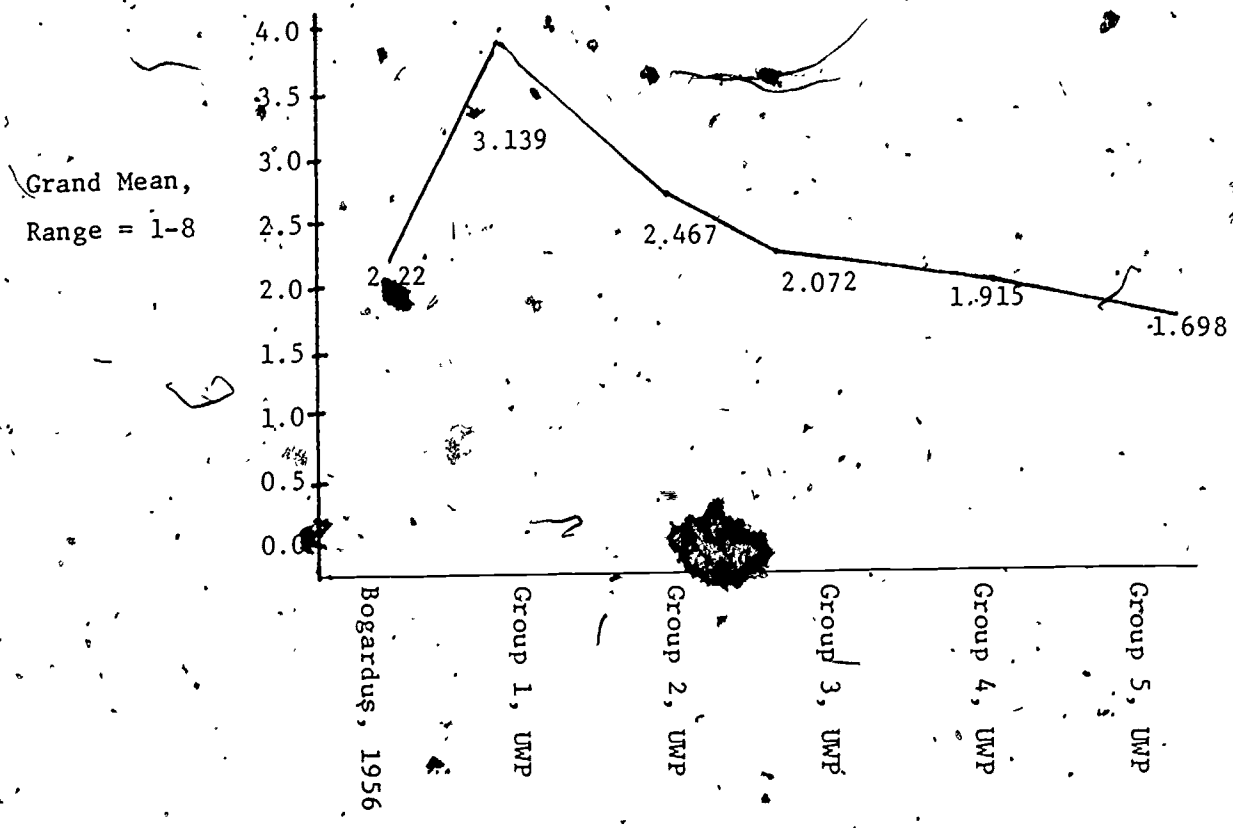
RATING GROUP / RACIAL AND ETHNIC GROUP	Bogardus 1956	Group 1 Principles of Sociology	Group 2 Psychology of Human Sexuality	Group 3 Educational Evaluation	Group 4 Human Relations Pre-test	Group 5 Human Relations Post-test
Canadians	1.16	2.369	1.773	1.227	1.440	1.160
English	1.23	2.044	1.429	1.190	1.096	1.140
Germans	1.61	1.978	1.864	1.364	1.160	1.123
Italians	1.89	2.178	2.000	1.652	1.280	1.280
Poles	2.07	3.877	3.708	4.091	1.150	1.403
Greeks	2.09	2.581	2.091	1.870	1.551	1.828
Jews	2.15	3.222	2.318	2.087	2.280	1.754
Czechs	2.22	2.867	2.136	1.864	1.804	1.661
Japanese	2.34	3.432	2.636	1.667	2.300	1.800
Native Americans	2.35	2.681	2.364	1.652	--*	1.526
Chicanos	2.51	3.756	3.045	2.565	2.306	2.018
Turks	2.52	4.000	3.091	2.652	2.400	2.250
Russians	2.56	3.795	2.681	2.348	2.392	2.035
Chinese	2.68	3.478	2.714	2.043	2.417	1.982
Blacks	2.74	3.378	2.409	2.130	2.200	1.911
Indians (India)	2.80	3.913	3.091	2.652	2.408	2.070
Koreans	2.83	3.818	2.590	2.174	2.460	1.927
Grand Mean	2.222	3.139	2.467	2.072	1.915	1.698
N	2053	46	22	23	52	57

Source: Bogardus (1958:135); 1979 UWP questionnaire data.

* The ethnic group, Native Americans, was omitted from the pre-test questionnaire.

entering Human Relations have a lower grand mean not only than the 1956 sample (1.915 versus 2.22) but also lower than the senior education majors (1.915 versus 2.072). The lowest grand mean of all is produced by the exiting Human Relations students (1.698 versus Bogardus's 2.22). These comparisons are illustrated graphically in Figure 3.

Figure 3. Comparison of the Grand Mean Social Distance Scores Among Bogardus's 1956 Sample and Five 1979 UWP Samples



Group 1, Principles of Sociology
Group 2, Psychology of Human Sexuality
Group 3, Educational Evaluation
Group 4, Human Relations, Pre-test
Group 5, Human Relations, Post-test

Source: Bogardus, 1958; Table 2.

Another point to consider in the comparison of the 1956 Bogardus sample and the five 1979 UWP samples is the relative ranking of the various racial and ethnic groups. In the years since 1956, some minority groups have been more demonstrative, vocal and active than others of the groups listed. Also, during students' careers at the university, they receive varied information about and exposure to the several groups. One might ask if these selective factors have altered the rankings of the ethnic and racial groups in terms of their relative social distance. Table 3 presents the mean ranks for the 17 groups under consideration by the Bogardus respondents and by the UWP respondents.

Table 3. Rank of the Means for 17 Ethnic and Racial Groups by Bogardus's 1956 Respondents and 1979 UWP Respondents

Ethnic or Racial Group	Bogardus, 1956	Group 1, UWP Principles of Sociology	Group 2, UWP Psychology of Human Sexuality	Group 3, UWP Educational Evaluation	Group 4, UWP Human Relations, Pre-test	Group 5, UWP Human Relations Post-test
Canadians	1	4	2	2	5	3
English	2	2	1	1	1	2
Germans	3	1	3	3	3	1
Italians	4	3	4	4	4	4
Poles	5	15	17	17	2	5
Greeks	6	5	5	8	7	10
Jews	7	8	7	10	10	8
Czechs	8	7	6	7	8	7
Japanese	9	10	11	6	11	9
Native Americans	10	6	8	5	6	6
Chicanos	11	12	14	14	12	14
Turks	12	17	16	16	14	17
Russians	13	13	12	13	13	15
Chinese	14	11	13	9	16	13
Blacks	15	9	9	11	9	11
Indians (India)	16	16	15	15	15	16
Koreans	17	14	10	12	17	12
N =	2053	46	22	23	52	57

Source: Bogardus, 1958; 1979 UWP questionnaire data.

Kendall's coefficient of concordance, symbolized by W, is a method of measuring the extent to which there is agreement between the rankings of cases on a number of variables (Downey, 1975:274ff). It is a measure of association. The higher the value of W (it ranges between 0.00 and 1.00), the greater the agreement on the rankings of the 17 racial and ethnic groups by the groups of respondents. The formula for W is

$$W = \frac{S}{(1/12)(k^2)(N^3-N)}$$

where S= sum of the squares of differences between observed and expected rank sums

k= number of variables ranked

N= number of cases in the sample

Table 4 presents the computation for Kendall's W.

$$W = \frac{11690}{(1/12)(36)(4896)} = \frac{11690}{14688} = 0.80$$

W= .80 represents a fairly large agreement. We can test whether W is statistically significant by transforming W into a chi-squared value with d.f.=N-1, wherein:

$$x^2 = \frac{S}{(1/12)\ kN(N+1)}$$

To compute,

$$x^2 = \frac{11690}{(1/12)(6,17)(17+1)} = \frac{11690}{153} = 76.41$$

A chi-squared value of 76.41 with 16 degrees of freedom is statistically significant at the 0.001 level. That is to say, the relative rankings of the 17 ethnic and racial groups has remained fairly consistent over the last 23 years. While there have been minor shifts within the rankings, the rankings have remained stable over time.

Table 4. Computation of Kendall's W for the Mean Rankings of 17 Ethnic and Racial Groups by Bogardus's 1956 Respondents and 1979 UWP Respondents.

Ethnic/Racial Group	Observed Rank Sum	Expected Rank Sum	Difference	Squared Difference
Canadians	17	54	-33	1089
English	9	54	-45	2025
Germans	14	54	-40	1600
Italians	23	54	-31	961
Poles	61	54	+7	49
Greeks	41	54	-13	169
Jews	50	54	-4	16
Czechs	43	54	-11	121
Japanese	56	54	+2	4
Native Americans	41	54	-13	169
Chicanos	77	54	+23	529
Turks	92	54	+38	1444
Russians	79	54	+25	625
Chinese	76	54	+22	484
Blacks	64	54	+10	100
Indians (India)	93	54	+39	1521
Koreans	82	54	+28	784
	918			11690

Source: Bogardus, 1958; 1979 UWP questionnaire data; Downey, 1975.

My analysis of the comparisons between Bogardus's 1956 data and my 1979 data thus suggests several conclusions. First, it appears that the social distance from several racial and ethnic groups expressed by my underclassmen respondents is even greater than that of Bogardus's respondents. Second, the non-education majors at UWP reveal less social distance from those groups than do the underclassmen. Perhaps a liberal education reduces the forces of prejudice. Third, the senior education majors at UWP report less social distance than the non-education major seniors and quite a bit less than the underclassmen, and even less social distance than do Bogardus's respondents. Perhaps the professional education program is even more effective in diminishing social distance than is the general university education. Fourth, both the pre-test andthe post-test Human Relations students report the lowest social distance of all the groups measured, with the post-test students reporting the least social distance of all. Perhaps UWP's human relations program is effective in reducing prejudice. But I still remain puzzled by the increased social distance evidenced between the temporally earlier Human Relations post-test respondents and the later Educational Evaluation respondents.

FURTHER ANALYSIS OF THE DATA: THE 1979 UWP SAMPLES

When we narrow our attention to the five 1979 UWP samples, we discover that our scope has widened to include a larger number of racial and ethnic groups and to include more powerful statistical tools. As you may have noted when you looked at Figure 1, my Social Distance Scale instrument asked the respondents to rate 26 different racial, ethnic and sexual groups. I want to hold two of those groups (Pyrenian [a fictitious group] and Homosexual) for later examination. Now; I shall be concerned with 24 groups instead of the 17 previously mentioned groups which overlap with Bogardus's groups. The groups and their mean rankings are listed in Table 5 (page 17).

Table 5. Mean Social Distance Ratings of 24 Racial and Ethnic Groups by 5 UWP Samples; N=200

Racial or Ethnic Group	Group 1 Principles of Sociology	Group 2 Psych. of Human Sexuality	Group 3 Educational Evaluation	Group 4 Human Rel. Pre-test	Group 5 Human Rel. Post-test
Italian	2.178	2.000	1.652	1.280	1.280
Jewish	3.222	2.318	2.087	2.280	1.754
Koreans	3.818	2.590	2.174	2.460	1.927
Canadians	2.369	1.773	1.227	1.440	1.160
Chicanos	3.756	3.045	2.565	2.306	2.018
Indians (India)	3.913	3.091	2.652	2.408	2.070
Turks	4.000	3.091	2.652	2.400	2.250
Poles	3.877	3.708	4.091	1.150	1.403
Blacks	3.378	2.409	2.130	2.200	1.911
Chinese	3.478	2.714	2.043	2.417	1.982
Germans	1.978	1.864	1.364	1.160	1.123
Native Americans	2.681	2.364	1.652	-	1.526
Czechs	2.867	2.136	1.864	1.804	1.661
Puerto Ricans	3.489	2.619	2.391	2.120	1.875
Ghanaian	3.932	3.100	2.818	2.840	2.059
English	2.044	1.429	1.190	1.096	1.140
Pakistani	3.818	3.363	2.609	2.700	2.127
Russians	3.795	2.681	2.348	2.392	2.035
Japanese	3.432	2.636	1.667	2.300	1.800
Australians	2.093	1.682	1.773	1.306	1.426
Hawaiians	2.047	1.727	1.435	1.509	1.321
Greeks	2.581	2.091	1.870	1.551	1.828
Vietnamese	4.837	6.357	5.158	3.929	1.889
Venezuelan	3.023	2.591	2.478	2.039	1.821
$\bar{x}$ =	3.192	2.641	2.245	2.047	1.724
N =	46	22	23	52	57

Source: 1979 UWP questionnaire data.

We notice immediately that the relationships among the five samples when rating 24 instead of 17 ethnic and racial groups is unchanged. The underclassmen (group 1) have the highest mean social distance (3.192), followed, in order, by the non-education major seniors (2.641), the education major seniors (2.245), the Human Relations pre-test (2.047), and the Human Relations post-test (1.724).

With the addition of seven more ethnic and racial groups, the ranges of the mean social distance scores increase. For the underclassmen, the highest rated group, the Vietnamese, have a mean score of 4.837. The Vietnamese are also the highest rated group for the non-education major seniors (at 6.357, much higher than for the underclassmen); for the education major seniors (5.158); and for the Human Relations pre-test (3.929); for the Human Relations post-test it is the Turks (2.250). Notice as well that the highest mean social distance score for the Human Relations post-test group is lower than the grand mean score for the underclassmen or for the non-education major seniors. Again, at first glance, it appears that the Human Relations program is reducing students' social distance from others.

Table 6 (page 19) presents the rankings of the mean social distance scores for the 24 ethnic and racial groups by the five UWP samples. Again, Kendall's W can be used to measure the degree of agreement among the five samples in their rankings of the 24 racial and ethnic groups.

$$W = \frac{S}{(1/12)(k^2)(N^3-N)}$$

$$W = \frac{26540.2}{(1/12)(5^2)(24^3-24)} = \frac{26540.2}{28750.0} = 0.92$$

W = .92 represents a very large degree of agreement. Again, we can test whether W is statistically significant by transforming W into a chi-squared value.

Table 6. Ranks of the Means for 24 Ethnic and Racial Groups by 5 UWP Samples; N=200.

Ethnic or Racial Groups	Group 1 Principles of Sociology	Group 2 Psychology of Human Sexuality	Group 3 Educational Evaluation	Group 4 Human Relations Pre-test	Group 5 Human Relations Post-test	Observed Sum of Ranks	Squared Difference Between Observed and Expected Sums of Ranks
Germans	1	5	3	3	1	13	2361.9
English	2	1	1	1	2	7	2981.2
Hawaiians	3	3	4	7	5	2	3552.2
Australians	4	2	8	5	7	26	1267.4
Italians	5	6	5	4	4	24	1413.8
Canadians	6	4	2	6	3	21	1648.4
Greeks	7	7	10	9	13	46	243.4
Native Americans	8	10	6	8	8	40	466.6
Czechs	9	8	9	10	9	45	275.6
Venezuelans	10	13	17	11	12	63	1.9
Jews	11	9	12	14	10	56	31.4
Blacks	12	11	13	13	16	65	11.6
Japanese	13	15	7	15	11	61	0.4
Chinese	14	17	11	20	18	80	338.6
Puerto Ricans	15	14	16	12	14	71	88.4
Chicanos	16	18	18	16	19	87	645.2
Russians	17	16	15	17	20	85	547.6
Koreans	18	12	14	21	17	82	416.2
Pakistani	19	22	19	22	23	105	1883.6
Poles	20	23	23	2	6	74	153.8
Indians (India)	21	19	20	19	22	101	1552.4
Ghanaians	22	21	22	23	21	109	2246.8
Turks	23	20	21	18	24	106	1971.4
Vietnamese	24	24	24	24	15	111	2440.4
N=	46	22	23	52	57	Σ= 1480	Σ= 26540.2

Expected rank sum = mean rank sum = 1480/24 = 61.6

$$x^2 = \frac{S}{(1/12)kN(N+1)} = \frac{26540.2}{(1/12)(5.24)(24+1)} = \frac{26540.2}{250} = 106.16$$

A chi-squared value of 106.16 with 24 degrees of freedom is statistically significant at the 0.001 level. More simply stated, the relative rankings of the social distance means among the five samples is very consistent. While the mean social distance values may be reduced by the human relations program, the relative statuses of these ethnic and racial groups remains unchanged.

So far, though, the most important methodological question about my data has been unanswered as one inspects the mean social distance scores for the 24 ethnic and racial groups. Those means appear to be quite different. It may appear obvious that, for example, the reduction of the mean for the Germans from 1.978 (the Principles of Sociology group) down to 1.864, then to 1.364, then to 1.160 and finally to 1.123 (the Human Relations post-test group) is a large and significant diminution. But is the reduction significant, or could it have been produced simply by sampling error? A statistical test to determine whether the reduction is a "real" one or arises from error is the analysis of variance. The general method of analysis of variance is to test whether the means of several samples come from the same population. If the means do so, then one cannot conclude that the means are measuring any real change, but rather reflect random error.

Table 7 (page 21) lists the ethnic and racial groups, the distribution of F from a statistical table (Loether and McTavish, 1976:601), computed F-ratios for each ethnic or racial group, a decision about the significance of the computed F-ratio, and levels of significance. As we can see from Table 7, the computed F-ratios are greater than the Table F values at least at the 0.05 level of significance for the five means for each of the ethnic or racial groups, except for two (Australian and Hawaiian). Three of the computed F-ratios are significant only at the .05 level, another three are significant at the .01 level, while

Table 7. F-Ratios for the Means for Each Ethnic and Racial Group for Five Samples, UWP, 1979; Total N=200.

Ethnic or Racial Group	F-Ratio, Table 4,∞	F-ratio computed	Significant?	Level of Significance
Italians	3.32	4.126	Yes	.01
Jews	4.62	5.23	Yes	.001
Koreans	4.62	7.969	Yes	.001
Canadians	4.62	4.842	Yes	.001
Chicanos	4.62	7.023	Yes	.001
Indians (India)	4.62	7.656	Yes	.001
Turks	4.62	5.517	Yes	.001
Poles	2.45	3.294	Yes	.05
Blacks	4.62	7.376	Yes	.001
Chinese	4.62	5.908	Yes	.001
Germans	4.62	4.998	Yes	.001
Native Americans	5.42*	6.215	Yes	.001
Czechs	3.32	4.068	Yes	.01
Puerto Ricans	4.62	6.622	Yes	.001
Ghanaians	4.62	5.638	Yes	.001
English	4.62	6.057	Yes	.001
Pakistani	4.62	5.165	Yes	.001
Russians	3.32	4.502	Yes	.01
Japanese	4.62	7.052	Yes	.001
Australians	2.37	2.124	No	.05
Hawaiians	2.37	2.206	No	.05
Greeks	2.37	2.540	Yes	.05
Vietnamese	4.62	5.873	Yes	.001
Venezuelans	2.37	3.189	Yes	.05

* F-ratio table value at 3,∞.

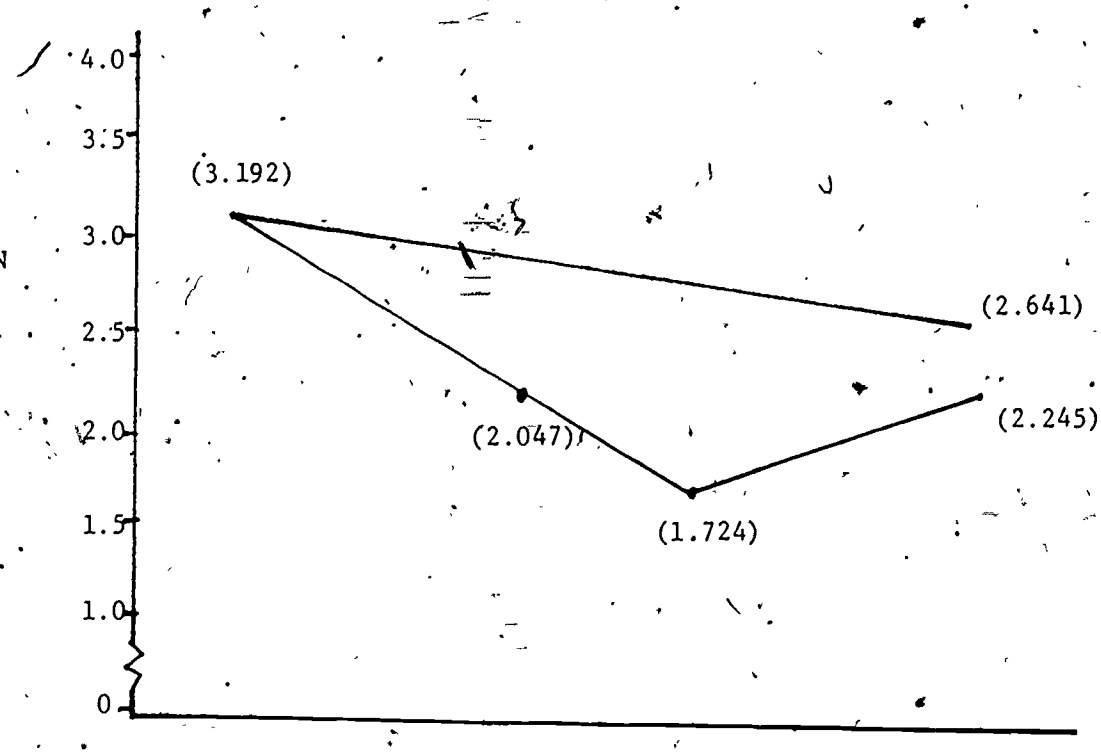
Source: Loether and McTavish, 1976:601; 1979 UWP questionnaire data.

16 of the 24 F-ratios are significant at the .001 level.

This analysis of variance supports a conclusion that the means of the social distance scores do reflect a reduction of the social distance among members of our samples as they progress through the human relations program at UWP. Whether inadvertently or by plan, students who graduate from the College of Education at UWP report significantly lower social distance scores than graduates in other Colleges, as well as much lower scores than underclassmen at UWP. When one considers that the social distance scores of students diminish between entering and exiting Human Relations, one may have confidence that participation in that class does result in reported lower social distance, and, by implication, in a lesser degree of prejudice.

We can illustrate the changes in the social distance scores of students as they progress through their careers at UWP. (See Figure 4, page 23). As Figure 4 shows, there is a decline in the social distance scores of non-education major students as they move from underclassmen to senior class status. The reduction in the scores for these students (from 3.192 to 2.641) is not great, a difference of 0.551; but it is in the direction of lesser expressions of prejudice. The difference in the scores of underclassmen and education major seniors is greater (from 3.192 to 2.245, a difference of 0.7470, but the difference between the mean scores is not large. The change between the scores of underclassmen and the Human Relations post-test group is far greater than either of those previously discussed (from 3.192 to 1.724, a difference of 1.468). This change between the underclassmen and the Human Relations post-test is almost three times as great as that between the underclassmen and the non-education major seniors (1.468 versus 0.551) and almost twice as great as the difference between underclassmen and education major seniors (1.468 versus 0.747). The effectiveness of the Human Relations course in changing expressions of prejudice clearly seems to be greater than that of the general university

Figure 4. Grand Mean Social Distance Ratings of 24 Racial and Ethnic Groups by 5 UWP Samples, Plotted on Temporal and Vocational Model of the Five Samples



Sample: Group 1 Group 4 Group 5 Group 2/Group 3

Academic Class: Underclassmen Juniors / Seniors Seniors

Group 1: Principles of Sociology, N=46
Group 2: Psychology of Human Sexuality, N=22
Group 3: Educational Evaluation, N=23
Group 4: Human Relations Pre-Test, N=52
Group 5: Human Relations Post-Test, N=57

Source: Figure 2 ; Table 5

education. I am still at a loss to explain the rise in the social distance scores after students exit from the Human Relations course.

Two final notes are in order. First, the means for one group on the Social Distance Scale may indicate that the reported reduction in prejudice on the part of our students is generalizable beyond the specific racial and ethnic groups considered in our human relations classes. One of the listed groups is the Pyrenians. As far as I know, the Pyrenians are non-existent. Nevertheless, the underclassmen (or at least 43 of the 46 respondents) rated them as well as the other groups. The mean social distance score for the Pyrenians by the underclassmen equals 3.884, above the grand mean of 3.192. The Pyrenians are ranked with the Indians (India), at 3.913, the Koreans, at 3.818, and others. Yet the Pyrenian mean scores decline parallel to those of other groups. The difference in the means for the Pyrenians produces a F-ratio of 5.37, which is significant at the .001 level. This pattern may indicate response set among the respondents, or it may point to a general decline in prejudice among the respondents. Either way, the respondents report lower social distance.

Second, a disturbing note. Homosexuals were included on the Social Distance Scale. For all five UWP samples, the mean social distance score for Homosexuals was the highest for all ethnic, racial and sexual groups (see Table 8). But, counter to the trend for other ethnic and social groups, the mean score for

Table 8. Mean Social Distance Scores for Homosexuals, Five UWP Samples; N-195

	Group 1 Principles of Sociology	Group 2 Psychology of Human Sexuality	Group 3 Educational Evaluation	Group 4 Human Relations Pre-test	Group 5 Human Relations Post-test	F-Ratio
Mean Score	4.860	3.373	5.391	4.404	3.018	6.775, sig. at .001

the education major seniors (5.391) is far higher than for any other sample. The increase between the Human Relations post-test (3.018) and the education major seniors equals 2.373, a very large increase. I am not able to guess the source of this hemophobia, but it is a matter of some concern. Nevertheless, the analysis of variance of the mean scores for Homosexuals yields an F-ratio of 6.775, which is significant at the .001 level.

CONCLUSIONS

UWP is now in its seventh year of compliance with the DPI human relations requirement. Its program, consisting of three different courses, is designed to make a serious effort at the reduction of prejudice among its candidates for teacher certification. The students in one of those courses composed the base samples for this project. A version of the Social Distance Scale was administered to those two groups of students and to three control groups. The three control groups consisted of one class of general underclassmen, one class of non-education major seniors, and one of education major seniors. The scores of these five groups were compared among the groups and also with a 1956 survey by Emory Bogardus. The mean scores for 17 ethnic and racial groups by 1979 UWP underclassmen were higher than those by Bogardus's 1956 national sample. A high degree of agreement on the rankings of the 17 groups between the five UWP samples and the Bogardus sample was found ($W=.80$, $x^2=76.41$, significant at the .001 level).

When the analysis focused only on the UWP samples, the mean scores were found to have two patterns. First, the mean scores declined between a sample of general underclassmen and one of non-education major seniors. Second, the mean scores declined between the underclassmen sample and the Human Relations pre-test sample, then declined further between the Human Relations pre-test and the Human Relations post-test, but then increased between the Human Relations post-test and the senior education-major sample. No satisfactory

explanation for this last increase was discovered. There was a very high degree of agreement among the scores of the five UWP samples (W=.92, x^2=106.16, significant at the .001 level). An analysis of variance of the 24 sets of means for racial and ethnic groups produced F-ratios significant at the .05 or less level of significance for 22 of the groups. Significant F-ratios were also produced for the five mean scores for a non-existent ethnic group (Pyrenians) and for a sexual group (Homosexuals).

These analyses of variance suggest that the UWP human relations program does produce measurably lower social distances among its students. The particular effects of the Human Relations class in lowering social distance seem clear.

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