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Development of an Instrument to Measure University Students' Social Ties and Social Distance with a Particular Focus on Racial and Ethnic Diversity

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Development of an Instrument to Measure University Students' Social Ties and
Social Distance with a Particular Focus on Racial and Ethnic Diversity¹

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Abstract

As university campuses become more racially and ethnically diverse, the opportunities for students to create and maintain friendships with individuals whose experiences and cultures differ from their own increases. The level of comfort an individual has toward those of a different race or ethnicity could influence how they meet, interact with and maintain a diverse group of friends. A student's perception of diversity will not only influence the social ties and social distance they have within their circle of friends throughout their college years but may also influence later life opportunities such as job searches, job tasks and financial opportunities. A survey designed to measure students' social ties and social distance was administered to one hundred eighty-two university students. The statistical analysis reveals that students who are more comfortable with people from a different race or ethnicity are more likely to interact with diverse groups of people. Preliminary findings also suggest that students are more likely to interact with diverse groups of people in the classroom than in purely social situations. These findings have implications with regard to how communities, companies and schools create interactions that cultivate meaningful and long-lasting relationships among diverse groups.

I. Introduction

The state of Connecticut has budgeted over \$103 million for magnet schools for the 2008 fiscal year. Connecticut's magnet schools were created primarily in response to a State Supreme Court ruling which required the State to reduce de facto segregation in Hartford and the surrounding towns (Sheff v. O'Neill, 1996). While pulling students from various towns may create a diverse student population, relationships between students from these diverse backgrounds may not happen simply because they are sitting next to one another in a class. In order to create and maintain these relationships both parties must be willing to interact with people that are a different race or ethnicity than themselves. Even then a relationship can be formed that is perfunctory and distant or intimate and strong. Understanding social distance and its effects on relationships and interactions is an important component to education in general but to magnet schools in

Connecticut specifically. Knowing how to create an environment that ameliorates distance between groups and nurtures strong social ties is a key component to reducing the racial, ethnic and economic isolation in Connecticut's cities.

The concept of social distance, introduced by Emil Bogardus (1925, 1933), was initially developed to measure native-born white Americans' attitudes of various racial and ethnic groups. Since then the Bogardus Scale has been widely used to measure racial attitudes within and between various racial and ethnic groups and social distance refers to the degree to which people can understand and be comfortable with individuals from different racial, ethnic and cultural backgrounds (Parillo and Donoghue, 2005; Owen, et. al., 1977). It is often the case that the reserve and empathy people feel towards an individual who is "different" from them involves a sense of superiority which results in vertical social distance - one cultural group believes they are superior to another cultural racial group and acts accordingly (Komorosvsky, 1964). Conversely, horizontal social distance occurs where this is distance or a lack of understanding between groups that is not influenced by superiority or inferiority. This lack of understanding can be attributed to socially engrained racial attitudes as much as it is a result of access to different and diverse cultural and ethnic groups (Bobo and Hutchings, 1996). It is this access or lack thereof that brings to mind the influence social distance and social ties may have on one another.

Social distance is the measure of comfort an individual has with a person of a different cultural group. Initially the study was designed on a scale of intimacy where one end represented marriage to an individual of a different racial or ethnic group and therefore complete comfort with diverse cultures (Bogardus 1925, 1933). This level of

comfort could also be viewed as a willingness to interact with individuals from diverse racial and ethnic backgrounds. It is this willingness that could result in a diverse group of acquaintances, friends and colleagues and influence an individual's social ties.

Social ties refer to the relationships individuals have with one another and are categorized as either weak or strong (Granovetter 1973, 1982; Wasserman & Faust 1994.) Strong ties are more likely to occur within the same social circles and studies have shown that there is a high correlation between redundancy and strong ties (Hanson, 1994). Past studies have shown that relationships where communication between the individuals occurs infrequently AND the relationship bridges the individuals' social circles are often the most utilized and effective when it comes to events such as job searches/hiring, communicating information and innovative job tasks. These ties are known as weak ties (Haythornwaite, 2005).

Examining social ties in conjunction with social distance is a currently understudied area of sociology, business and education. Through a literature search no articles surfaced that detailed a study where these constructs were measured simultaneously in order to examine the impact and role of comfort and understanding of other racial and cultural groups and the representation of various cultural groups in an individual's social circle. It is posited that those individuals who exhibit strong social distance will have many strong ties (reciprocal relationships with people in their same racial or ethnic group) and few, if any, diverse weak ties. For those who score high on the social distance scale both their strong and weak ties would be ethnically and racially diverse. The survey in this study is designed to test university students' social ties and social distance with a particular focus on the racial and ethnic diversity of their social

ties. It is hypothesized that the two constructs will be positively correlated which would indicate that those students who are comfortable and open to students of different races and ethnicities would have more culturally diverse social ties.

II. Methodology

Based on a thorough literature review, twenty-eight items were generated for content validation. A panel of five experts was given the construct definitions, the items, a validation table and four open-ended questions. An analysis of these results was used to refine the instrument prior to gathering data for the validation study.

A. Item Generation

Twenty-eight items were initially generated based on a thorough literature review. It was at this stage that the instrument was hypothesized to have two factors: Social Ties and Social Distance (see Table 1).

Social Ties	The strength of a tie is a combination of the amount of time, emotional intensity, the intimacy (mutual confiding) and reciprocal services which characterize the tie. Each of these is somewhat independent of the other but obviously highly correlated. (Granovetter, 1973)
Social Distance	Understanding that exists and/or reserve in social interactions resulting from cultural, ethnic or racial differences.

Based on these construct definitions sixteen items were written for the Social Distance and twelve for the Social Ties scale. The items were written to investigate the respondent's levels of comfort with persons of a different race or ethnicity than their own and the frequency and type of interactions the respondent had with a diverse population if at all. The intent was to score the person's comfort with different races and ethnicities

and examine its effect, if any, on their strong and weak social ties represented by the diversity of their friends.

B. Process of Content Validation

The expert panel was asked to identify each item as belonging to Social Ties, Social Distance or No Category. They were then asked to rate their level of confidence (Not, Somewhat, Completely) in regard to the category placement and then indicate whether they felt the item was Not Relevant, Moderately Relevant or Highly Relevant. These determinations were designed to assess whether the item represented the construct it was written to as well as its importance to the construct in general. The relevance column was an indicator of the item's ability to provide pertinent and useful information about the intended construct. In calculating the results, an item that was scored as not relevant by any of the five experts was highlighted as a potential discarded item.

In analyzing the construct validation responses, any item whose construct placement was highly split, no more than three respondents in any one category, was highlighted and subject to further review. These items also tended to receive split scores on the Not Confident and Somewhat Confident rating scale. Additionally, any item whose confidence ratings section was highly split, no greater than three respondents in any category, was also highlighted for review. Ultimately, items whose construct ratings were highly split and whose confidence ratings were low and/or highly split were deleted from the survey. Analysis of the scores for the twenty-eight initial items ultimately resulted in seven item deletions, two item revisions and three item additions (see Appendix C). The final survey instrument has twenty-four items and three response

scales. The first is based on the 7-point Likert scale, ranging from 1 (very uncomfortable) to 7 (very comfortable) and the second two response scales are based on a 5-point scale indicating number and frequency, ranging from 1 (none, never) to 5 (7 or more, daily).

C. Sample Description

A sample of undergraduate and graduate students from the University of Connecticut participated in this study. The participants were approached on campus in addition to the survey being sent to the School of Education's undergraduate and graduate listserv. The sample consisted of 182 students, 24% of which were male and 76% female. One respondent chose not to identify ethnicity but of the remaining respondents, 75% self-nominated as Caucasian, 7% African American, 7% Hispanic, 6% Asian American and 4% Other. No respondents identified themselves as Native American.

III. Factor Analysis

A. Factor Extraction

Descriptive statistics were first examined to determine whether the relationships among the variables were strong enough to warrant factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = 0.908 and the Bartlett's Test of Sphericity was statistically significant. The Chi Square = 3712.523, $p < 0.0001$ further indicates that the relationship among the variables is strong enough to run a factor analysis. The factor analysis was run using an oblique rotation as the factors are not assumed to be independent of one another. The Measure of Sampling Adequacy (MSA)

of the Anti-Image Matrix ranged from 0.72 (“middling”) to 0.95 (“marvelous”) indicating the items were highly correlated.

Principal Axis Factoring (PAF) was used for factor analysis with an oblique rotation method as the instrument’s factors were written to correlate with each other. The factor analysis yielded five factors with initial eigenvalues >1 and three extracted factors with eigenvalues >1 and an overall variance explained of 63.1%. This factor extraction along with the Parallel Analysis and an examination of the Scree plot suggest that the instrument is measuring three factors. Upon examination of the initial Pattern Matrix, two items were deleted based on multi-dimensionality (0.36, 0.41) and multiple low loadings (loading on all five factors, no value > 0.30). The deletion of these two items resulted in only four initial eigenvalues >1 and four extracted factors. Additionally, one factor had only two items loading on that factor which is too few to fully define a factor and though they were strong items, the answers did not provide strong inferential value to social ties or social distance.

The pattern matrix shown in Table 2 is a simple structure with the exception of one item which loaded on factor two (0.38) and factor three (0.25). This item will be retained and assigned to factor 2 until the item can be revised. This decision was made in correspondence with the importance of respondent’s delineating levels of friendships, in this case friend and acquaintance. This decision will receive more attention in the discussion section. The item loadings range from 0.45 to 0.97 which are considered strong. Factor 1, Social Distance, and Factor 2, Social Ties, have the highest overall loadings of the three factors and were the initial hypothesized factors. After examining the remaining items, the third factor measures the amount and type of interaction the

respondent has with people of a different race or ethnicity than their own and was subsequently labeled “Interaction” (see Table 4). Though the item loadings on the Interaction factor are weaker than the other two, the information gathered regarding how often the respondent interacts with people of a different race or ethnicity and in what capacity is important when attempting to measure weak and strong social ties.

Table 2. Pattern Matrix

	Factor		
	1	2	3
Was your co-worker	0.974		
Was your teacher	0.964		
Moved in to your neighborhood	0.958		
Repaired your car	0.956		
Was your boss	0.936		
Invited you to their home	0.922		
Were to become president	0.902		
Repaired your computer	0.879		
Asked you on a date	0.763		
How many of these people (of a different race or ethnicity than yours) do you consider a "friend"?		0.882	
How many friends do you have that are of a different race or ethnicity than your own?		0.831	
How many cell phone numbers do you have for people of a different race or ethnicity than yours?		0.830	
How many of these people (of a different race or ethnicity than yours) are in your close circle of friends?		0.799	
How many email addresses do you have for people of a different race or ethnicity than yours?		0.719	
How many of these people (of a different race or ethnicity than yours) do you consider an "acquaintance"?		0.376	0.250
How often do you see this person/these people (of a different race or ethnicity than yours)?			0.908

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How many of these people (of a different race or ethnicity than yours) are in your class(es)?			0.504
How often do you see this person/these people (of a different race or ethnicity than yours) in purely social situations?			0.504
Do you work with this person/these people (of a different race or ethnicity than yours) in class?			0.460
How many of these people (of a different race or ethnicity than yours) are a co-worker?			0.449

Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 4. Structure Matrix

	Factor		
	1	2	3
Was your teacher	.974	.309	.352
Was your co-worker	.970	.271	.322
Was your boss	.960	.345	.374
Invited you to their home	.941	.345	.338
Moved in to your neighborhood	.940	.276	.242
Repaired your car	.921	.185	.238
Were to become president	.905	.285	.300
Repaired your computer	.861	.208	.253
Asked you on a date	.810	.400	.334
How many of these people (of a different race or ethnicity than yours) do you consider a "friend"?	.265	.845	.487
How many cell phone numbers do you have for people of a different race or ethnicity than yours?	.250	.843	.540
How many friends do you have that are of a different race or ethnicity than your own?	.317	.838	.516
How many of these people (of a different race or ethnicity than yours) are in your close circle of friends?	.260	.825	.539
How many email addresses do you have for people of a different race or ethnicity than yours?	.238	.773	.536

How many of these people (of a different race or ethnicity than yours) do you consider an "acquaintance"?	.238	.544	.497
How often do you see this person/these people (of a different race or ethnicity than yours)?	.227	.422	.816
How often do you see this person/these people (of a different race or ethnicity than yours) in purely social situations?	.236	.606	.684
How many of these people (of a different race or ethnicity than yours) are a co-worker?	.232	.463	.568
Do you work with this person/these people (of a different race or ethnicity than yours) in class?	.216	.424	.549
How many of these people (of a different race or ethnicity than yours) are in your class(es)?	.219	.323	.518

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

Table 5: Instrument Subscale Items

Subscale	Items
Social Distance	President, Neighborhood, Teacher, Boss, Coworker, Computer, Car, To their home, On a date
Social Ties	Friends, Email addresses, Cell phone numbers, Close circle, Consider a friend, Consider an acquaintance
Interaction	Are a coworker, Are classmate, Work with in class, Often do you see, Often do you see socially

IV. Reliability Analysis

A reliability analysis was run on each subscale and reported in Table 7. The Cronbach's Alpha values ranged from 0.76 to 0.98 indicating that the internal consistency reliabilities for two of the three factors is high. The Spearman-Brown Formula suggested that the Interaction subscale needed only two additional items to reach a reliability value >0.80.

Table 6. Subscale Descriptive Statistics

	N	Mean	Std. Deviation
Social Distance	182	6.11	1.286

Social Ties	182	3.19	1.081
Interaction	181	3.31	0.950
Valid N (listwise)	181		

Table 7. Subscale Reliability Data

Subscale	Number of Items	Cronbach's Alpha	Confidence Interval	Average Inter-Item Correlation	Standard Deviation of the Inter-Item Correlation
Social Distance	9	.978	.973 - .983	.846	.071
Social Ties	6	.903	.880 - .924	.609	.126
Interaction	5	.755	.692 - .807	.401	.110

A. Subscale 1 – Social Distance

This scale included items President, Neighborhood, Teacher, Boss, Coworker, Computer, Car, To their home, On a date and was designed to measure a respondent's level of comfort with a person of a different race or ethnicity holding various positions in their immediate life (Boss) or in their larger life in society (President). A high score on this scale indicates that an individual is very comfortable with persons of a different race or ethnicity of their own and you could infer the respondent would then be willing and would consequently have a diverse group of friends. The high Cronbach's Alpha suggests high internal consistency and the Inter-Item Correlation suggest that the items on the subscale are highly correlated. However, Teacher and Boss are highly correlated at a value of 0.96, this redundancy may be indicative of the sample as students may consider Teacher and Boss to be more similar with regard to power and authority than they are different.

B. Subscale 2 – Social Ties

This scale included items Friends, Email addresses, Cell phone numbers, Close circle, Consider a friend, Consider an acquaintance and was designed to measure the diversity of a respondent's social circle. A high score on this scale indicates that the individual has a diverse group of friends whom they see and interact with often. This includes delineating between social and work interactions and considering an individual part of their circle of friends as opposed to a mere acquaintance. The high Cronbach's Alpha and Average Inter-Item Correlation values suggest that this subscale is unidimensional and presents high internal consistency. However, the Inter-Item Correlations for the item that included the word "acquaintance" ($0.37 < 0.51$) were lower than the correlations between the rest of the items (average IIC = 0.61). As stated previously, revising these items to demarcate more clearly the intimacy between friends and acquaintances would better measure the strong and weak social ties an individual has and any impact racial attitudes may have on these ties.

C. Subscale 3 - Interaction

This scale included items Are a coworker, Are classmate, Work with in class, Often do you see, Often do you see socially and measures the frequency and type of interaction the respondent has with people of a different race or ethnicity. A person who scores high on this five-point scale would interact frequently with persons of a different race or ethnicity than themselves and in both work and social situations. The Cronbach's Alpha of this subscale is slightly lower than the preferred value of 0.80 and this may be a reflection of the low item number. To improve the reliability of this subscale from 0.76

to 0.80 two items would need to be added to the subscale. This number was calculated using the Spearman Brown Formula provided below:

$$REL = K * R / [1 + (K-1) * R].$$

This equation is solved for K where R is the inter-item correlation (0.40) and REL is the target reliability (0.80). In computing this formula, K = 5.98 meaning that only one item would need to be added for the scale to reach the desired reliability of 0.80. There was an unusually low inter-item correlation in this scale between how many people of a different race or ethnicity are in your classes and do you work with them in your classes (0.18).

This may be a result of too few choices in the response area. Respondents were asked how many persons of a different race or ethnicity were in their classes and provided with number choices ranging from 0 – 7 or more. A different response scale was given to the item asking whether or not they worked with this person/these people in class. This item response did not have an option of Not Applicable which would have been the correlated response to an individual who answered 0 in the previous question.

D. Subscale Correlations

The correlations for the subscales are presented in Table 6 below. Social Distance is moderately correlated to Social Ties and Interaction, 0.30 and 0.33 respectively. Social Ties and Interaction have a large correlation value of 0.63. The correlation values indicate that the factors have acceptable levels of correlation and do not have discriminant validity issues.

Table 8. Subscale Correlations

	Social Distance	Social Ties	Interaction
Social Distance	1.000		
Social Ties	0.330**	1.000	
Interaction	0.326**	0.633**	1.000
**. Correlation is significant at the 0.01 level (2-tailed).			

V. Discussion

A. Implications of the Study

This instrument was created to examine social distance and its correlation, if any, to strong and weak social ties with a particular eye toward race and ethnicity. It was hypothesized that an individual who scored highly on the social distance scale was comfortable with people of different races and ethnicities and that would be reflected in an equally high score on the social ties scale. The descriptive statistics in Table 4 support this hypothesis. The overall mean score for Factor 1, Social Distance, was 6.14 indicating that the survey respondents felt somewhat to very comfortable with individuals of a different race or ethnicity than their own in various roles both primary (Teacher) and secondary (President) to the respondent’s life. The overall mean score for Factor 2, Social Ties, supported this comfort in that the majority of the respondents knew between three and four friends of a different race or ethnicity of their own that they considered a friend.

The results for Factor 2 were quite similar to those for Factor 3, Interaction, which had an overall mean score of 3.31. This mean value indicates that the respondents saw and interacted with these individuals either socially or in class less than once a week but more than once a month. Social Ties was more highly correlated with Interaction than Social Distance which does make sense as an individual who has many strong or weak

social ties would also have more interaction. Social Distance is measuring a person's attitude while Social Ties and Interaction are measuring the outward manifestations of those attitudes.

The discrepancy between the high score on the Social Distance scales indicating that the respondents were comfortable with people ethnically or racially different from themselves and the lower scores on the Social Ties and Interactions scales may be a result of a number of factors. It may be that while individuals are open-minded and comfortable, they do not have many opportunities to meet and interact with diverse populations. This inability does not suggest undesirability and adding a question to that effect, opportunities for interaction, may help tease out this difference. It could also be however, that even though the survey was anonymous the social consequences of appearing to be less open-minded may have influenced a respondent's answers. This "faking good" phenomenon could have skewed a respondent's answers as they filled out the survey among their peers.

Overall the survey data suggests that most of the diverse interactions happen in classroom settings. While this survey did not ask the students how they met the individuals they were thinking of as they answered the survey it is interesting to note that the interactions in classroom settings were more highly correlated than the interactions in purely social situations. This finding would suggest that it is the scaffolded work toward a common goal that creates the tie and additional research into categorizing these ties as strong or weak could influence the types of interactions companies, universities, community programs create to cultivate and maintain strong relationships between diverse people.

Table 9a. Inter-Item Correlation Matrix for Social Distance Subscale

	president	neighborhood	teacher	boss	co- worker	computer	repaired your car	Invited you to their home	Asked you on a date
Were to become president	1.000	.870	.900	.898	.868	.735	.798	.836	.780
Moved in to your neighborhood	.870	1.000	.909	.889	.901	.813	.883	.897	.739
Was your teacher	.900	.909	1.000	.955	.950	.830	.890	.907	.787
Was your boss	.898	.889	.955	1.000	.924	.802	.853	.912	.810
Was your co- worker	.868	.901	.950	.924	1.000	.878	.903	.909	.759
Repaired your computer	.735	.813	.830	.802	.878	1.000	.881	.802	.635
Repaired your car	.798	.883	.890	.853	.903	.881	1.000	.851	.712
Invited you to their home	.836	.897	.907	.912	.909	.802	.851	1.000	.796
Asked you on a date	.780	.739	.787	.810	.759	.635	.712	.796	1.000

Table 9b. Inter-Item Correlation Matrix for Social Ties Subscale

	How many friends	email addresses	cell phone numbers	close circle of friends	consider a "friend"	consider an "acquaintance"
How many friends do you have that are of a different race or ethnicity than your own?	1.000	.595	.693	.713	.746	.512
How many email addresses do you have for people of a different race or ethnicity than yours?	.595	1.000	.807	.598	.592	.445
How many cell phone numbers do you have for people of a different race or ethnicity than yours?	.693	.807	1.000	.659	.666	.491
How many of these people (of a different race or ethnicity than yours) are in your close circle of friends?	.713	.598	.659	1.000	.776	.366
How many of these people (of a different race or ethnicity than yours) do you consider a "friend"?	.746	.592	.666	.776	1.000	.479
How many of these people (of a different race or ethnicity than yours) do you consider an "acquaintance"?	.512	.445	.491	.366	.479	1.000

Table 9c. Inter-Item Correlation Matrix for Interaction Subscale

	are a co-worker	are in your class(es)	work with in class	often do you see	often do you see purely social
How many of these people (of a different race or ethnicity than yours) are a co-worker?	1.000	.463	.436	.350	.344
How many of these people (of a different race or ethnicity than yours) are in your class(es)?	.463	1.000	.182	.419	.310
Do you work with this person/these people (of a different race or ethnicity than yours) in class?	.436	.182	1.000	.474	.416
How often do you see this person/these people (of a different race or ethnicity than yours)?	.350	.419	.474	1.000	.614
How often do you see this person/these people (of a different race or ethnicity than yours) in purely social situations?	.344	.310	.416	.614	1.000

B. Limitations of the Study

The original instrument was written to measure two factors though factor and reliability analysis results indicate the instrument measures three factors. This additional factor causes some concern with multiple scales loading on one factor. This presents a limitation in the data analysis as item mean scores and inter-item correlations are affected.

Another limitation of the study was the sample population. After asking students on campus to fill out a survey a sample of convenience was used due to the researcher's ties to the School of Education. As a result the sample was primarily composed of Caucasian females enrolled in the same program. This will bias the results as there is little variation among classes including size, diversity and group work.

In retrospect the inflexibility of the instrument could have been ameliorated through a small pilot study. There were instances where the respondents did not have enough choices or appropriate choices for the questions. For instance, there was no "Not Applicable" when students were asked about working in diverse groups in their classes. Also when students were asked how long they had known an individual the longest option was between six months and a year. The option for knowing someone longer than a year was clearly missing.

C. Future Research

Prior to gathering any additional data, there must be some slight modifications made to a small number of items and responses. Following these revisions a Confirmatory Analysis would be run on a larger, more diverse sample. To prevent social consequences or faking good, the survey could be administered to purposefully selective focus groups which may allow respondents to answer more freely. It would also be interesting to do a more pointed analysis between items. For instance comparing the data from those respondents who have students of different races and ethnicities in class to those who do not may indicate that those students who are enrolled in diverse classes are

more comfortable with various races and ethnicities and as a result have more diverse social ties.

The most important implication for future research is a more diverse sample. Gathering data from a more diverse population would enable the researcher to infer relationships between social distance, weak and strong social ties and the diversity of the respondent's social circle. These inferences could impact how classrooms structure group work, bring greater attention to representative diversity in academic programs and campus populations and the social and events calendar of universities. It would benefit researchers to learn whether it is the level of comfort that people have toward people of different races or ethnicities that influence their social ties or the types and frequencies of the interactions that are the most influential.

VI. Conclusions

In an age where job offers and financial opportunities are often a matter of who and how you know, it is important to investigate how social distance affects the social ties of university students and whether there is a correlation with racial and ethnic prejudice. The impact and role of comfort and understanding of other racial and cultural groups is important to understand as our nation's diversity continues to increase.

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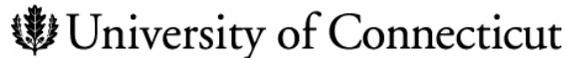
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Appendix A

Information Sheet

Information Sheet for Investigation of University Social Circles Survey



Principal Investigator: D. Betsy McCoach, Ph.D.

Student: Vanessa E. Kass

Course Name and Number: EPSY 344: Construction of Evaluation instruments (H04-319)

Title of Study: Investigation of University Social Circles

You are invited to participate in this survey regarding the social circles of college students. I am a graduate student at the University of Connecticut, and am conducting this survey as part of my course work. I am interested in finding out how students meet and interact with individuals who belong to a different racial or ethnic group than themselves.

Your participation in this study will require (completion of the attached questionnaire or test/participation in a brief interview). This should take approximately 5-10 minutes of your time. Your participation will be anonymous and you will not be contacted again in the future. You will not be paid for being in this study. We believe this (survey/interview/test) does not involve any risk to you. Although you may find it interesting to participate in this study, there will be no direct benefit to you from your participation.

You do not have to be in this study if you do not want to be. I will be happy to answer any questions you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact me, Vanessa E. Kass (the student) at (860)486-0891 or my advisor, D. Betsy McCoach at (860) 486-0183. If you have any questions about your rights as a research participant you may contact the University of Connecticut Institutional Review Board (IRB) at 860-486-8802. An IRB is a group of people that reviews research studies to make sure they are safe for participants.

Please complete the attached survey and return it to the packet provided by the researcher.

Thank you.

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Appendix B

Survey Instrument

University Social Circles Scale

Please circle the appropriate answer to the following questions.							
How comfortable would you feel:	Very uncomfortable	Uncomfortable	Somewhat uncomfortable	Neither comfortable nor uncomfortable	Somewhat comfortable	Comfortable	Very comfortable
If a person of a different race/ethnicity than you:							
Were to become president	1	2	3	4	5	6	7
Moved in to your neighborhood	1	2	3	4	5	6	7
Was your teacher	1	2	3	4	5	6	7
Was your boss	1	2	3	4	5	6	7
Was your co-worker	1	2	3	4	5	6	7
Repaired your computer	1	2	3	4	5	6	7
Repaired your car	1	2	3	4	5	6	7
Invited you to their home	1	2	3	4	5	6	7
Asked you on a date	1	2	3	4	5	6	7
If you:							
Did not speak the language of everyone at the lunch table	1	2	3	4	5	6	7
Did not celebrate the same holidays as a large number of the people in your neighborhood	1	2	3	4	5	6	7
How many friends do you have that are of a different race or ethnicity than your own?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many people do you know that are of a different race or ethnicity of your own?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many email addresses do you have for people of a different race or ethnicity than yours?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many cell phone numbers do you have for people of a different race or ethnicity than yours?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many of these people (of a different race or ethnicity of yours) in your close circle of friends?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many of these people (of a different race or ethnicity of yours) do you consider a “friend”?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many of these people (of a different race or ethnicity of yours) do you consider an “acquaintance”?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many of these these people (of a different race or ethnicity of yours) are a co-worker?	0	1 – 2	3 – 4	5 – 6	7 or more		
How many of these people (of a different race or ethnicity of yours) are in your class(es)?	0	1 – 2	3 – 4	5 – 6	7 or more		

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Do you work with this person/these people (of a different race or ethnicity of yours) in class?	Never	Less than once a month, more than once a semester	Less than once a week, more than once a month	More than once a week	Daily
How often do you see this person/these people (of a different race or ethnicity of yours)?	Less than once a year	Less than once a month, more than once a semester	Less than once a week, more than once a month	More than once a week	Daily
How often do you see this person/these people (of a different race or ethnicity of yours) in purely social situations?	Less than once a year	Less than once a month, more than once a semester	Less than once a week, more than once a month	More than once a week	Daily
How long have you known this person/these people (of a different race or ethnicity of yours)?	Between 6 months and a year	Less than 6 months	Less than a semester	Less than a month	Less than a week

Demographic Information (please fill in the following information):

Age: _____

Gender: _____ female
 _____ male

Race/Ethnicity: _____ African-American
 _____ Asian-American
 _____ Hispanic
 _____ Native American
 _____ Caucasian
 _____ Other

College: _____ freshman
 _____ sophomore
 _____ junior
 _____ senior
 _____ 5th year

Employment: _____ none during the school year
 _____ part-time during the school year – on campus
 _____ part-time during the school year – off campus
 _____ full-time during the school year
 _____ part-time during the summer or winter
 _____ full-time during the summer or winter

Appendix D

Factor and Reliability Analysis Output

Appendix C

Content Validation Table

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	Social Ties	Social Distance	No Category	Not Confident	Somewhat Confident	Completely Confident	Not Relevant	Moderately Relevant	Highly Relevant
How comfortable would you feel if a person of a different race/ethnicity than you were to become president?	1/5 = 20%	4/5 = 80%			3/4 = 75%	1/4 = 25%		3/4 = 75%	1/4 = 25%
How comfortable would you feel if you did not speak the language of everyone at the lunch table?		5/5 = 100%			4/5 = 80%	1/5 = 20%		4/5 = 80%	1/5 = 20%
How many of these people (of a different race or ethnicity than yours) are in your close circle of friends?	4/5 = 80%		1/5 = 20%			4/4 = 100%			4/4 = 100%
How comfortable would you feel if a person of a different race/ethnicity than you was your co-worker?		4/5 = 80%	1/5 = 20%			4/4 = 100%			4/4 = 100%
How many friends do you have that are of a different race or ethnicity than your own?	4/5 = 80%		1/5 = 20%		3/4 = 75%	1/4 = 25%			4/4 = 100%
How comfortable would you feel if a person of a different race/ethnicity than you was your boss?	1/5 = 20%	4/5 = 80%				4/4 = 100%			4/4 = 100%
How comfortable would you feel if you did not get picked to work on a school/work project?	1/5 = 20%	2/5 = 40%	2/5 = 40%	1/1 = 100%			1/1 = 100%		
How comfortable would you feel if a person of a different race/ethnicity than you was your teacher?		5/5 = 100%			3/5 = 60%	2/5 = 40%		3/5 = 60%	2/5 = 40%
How many people do you know of a different race or ethnicity than your own?	2/5 = 40%	3/5 = 60%			2/3 = 66%	1/3 = 33%		2/3 = 66%	1/3 = 33%
How often do you see these people/ this person (of a different race or ethnicity than yours) in purely social situations?	5/5 = 100%					5/5 = 100%			5/5 = 100%
How comfortable would you feel if a person of a different race/ethnicity than you moved in to your neighborhood?		5/5 = 100%			3/5 = 60%	2/5 = 40%			5/5 = 100%
How did you meet this person/persons (of a different race or ethnicity than yours)?	1/5 = 20%	3/5 = 60%	1/5 = 20%	1/1 = 100%			1/1 = 100%		

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How comfortable would you feel if a person of a different race/ethnicity than you repaired your car?		5/5 = 100%				5/5 = 100%			5/5 = 100%
How many of these people (of a different race or ethnicity than yours) do you consider a “friend”?	5/5 = 100%					5/5 = 100%		1/5 = 20%	4/5 = 80%
How comfortable would you feel if you did not get acknowledged when you entered a room?	1/5 = 20%	3/5 = 60%	1/5 = 20%	1/3 = 33%	2/3 = 66%		1/3 = 33%	2/3 = 66%	
How comfortable would you feel if a person of a different race/ethnicity than you invited you to their home?	1/5 = 20%	4/5 = 80%			3/4 = 75%	1/4 = 25%		3/4 = 75%	1/4 = 25%
How comfortable would you feel if a person of a different race/ethnicity than you asked you on a date?	1/5 = 20%	4/5 = 80%		1/4 = 25%	3/4 = 75%			3/4 = 75%	1/4 = 25%
How many email or cell phone numbers do you have (of a person of a different race or ethnicity than yours)?	5/5 = 100%				3/5 = 60%	2/5 = 40%		3/5 = 60%	2/5 = 40%
How comfortable would you feel if a person of a different race/ethnicity than you repaired your computer?		5/5 = 100%			4/5 = 80%	1/5 = 20%		2/5 = 40%	3/5 = 60%
How often do you see this person/these people (of a different race or ethnicity than yours)?	5/5 = 100%					5/5 = 100%			5/5 = 100%
How comfortable would you feel if you did not celebrate the same holidays as a large number of the people in your neighborhood?		4/5 = 80%		1/4 = 25%	3/4 = 75%			3/4 = 75%	1/4 = 25%
Is this person/these people (of a different race or ethnicity than yours) in your class(es)?	5/5 = 100%				3/5 = 60%	2/5 = 40%		4/5 = 80%	1/5 = 20%
How comfortable would you feel if you did not get invited to participate in discussions?	2/5 = 40%	3/5 = 60%		3/3 = 100%			1/3 = 33%	2/3 = 66%	
How long have you known this person/these people (of a different race or ethnicity than yours)?	4/5 = 80%	1/5 = 20%			1/4 = 25%	3/4 = 75%		1/4 = 25%	3/4 = 75%
Do you work with this person/these people (of a different race or ethnicity than yours) in class?	4/5 = 80%	1/5 = 20%				4/4 = 100%		3/4 = 75%	1/4 = 25%

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How comfortable would you feel if you did not get chosen to lead a school/work project?	3/5 = 60%	2/5 = 40%		1/3 = 33%	2 / 3 = 66%		1/3 = 33%	2 / 3 = 66%	
Is this person (of a different race or ethnicity than yours) a co-worker? More than one?	2/5 = 40%	1/5 = 20%	2/5 = 40%		2/2 = 100%			2/2 = 100%	
What is your relationship to this person (of a different race or ethnicity than yours)?	2/5 = 40%	1/5 = 20%	2/5 = 40%		2/2 = 100%			2/2 = 100%	

