Q methodology, a theory-based research technique begun by William Stephenson, permits a scientific approach to the study of subjective ideas, and proves useful in studying intrapersonal communication processes in a variety of contexts. The Q-sort, which incorporates Q methodology into a measure, allows respondents to sort statements (pictures or other materials) according to an agree-disagree (pleasure-unpleasure) continuum. Using this method, researchers can construct a theoretically based measure in which the respondents restructure information to reflect their interpretations. A study on music videos effectively illustrates the use of Q-sort statements as a research tool. Q methodology can also be used as an instructional tool, as demonstrated by a sophomore level interpersonal communication course structured around the design and completion of three Q sorts. Course evaluations indicated that the use of Q methodology was an effective teaching strategy. (A list of resources is provided, including articles and manuscripts by Stephenson, a Q research journal, and computer programs analyzing Q data. Appendixes include: (1) music video Q-sort; (2) gender communication Q-sort; (3) gender Q-sort; and (4) student analysis of gender study results. Descending arrays of Z-scores and item descriptions for types 1, 2, and 3, and 37 references are appended.) (MM)
Stephenson's Q Methodology: A Unique Tool for Research and Instruction

Joan E. Aitken
University of Missouri--Kansas City


Abstract: Q methodology is a research technique begun by William Stephenson. Over 1500 studies using the method have been completed, many of which reflect applications in the field of communication. As a research tool, Q methodology and Q technique permit a scientific approach to the study of subjective ideas and prove particularly useful in studying intrapersonal communication processes in a variety of contexts. As a teaching tool, Q can be used to structure student thinking on various issues and to teach students a method for solving problems.

The purpose of this paper is to provide basic information on Q methodology through the examples of a research study on music videos and instruction in an undergraduate interpersonal communication course.

Author Identification: Joan E. Aitken, (Ed.D. University of Arkansas), is an Assistant Professor, Department of Communication Studies, University of Missouri, Kansas City, Missouri, USA, 64110-2499, telephone (816) 276-1698. The author expresses her appreciation to Rodger Palmer, Anne Porche, and Keith Sanders for their research assistance. An earlier version of this paper was presented at the annual meeting of the Speech Communication Association, Boston, 1987.
Stephenson's Q Methodology: A Unique Tool for Research and Instruction

The strength of Q methodology (Stephenson, 1953) has been shown through more than 1500 studies over the past fifty years (Brown, 1986, p. 72). Recent applications in communication (e.g., Cragan and Shields, 1981; Barchak, 1984; Stephen, 1985; Barbato, 1986; Murray, 1986; Nitcavic & Aitken, 1988) demonstrate the use of Q methodology in the communication discipline. The method has been proven effective in analyzing the "phenomenological world of the individual (or of small numbers of individuals) without sacrificing the power of statistical analysis" (Stephen, 1985, p. 193), and in analyzing the intrapersonal processes of large numbers of subjects (Cataldo et al, 1970). Q has been used to study human subjectivity, thus making it viable in the study of intrapersonal communication processes. Because of Stephenson's training in both the physical and behavioral sciences—a Ph.D. in physics and a Ph.D. in psychology—he has developed a method that can serve as the science of subjectivity.

Introduction to Q Methodology

"In a nutshell," Q methodology is a set of procedures that can be used in developing theory-based research. Whether the researcher incorporates theory into a measure (Q-sort) or allows the data to suggest a theoretical explanation, the researcher obtains person-types or thinking patterns of people through principles of factor analysis.

The Q-sort is different from most paper-and-pencil measures, in that the respondent sorts statements (pictures or other material) according to an agree—disagree (pleasure—unpleasure) continuum. Instead of responding with one's agreement to each statement, the respondent sorts each statement to be placed on an agree-disagree continuum that shows the relationship between statements.

Q Applicability

Q has several important characteristics. (a) Q's heuristic ability provides fundamental research, (b) Q's theory-building ability can provide a framework for further study, (c) Q's analysis of the individual's intrapersonal communication processes gives a scientific approach to the study of subjectivity, (d) Q draws statements and structure from the culture, and (e) by using a structured Q-sort, the individual respondents' conceptual processes will transcend the researcher's theory. In communication research—which has been criticized by some for inadequate theoretical development—Q's greatest strength lies in its potential for shaping theory. Q methodology also has proven effective in
specific types of problem solving, such as in analysis of decision-making processes (Brown, 1980), and comparison of the real and ideal (Bem & Funder, 1978; Nitcavic, 1979).

One major advantage of Q method is that the researcher can construct a theoretically based measure, but the respondents will restructure that information so that it represents their interpretations. According to Stephenson (1980):

Q sorts are operations of "focalizing attention" under given conditions of instruction, in which measurement is for a person's feeling and belief with self-reference....The individual, in Q sorting, may of course use judgment, reason, and comprehension, all of which we call conscious. But the underpinning is "affectability," and quantification is with respect to feeling, belief, and self reference. The outcome for any individual is operant factor structure, subject to various laws..., a structure that is indicative of objective properties of communicability of which the person is quite unaware. (p. 884)

The logic of Q is based on communication processes in that the Q statements represent language common to the people involved. After completing a Q sort by this author, a colleague commented that it was the most understandable survey he had ever seen from the standpoint of the language used in each statement. Perhaps the understandability was because the language of each statement came from the people interviewed, not the jargon of the researcher.

One might wonder why investigators simply cannot interview subjects regarding their feelings on an issue instead of using Q methodology. Research shows that people are unable to define their intrapersonal communication processes. As Brown (1986) explained, a person's "viewpoint [will] remain implicit (that is, present but undetected) unless provided with some instrumental medium, such as a Q sort, for transforming it into a manifestation" (Brown, 1986, p. 73). Regarding their understanding of cognitive processes, people may be unaware of their intrapersonal processes, and the existence and influence of stimuli (Nisbett & Wilson, 1977, p. 231). Thus, the Q method can enable the researcher to discover feelings and patterns he or she cannot discover in other ways.

Issues of Q Methodology
Among those who have analyzed the value of Q methodology, Kerlinger (1986) cautioned users regarding inappropriate applications. Although the method has proven its heuristic value and ability to uncover new relationships and conceptualizations, it remains controversial (personal conversation, Stephenson, January, 1987). To effectively use Q methodology, one must consider certain issues.
In the field of communication—which sometimes generates controversy over the values of empirical versus critical research—some researchers (e.g., Murray, 1986) think Q offers the ability to provide theoretically grounded research with elements of subjective and objective analysis. Cragan (personal conversation, November, 1986) suggested that the use of Q may put the researcher in a middle area in which he or she finds difficulty being accepted by either colleagues doing quantitative research or colleagues doing qualitative research. The subjective nature of Q methodology makes the quantitative researcher suspicious and the "number crunching" of the factor analysis makes the qualitative researcher suspicious. Although he has published successfully in many prestigious sources, Stephenson has found difficulty in publishing Q studies and has encountered theorists and statisticians who have been unable or unwilling to understand Q methodology (personal conversation, January, 1987).

Q methodology links theory and statistics. In essence, the statistics provide the theory for the method. An understanding of the statistical basis is helpful to the researcher using Q methodology. One might ask whether Q method is simply the inverted R matrix. There is, obviously, a relationship between Q and R factor analysis. Q determines person factors while R determines concept factors. In one's data analysis, the researcher should make a decision regarding the Q-R use of horizontal matrices and whether or not the centroid method should be used in rotated solutions.

Several computer programs and program versions are now available for Q data analysis. Some researchers believe that the most recent are not necessarily the best, but there are advantages and disadvantages to each program. Certainly the differences between programs can somewhat shape the data analysis (VanTurbergen, 1975; Nesterenko & Wilson, 1980).

Some researchers use a template in the administration of a Q-sort. A template grid with pockets in which the respondent can place each Q statement is one method of effectively administering the Q-sort. This author used a grid on paper, which is another commonly used technique (see Appendix 2). Barchak provides a pamphlet of instruction for respondents doing Q-sorting, which includes photographs (personal conversation, February, 1988).

Sample size of people and sample size of statements have been an area of differences in opinions. Although some Q studies use large numbers of subjects, most rarely use more than approximately 50 subjects. Stephenson basically has argued for 40 to 60; Kerlinger has suggested 60 to 80. For validity, one does not need more than that in most cases, and in addition, with large numbers one is likely to find a severe regression to the mean (resulting in a one
factor solution) with large person samples. This author disagrees with Kerlinger (1986) on the issue of sample size and other issues about which Kerlinger appears less than up-to-date. Regarding sample size of people, there is adequate evidence that the method can be used successfully for a sample of one person up to thousands of persons. For example, one application of Q would be to have a single individual sort statements under different conditions. One person might sort statements about communication apprehension, for example, first under the condition of speaking in a dyad, second under the condition of speaking in public, and so on. Because of certain computer program capacities, a factoring of factors may be useful with large numbers.

Long Q sorts can be time consuming and confusing. The 52 statement Q sort in this study took college students between 10 and 45 minutes to complete. Although most people find the unique nature of Qsorting fun to do, a long Q sort can become tedious. The ability to discriminate levels of agreement accurately with large numbers of statements also raises certain questions. Investigators must determine the exact size of people and statements based on the pilot study and needs of the specific research (Stephenson, 1967, p. 17-20), and determine for themselves whether they consider the method appropriate for large surveys (Cataldo, Johnson, Kellstedt, & Mildrath, 1970).

Design and Construction of a Q Sort
Three methods are commonly used in initiating statements for a Q sort: the literature, interviews, and focus groups. In this case, relatively few statements were made regarding the industry promotion aspect of music videos, so additional statements were taken from the literature and added to this category. The key to using such statements is to word them in commonly used language rather than professional jargon. This author has found success in other studies using in-depth interviews of adults and focus groups of children to generate statements. Stephenson has developed Q sorts that use color swatches and pictures. Anything one can sort according to a continuum appears appropriate.

When one considers the unique nature of Q sorts, one can understand the administrative problems they present. Each Q sort is copied on paper or cardboard stock, the cut up into a stack of statements (papers or cards). Those statements may be bound by a rubber band or placed in an envelope, for example. The actual process of cutting the statements and preparing each Q sort is a time consuming one that may take several people hours. If the researcher uses small numbers or several small groups, considerable time can be saved in the preparation of the Q sorts. Each stack of
statements should be shuffled between uses, however, so that the arrangement of one respondent does not influence the arrangement of the next respondent who uses that Q-sort stack. Administration to a large group instead of several small groups also raises the cost of making the Q-sort because so many more copies of the Q-sort are needed.

This author has found it easiest to put all Q-sort statements on a couple pages, make copies, then separate and cut out each page. This procedure works better than an assembly-line procedure because it goes faster and there is less apt to be a mistake in adding or omitting a statement.

Respondents have difficulty finding their own errors in a Q-sort because of the time required to go back and check each statements. The researcher or person entering the data needs to double-check for respondent mistakes. One problem this author experienced in using a computer printed Q-sort was that the appearance of number "36" and "38" were so similar that some respondents recorded "36" twice instead of both numbers. The researcher can generally correct such problems by looking at the content of statements to determine where the statements would most logically go. Another way of handling such problems is to put missing statements in the neutral-middle area. An occasional respondent mistake will not significantly alter the data.

Another respondent problem that occurs in research is the person who does not follow directions because he or she lacks the ability or desire to do so. The responses of such individuals probably will fail to load on factors with other respondents. A researcher should pay attention to loadings with only a few respondents because they represent a unique—although less common—person-type. The respondents who fail to load on any type probably represent persons who did not respond accurately on their Q-sort. In study using children (Nitcavic & Aitken, 1988), this author has found the technique ineffective with mentally retarded students. Apparently they cannot handle the complexity of the Q-sorting procedure.

Anyone using a Q-sort should consider the various discussions about the advantages and statistical soundness of using a structured Q. One concern in using a forced-choice grid is whether or not people who apply their responses to a grid structure (see Brown, 1971), will be "made the same" artificially. Instructing respondents to work from the two extremes toward the neutral-middle area, however, seems to solve that problem. Although people may differ in their intensity of feelings about the statements and their agree-disagree balance, this procedure should allow a viable method for each respondent.

To determine Q-sort validity, one can have a small number of respondents sort the statements according to the categories employed in the structure (theoretical and
positive-negative categories). One method of establishing reliability is to have some respondents re-sort the statements and then to compare the first and second sort. After an initial administration of a Q-sort, the researcher may choose to modify statements, particularly by omitting (or substituting) statements that generate the same response by all respondents. Some researchers use Q to develop measures and then convert them to a normative form using a Likert-type scale. Although Stephenson does not approve of this procedure (personal conversation, January, 1987), it may be appropriate depending upon the researcher's objectives.

To provide an example of a research application, this paper shows the procedures used to design a study using Q methodology for development of a theory about music video use. With their introduction to the public a few years ago, music videos have been an area of recent communication research. Content analysis of videos, for example, has revealed dominant themes and techniques (Baxter De Riemer, Landini, Leslie, & Singletary, 1985). Relatively little research exists on the effects of music videos, however, particularly in regard to the viewers' feelings. A survey of the literature showed three areas of current study and analysis about music videos: industry promotion, social behavior, and content. Consideration of interpersonal communication was added as an additional category of analysis. These areas formed the theoretical basis for the Q-sort.

To provide an example of an instructional application, this paper also shows the procedures used to teach an undergraduate course in interpersonal communication by the use of four Q sorts. Thus, the purpose of this paper is twofold: (a) to demonstrate how one can design and administer a theoretically-based measure (Q-sort) to solve research problems, and (b) to demonstrate how one can teach communication by using Q methodology.

**Q As A Research Tool: A Music Video Study**

Not all studies using Q techniques actually use Q methodology, in that Stephenson's Q methodology employs theoretically-based construction. Two key aspects in the development of a study using Q methodology are (a) to structure a measure that is theoretically-based and (b) to use language common to the respondents. Thus, the content of the measure can be designed to include key elements that the researcher wants to test. In this case, a survey of the literature indicated three key aspects to music videos: industry promotion, social behavior, and content. The concept of interpersonal communication was added because this author wanted to see the relationship between music...
video viewing and one's interpersonal interaction. To provide language that would be most capable of evoking meaning, the statements were gathered from essays about music videos. Using statements from the public allows the statements to have the same meaning, not in the sense that they are normative, but in the sense that the common language evokes meaning in any respondent. The purpose of the study was to determine whether the four categories related to music videos--industry promotion, social behavior, music video content, and interpersonal communication--provide a viable explanation for different types of music video viewers.

Method

The Q sort was generated from 98 college students in two communication classes. One class was shown five music videos, and given time in between each to write about their feelings. The other class was told to think about a music video they liked and one they disliked and write about them based on the following categories: visual abstraction-animation, sex, relationships, dance, violence, celebration, friendship, isolation, and character (Baxter, et al, 1985). The researcher originally considered the Baxter categories as a basis for theory development. Student responses, however, showed a much broader range of feelings. Because a researcher may choose to use Q to test the theories of others, the ideas of various researchers were built into this Q-sort.

This author considers structuring the most appropriate use of a Q-sort because it provides a way the researcher to build theory into the measure. Stephenson has, however, given mixed reactions to structuring (paper rebuttal, November, 1987). A structured Q sort was designed in this case to determine if the Q factors would support current literature on music videos. The Q-sort included 13 statements in each of four categories: (a) industry promotion, (b) social behavior, (c) music video content, and (d) interpersonal communication. If the theory is sound, the four factors should emerge after the data analysis. More likely, however, the data will transcend the theory by allowing a new form to emerge.

In the case of the Music Video Q-sort, this author categorized the statements according to their positive, mixed-or neutral, or negative tone either toward music videos or toward socially-accepted behaviors. The Q sort included 24 statements that were positive or neutral in nature and 28 statements that were negative in nature (see Appendix 1 for categorization of statements). Researchers should mix Q-sort statement numbering so as to avoid responder bias because of the categorization. This author prefers to include positive and negative statements,
although some researchers have found that the use of negative statements in disagree columns causes a double negative that is confusing and disadvantageous.

To better understand the basis for the Q-sort structure in this case, a selected review of literature is included below. The current research seemed to fall into three main categories: industry promotion, social behavior, and content. A fourth category—interpersonal communication—was added to the Q sort to provide further explanation for viewer response to music videos.

**Industry Promotion.** A variety of researchers have discussed the role of industry promotion in music videos, some of whom consider promotion as the main purpose for their existence (Peterson-Lewis & Chennault, 1986; Sur & Lull, 1986; Dominick & Sherman, 1986; Hoberman, 1983; Zeicnner, 1983). Music Television (MTV) began in 1981. Within three years, 25 percent of American households had 24 hour access to the music videos of the MTV channel, while virtually all households had access to some music videos on television (Brown & Campbell, 1986).

MTV was the first 24-hour all-music-video station. Viewers of Music Television buy more records than people without the music channel, and when buying records, viewers are more influenced by MTV than by radio, concerts, or commercial television (Hoberman, 1983). Music Television has been credited with driving the industry out of a buying slump by increasing sales (Zeichner, 1983).

**Social Behavior.** Perhaps the most important aspect of music videos is their relationship to social behavior because social behavior includes the social effects of music video viewing. According to Aufderfeide (1986), for example, "music videos have animated and set to music a tension basic to American youth culture: That feeling of instability which fuels the search to buy and belong" (p. 57). MTV has become a socializing agent which is almost mandatory to a happy adolescent's life (Sun & Lull, 1986).

Major concerns are the portrayal of race, violence, and gender in videos. Brown and Campbell (1986) found: "Blacks were much more likely than whites to be shown in optimistic scenarios as helpful and caring individual, but almost exclusively in videos on a black channel; women and blacks remain minorities on MTV" (p. 94). According to Sherman and Dominick (1986), as far as visual content, "women, older
adults, and nonwhites are all more likely to be the aggressors than the victims" (p. 79). Caplan (1985) said about music videos: "Violence, victimization, gender portrayal and subservience are all played out in a bizarre, seemingly unrelated fashion" (p. 145). In their content analysis of music videos, Sherman and Dominick found "music videos are violent, male-oriented, and laden with sexual content" (p. 92). Lewis (1987) analyzed form and female authorship of music videos as aspects that "negotiate gender inequalities."

Music Video Content. A final area of music video research has been content. Because Music Television has creative potential aesthetic video and film effects have become an important part of some videos (Caplan, 1985). The techniques behind images have emerged as an art form of its own. As Baxter and other explained (1985), music videos have become "a contemporary hybrid of rock music and film imagery" (p. 333). They continued: "Producers rely heavily on special camera techniques, film imagery, and special effects in creating music videos" (p. 336). One might consider some music videos simply "bubble gum for the eyes," thus able to keep the attention of youth who have short attention spans. Providing a different analysis of the content, Wollen (1986) analyzed music videos according to cultural traits: "(1) the fine arts/avant-garde tradition, (2) the mass media, (3) vernacular culture (or sub-cultures), (4) the new technologies (mainly electronic) associated with the 'communications explosion' and the 'information revolution'" (p. 167).

Many music videos are characterized by their lack of fluidity. Gehr (1983) wrote: "If any one troupe sums up the rhetoric of rock video, it's that of discontinuity and disjunction" (p. 39). The videos have a dream-like quality that differs from reality (Kinder, 1984). Rubin, Rubin, Perse, Armstrong, McHugh, and Fait (1986) found that the same music have different meanings, depending upon whether they were in music-video or music-audio forms (p. 353).

Sin and Lull (1987) found that the purpose behind music video viewing for many adolescents is "to find out what popular songs 'mean'" (p. 115). One problem may be that too many different kinds of music are presented back-to-back on television. As Peterson-Lewis and Chennault (1986) explained: "Artists may attempt to broaden their appeal to include audiences with which they traditionally have not been popular, blurring the distinctions between various types of music as a result" (p. 114).

Music Television has changed the relationship between records and radio (Gehr, 1983). After watching a video, the image tends to stays in one's mind so that the image returns when the song is heard later. The listener then remembers the music video's visual elements rather than focusing on
the lyrics to the song. Even when the visuals are abstract or unrelated to the song, they can still enter one's intrapersonal processes at least momentarily. As Kinder (1984) wrote: "One of the most compelling aspects of rock video is its power to evoke specific visual images in the mind of the spectator every time one hears the music with which they have been juxtaposed on television" (p. 3).

Interpersonal Communication. The influence of music videos on interpersonal interaction appears to be largely ignored in current music video research. Many of the respondents' statements, however, included aspects of interpersonal interaction that were caused by the viewing of music videos. Because of this author's desire to emphasize the communication relationship in music videos, the Q-sort included statements related to interpersonal communication. Thus, this fourth area was included to determine if certain person-types watch music videos primarily for interpersonal communication reasons.

Once completed, the Q-sort was administered to a group of over 127 college students enrolled in a large section basic communication course. Each computer program that can be used to analyze Q data has its own characteristics. In this case, QUANAL was used.

The maximum number of variables (people, in Q) that QUANAL can handle is 109, although one sometimes can analyze more if the number of statements is small (e.g. less than 40) or the number of points on the scale is small (e.g. a 7-point scale). Because of the number of subjects in the music video study, the computer could not process the full 127 variables at once. First, the sample was split into two parts (one with 60 subjects and the other with 67) and run as two separate studies. Both worked. Of 127 subjects, 100 loaded on factor one, 12 loaded on factor two (10 negatively), four loaded on factor three (three negatively), and 11 subjects failed to correlate significantly. The three factor solution accounted for 57% of the total variance.

Because of the large group (N = 127) trial-and-error runs were made to see how many sorts could run at once. One run included 107 variables (people). On each run, the three solutions turned out to be virtually identical in factor structure. Had they not, then one could have proceeded to "factor the factors" in the split-halves approach. Instead, variable that was either confounded or non-significant were eliminated. There were about 11 such cases—an unusually small number out of a sample of 107. The high consistency in this case suggests that college students know how they feel about music videos.

To prepare a final run, the nonsignificant cases were replaced from the "left over" cases. All this had to be handled with care to make sure that subject ID numbers
matched the subject numbers on the computer printout. These procedures are quite defensible and, even, commonplace. For interest sake, the data was run in a split-halves approach. Again, the results were most consistent. The results in this case provide strong evidence for the validity of Q methodology.

The correlation for factor loadings was set at .415 because it indicates a .01 level of significance.

Music Video Study Results

The best solution in this study seemed to be a three factor solution, with most people loading on the first factor. Considerations in determining solutions include the number of persons loading on factors, the communality between factors, reflected factors, and the percentage of negative factors. One can determine the nature of each factor from studying the statement array (agree-disagree) for each factor, which represents people's thinking pattern or structured response to the Q-sort. The correlation gives the degree to which individuals are like the person-types. Most researchers give each person-type a label that typified the factor--allowing easy conceptualization--and a brief description. Having used eight different communication-related Q sorts over the years, this author found that most people have loaded on the first factor, which reflects healthy communication behaviors. The same held true in this case. Below are the three types found in this study.

Type 1: The Video Viewer. Type 1 has a positive attitude toward music videos. They like music videos that show friendship and relationships, have plot and meaning, and bring back memories. They enjoy watching videos that have a message, and consider videos artistic and creative. Music videos make them want to sing. They recognize the importance of MTV to the music industry, and they generally enjoy videos. Content and industry characteristics were most important to these viewers.

Type 2: The Listener. Type 2 would rather listen to music than watch videos, and--in fact--they seldom watch videos. They have a more negative and cautious attitude toward videos, showing little enthusiasm for the medium. Interpersonal communication and social interaction were most important to this type.

Type 3: The People Viewer. Type 3 was similar to type one, although less interested in videos and more interested in people. They like videos that make a statement, and generally enjoy watching them. Music videos are important in leading trends in clothing, behavior, and culture. This person prefers people to media, and would rather listen to music than watch videos. Music videos make them feel very energetic. Content is most important to this type.
The sample here was young college students, a prime audience for music videos. If people of other ages had completed the Q sort, the factors may have been different, resulting in more inconsistency in the data. In this case, however, the characteristics of the music video audience—not a general population—was sought.

Theoretical Basis
To determine the value of the Q sort's theoretical basis, the factors then were analyzed regarding the ten most agree and ten most disagree statements, and the categories to which those statements related. By using a Chi-square test for independence, no significant difference was found between factors (Chi-square 6.81, contingency coefficient .32, Cramer's phi prime .24), thus indicating that respondents on all factors considered statements from all four categories important in describing their feelings about music videos. Thus, one may conclude that viewers recognize the influence of music videos on the music industry, they feel that music videos affect social behavior, they consider content important in their response to music videos, and their interpersonal communication is influenced by their music video viewing. The study supports these four categories—industry promotion, social behavior, music video content, and interpersonal communication—as basis for a viable explanation of viewer response to music videos.

Q As An Instructional Tool
Over the years, this author has used Q methodology in a variety of contexts. In the case of the music video study, data was collected from a large section basic course. The main reason for using so many subjects was because large numbers of students volunteered to complete the Q sort. One unexpected result, however, was that in the course evaluation, students frequently mentioned the Q sort on music videos in response to an evaluation about "the most interesting" and the "most thought provoking" part of the course. This author had taught graduate students about Q in research courses and collected data on students, but had never considered Q's potential value as a learning tool. Discussions at the Q conference suggested that Q methodology may be viable for providing the structure for a course.

Therefore, Q methodology was used as the basis for teaching an undergraduate course in interpersonal communication. The sophomore level course was structured around the design and completion of three Q sorts, one for each major unit of the course. The students were given a Q-sort from a previous study as an example for discussion of the objectives and basic techniques of Q methodology and used the lecture-discussion format for teaching about Q.
The following educational objectives in using Q methodology were provided to the students:

1. To allow students to contribute to the advancement of knowledge, which includes testing theories found in the literature. [Students were encouraged to ask questions relevant to research findings on the particular issue being discussed.]

2. To encourage students to study areas of interpersonal communication in which they are interested. [The class as a group decided on the specific area within the unit to be studied through each Q sort.]

3. To teach interviewing techniques. [After providing instruction on interviewing, the students interviewed people of their choice in order to collect statements for a Q concourse.]

4. To stimulate interpersonal discussion with another person(s) of importance to the student. [The interviews themselves and the process of collecting data caused the students to talk with friends and family members about interpersonal communication issues.]

5. To structure the student's thinking on specific interpersonal communication issues. [One of the strengths of doing a Q sort is the thinking process required. The individual must sort through ideas, compare them with his or her own ideas, determine degrees of agreement, and structure his or her thinking. Q sorting is a somewhat complicated, but an interesting and enlightening process.]

6. To compare each student (and their "significant other") to class mates in order to provide insight into their feelings and the feelings of those students around them. [Each student was required to turn in two completed Q sorts for each assignment, one done by a "significant other." The students coded their response sheets so their answers could be anonymous.]

7. To teach students a scientific method for investigating and solving problems. [Two students subsequently used adaptations of the technique.]

Instructional Technique

The class decided to do an additional fourth Q sort during the semester because they were interested in investigating another topic, so a Q-sort was developed on each of the following topics: (a) initial contact in meeting new people, (b) communication differences caused by gender, particularly relating to opposite-sex platonic friends, (c) negotiation and risk in interpersonal
relationships, and (d) termination or ending of relationships (see examples from gender study in appendices).

The quality of statements students obtained increased in sophistication as they progressed, reflecting greater depth of feelings. As Barchak encouraged, people can be poetic with the right kind of probing questions. The increased number and depth of responses indicated that the students improved their interviewing techniques during the semester. The entire process included the following steps for each of the four studies:

1. The students selected a topic to be studied in depth, then read about the topic and discussed the topic in class.
2. Each student interviewed at least one significant other about the topic and obtained statements for the sort.
3. To save time, the teacher selected statements for the Q sort and typed up the statements and answer sheet.
4. Each student completed the Q sort and gave the Q sort to a significant other.
5. The teacher converted the data for computer analysis, determined the relevant factors, student loadings, and made copies of the results for the students.
6. Each student analyzed the factor statement arrays, then wrote a summary of each factor.
7. The teacher wrote a description of each factor based on the students' analyses and gave it to each student.
8. Student discussed the results with their significant others.
9. Each student evaluated the process and learning on his or her final examination.

Instructional Results. The task of compiling, printing, inputing data, and analyzing four Q sorts turned out to be enormous. If help had not hired, the projects would not have been completed on time. It is difficult to collect and analyze data under deadlines, especially when the students want immediate feedback. The same process using only one or two studies and allowing more than a week at the end of the semester for discussion of the projects would have been more realistic.

Instructional Results

During a mid-semester and final evaluation of the process, the students indicated that they considered the use of Q to be a valuable and interesting learning tool. With "10" representing the learning techniques used in the best class and "1" representing techniques of the poorest class
they have had in college, the mean student response rating
of Q methodology was "7." Some example student comments
included: "It produced a sense of accomplishment because
the whole study—from start to finish—was our own
doing....It is a chance to sort out one's thoughts....I
really could relate to the factors that I fell into....It
makes you really dig deep....I'll never forget these Q
studies because they forced me to sit down and take some
time to evaluate who I am and what I believe....Made me
think about my values....I felt overwhelmed by all the
information....The Q studies made me feel better about those
around me as well as myself....Very interesting and
fun....They really did make me think....I was involved in
the process."

The students appeared to learn the basic principles of
Q methodology in addition to interpersonal communication,
and did so in an interested and involved manner. The use of
Q methodology seemed more creative and applied than more
traditional teaching methods. Personally, this author found
the approach to be a way to experiment with Q methodology,
learn more about the technique, and keep motivated.

Resources for Users of Q Methodology

Q methodology is unique, interesting, and
extraordinarily successful for certain kinds of problems.
In this paper, this author has tried to provide sufficient
detail to enable a newcomer to tackle a problem by using Q
methodology. Perhaps the best way to conclude is to provide
some additional resources. This author has never met a
kinder, more generous, more open-minded group of people than
the researchers who use Q methodology. Perhaps using the
technique makes the researcher more likely to question
traditional forms of research, to respect the varied
intrapersonal processes of people, and be more inclined to
use new and creative approaches.

William Stephenson has several articles and eleven
book-length manuscripts in progress, as he continues to work
from his home: 2111 Rock Quarry Rd., Columbia, Missouri,
U.S.A., 65201. Probably the two most important works on Q
methodology are Stephenson's (1953) The Study of Behavior
and Brown's (1980) Political Subjectivity: Applications of
Q methodology in Political Science. Steve Brown is also
quite approachable to people seeking help with Q
methodology, and can be reached at: The Political Science
Department, Kent State University, Kent, Ohio, U.S.A., 44242
(area code 216-672-2060). Brown edits Operant
Subjectivity—an inexpensive journal that deals exclusively
with Q research—which is worth reading. He also has
compiled the most extensive bibliography on Q and heads the
annual Q conference that meets each Fall in Columbia,
Missouri, U.S.A. Len Barchak continues his work in communication at the Communication and Theatre Dept., McNeese State University, Lake Charles, Louisiana, U.S.A. 70609.

There are several computer programs available to analyze Q data: PCQ by Strickland; CENSORT for mainframes from the University of Iowa; Stephenson's ROSETTA; Hanley's PC program, Vantubergen's QUANAL for mainframes; Brown's JINNI for mainframes, and Barchak's statement program (personal conversation, S. Brown, November 17, 1987). For those who prefer to pay to have someone else run the data before investing in a program, they can find help from Donald J. Brenner, Director, The William Stephenson Research Center, School of Journalism, University of Missouri, Columbia, Missouri, U.S.A., 65205.
References


Appendix 1: Music Video Q-Sort

(4) Industry Promotion (Positive)

23. I enjoy watching music videos.

25. Music Television (MTV) has given musicians the broad public exposure necessary to make hit records.

31. Music Television (MTV) leads trends in clothing, behavior, and culture too.

39. I'd rather watch music videos on television than listen to music on the radio.

(3) Industry Promotion (Neutral/Mixed)

32. When I see a music video I really like, I go out and buy a record, disc, or tape.

34. I'm in love with some of the music video performers.

41. I buy more records and tapes when I see a lot of music videos I enjoy.

(6) Industry Promotion (Negative)

30. The music video industry is for kids.

37. Music videos are just advertisements for the music industry.

38. I seldom watch music videos.

42. I prefer listening to my favorite music rather than a bunch of music videos on television.

43. Music videos end my need for attending concerts.

44. I pity the people caught up in this music video nonsense.

(2) Social Behavior and Response (Positive)

9. Music videos make me feel very energetic.

50. Music videos make me want to sing.

(1) Social Behavior and Response (Mixed/neutral)
51. Music videos make me want to smoke and drink because they remind me of a bar.

(10) Social Behavior and Response (Negative)

12. I don't think young children should be allowed to watch music videos.

13. Music videos make me feel sexually deprived.

14. Music videos make me feel like raising hell!

15. Music videos are selling sex: they are too suggestive.

17. Music videos often use women as sex objects.

18. For the most part, I am bored or disgusted with music videos.

20. I don't feel anything when I watch music videos. They make me numb.

21. Some music videos make me want to kill soft furry things.

40. Some music videos make me want to take a bathroom break during the video and come back for the commercials.

48. Some performers are sick. I wish they would die!

(3) Music Video Content (Positive)

19. I enjoy watching videos which make statements, have a message with the music and visual effects.

22. I like videos with plot and meaning.

27. Music videos are very artistic and creative.

(2) Music Video Content (Neutral/Mixed)

26. I like the ones that simply show the performers singing, without a lot of visual effects.

28. The quality of the music and lyrics are the most important part of a music video.

(8) Music Video Content (Negative)

3. Music videos turn me off because they give music a bad name.
6. I like the music videos involved in satanic activities.
10. I like the music videos with violence.
16. Music videos have no meaning.
29. After seeing the video, that's all I see when I hear the song.
35. I hate the music videos in black and white.
36. I like the music videos with leather, sadomasochism, and sex.
52. Half naked, beautiful girls are almost always a must in today's videos.

(6) Interpersonal Communication (Positive)
1. Music videos really bring back memories about people I like to be with.
2. I like to watch music videos with other people. Actually, if I am not already with someone else, music video viewing often makes me call or visit a friend.
11. Music videos make me want togetherness.
45. I like music videos that show friendship and relationships.
46. Music videos make me want to dance with someone.
47. Music videos remind me of going with friends.

(3) Interpersonal Communication (Mixed/neutral)
4. Music videos are great when you want to party.
24. Music videos kill time when I'm alone.
48. Music videos make me ache to be with the person I love.

(4) Interpersonal Communication (Negative)
5. Music videos are a waste of time.
7. I'd rather be doing just about anything other than watching music videos.
8. I prefer people to media.
33. I like to watch music videos alone. In fact, they make me want to be alone.
INSTRUCTIONS: You have been given a stack of 52 statements. These statements relate to communication patterns among men and women. Think about your communication with people with whom you have relationships. Please sort these statements according to your first impression, how you feel today.

Step 1. Begin by reading the statements and placing them in 3 piles: (1) those you agree with, (2) those you disagree with, and (3) those you feel neutral or undecided about.

Step 2. Then take your "agree" pile and select from it the 2 statements with which you agree most strongly. Record the numbers on those statements in the 2 squares in the far-right ("+5") column of the figure below. From the remaining "agree" statements choose the 3 with which you agree next most strongly and record their numbers in the column with a "+4" over it. Repeat this procedure until there are no remaining statements in your "agree" pile.

Step 3. Next, take your "disagree" pile and follow the same procedure, except begin with the far-left ("-5") column for your "most disagree" statements. Continue to work toward the middle until you have recorded the numbers of all your "disagree" statements. You probably will not have equal numbers of agree and disagree statements, which is fine.

Step 4. Finally, take your "undecided" pile and arrange these statements in the middle. If you agree slightly with the statement, place its number toward the right and if you disagree slightly, place its number toward the left of the neutral area. Remember, it doesn't matter whether the agree-disagree balance is exact. Simply work from the extremes toward the middle, and your answers will be recorded correctly.

Be sure to put a number in every box. Use each number only once. (THIS IS VERY IMPORTANT). When you are finished, return this sheet and the stack of statements. Remember to complete the information items at the bottom of the page.

<table>
<thead>
<tr>
<th>MOST DISAGREE</th>
<th>NEUTRAL AREA</th>
<th>MOST AGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>-5</td>
<td>-4</td>
<td>-3</td>
</tr>
<tr>
<td>-2</td>
<td>-1</td>
<td>0</td>
</tr>
<tr>
<td>+1</td>
<td>+2</td>
<td>+3</td>
</tr>
<tr>
<td>+4</td>
<td>+5</td>
<td></td>
</tr>
</tbody>
</table>

Name (optional): ____________________ Age: __ Sex: F___ M___ Date: ___

Please double check to make sure you have recorded a number in every box and recorded each number only once. Thank you.

ERI
Appendix 3: Gender Q Sort
Developed by Undergraduate Interpersonal Class

1. Some of my closest platonic friends are members of the opposite sex.

2. I can open up more to someone of the opposite sex.

3. A platonic relationship is in itself a rare form of love.

4. I share everything with my friends, except sex.

5. Women are not as loyal as men in their relationships.

6. Women friends are more competitive with each other than men are competitive with each other.

7. It makes me angry when other people think there is something romantic going on between us (opposite sex platonic friends).

8. Because I am involved in team sports, I find myself showing male mannerisms toward women.

9. You can have best friend relations between opposite sexes before you are married, but after that, husband and wife should be best friends.

10. Some mother and son relationships make it hard for the son to relate to other women.

11. Women are more open with their friends, while men are more secretive.

12. I would rather have a platonic relationship than any other kind.

13. I get jealous when my partner has friends of the opposite sex.

14. Men may show that they are angry by throwing something or yelling, but I cannot remember a male ever confiding that he is upset or depressed.

15. Male and female gender is not what makes communication different, it is the individual.

16. It is easier to have a deep conversation with a friend of the opposite sex than one of my own gender.
17. Touching and hugging is too intimate for a platonic relationship.

18. It is easier to "tell off" someone of the opposite sex than someone of my own gender.

19. Women get more emotional support from other women than men get from men.

20. Platonic relationships are generally longer lasting than those with romantic and sexual involvement.

21. In woman to woman relationships, if there are children, friendships get harder.

22. I have never come close to a member of the opposite sex without first being lovers.

23. I think my best friend will be there forever for me. The only thing that might end our relationship would be a spouse who could not accept our love.

24. My closet friend lives far away. I imagine talks to discuss problems in my life.

25. Males hold grudges longer than females.

26. Most of my friends are of the opposite sex.

27. When I tell a man confidential information, I can trust him more than I could if I told a woman.

28. I'd rather work or study with a female friend because they're more focused and serious than the guys—they know what needs to be done and they do it.

29. I avoid opposite sex platonic relationships because of what "people may think."

30. If my intimate partner has time to do something with a platonic friend, s/he should have the time to do something with me first.

31. I hate the way people spread rumors about a purely platonic male-female relationship.

32. Women's best friends change as they go through life. Men keep the same friends throughout life.

33. Women are easier to talk to than men.
34. Men have more casual close relationships than women, who always need to know all the deep dark secrets.

35. I sometimes have sexual fantasies about a platonic friend.

36. I want my partner to be friends with my friends.

37. Having a friend of the opposite sex helps open my eyes to the basic feelings of the opposite sex.

38. At a party, it is easier to start talking to someone of the opposite sex than someone of my own sex.

39. I am intimidated more by someone of my same gender than one of my opposite gender.

40. A person of the opposite sex who is unattractive or unappealing to me is easier to become friends with. The expectations and inhibitions involved with romantic attraction are not present.

41. It is easier for me to manipulate people of the opposite sex.

42. Females are better listeners and helpers than males are.

43. My male friends are friends for life.

44. I would more often entrust a member of my own sex with an intimate secret about my past.

45. I maintain more active friendships than most people do.

46. Women talk to me about intimate things more than men do.

47. Platonic relationships are easier to maintain with someone I have known since childhood. I could never think of these kinds of friends in a sexual sense.

48. In developing a relationship between sexes, the males I know need more time to develop trust than the women I know.

49. Long term close friends don't have to worry about trust. That aspect of the relationship was worked out years ago.
50. I find females to be more open-minded and jolly. Males scare me with some of their attitudes.

51. Usually the people who give a male and female (who are just friends) trouble about being "just friends" are jealous because they don't share such a unique relationship with anyone.

52. If I were to be unfaithful to my partner, it would probably be because of one of my partner's best friends.
Appendix 4: Student Analysis of Gender Study Results

The data suggests a four factor solution (N=39). Significant factor loadings (.4125 level) were as follows: factor 1, 24 positive; factor 2, 1 positive, 2 negative; factor 3, 2 positive, 1 negative; nine not significant or confounded loadings. Each student turned in a paragraph description of each factor-type. The responses were compiled, omitting information that was very similar. The teacher omitted analysis that portrayed any factor in very negative terms. Below is a compilation of student descriptions of factors (note that sexist language and analysis that conflicts between students is included). The descending array of z-scores and item descriptions for the three types follow the student analysis.

**Type 1**

This person finds platonic relationships to be unique and fulfilling to the extent of what is put into the relationship is what is received out of it. Friendly, supportive and open-minded are a few of their qualities. This person will be your friend through thick and thin. S/he has more women friends than men friends, and s/he feels that women are easier to talk to. Their platonic friendships with the opposite sex are exactly that and nothing more.

This type puts a lot of emphasis on their friends, and they are open with their relationships. They also have realistic and modern views about relationships.

Someone in touch with their feelings. S/he is only concerned with him/herself. Not afraid to have opposite sex friends.

Very open person.

The friendly social person. It seems to me that this type wants to be friends with everyone. They also want everyone to be friends with each other. This kind reminds me of the question-answer period in the Miss American Pageant-runway speech. They want to say something that pleases everyone.

Friendly with males and females, but not many close platonic friends of the opposite sex. Strong identity with women friends--more trusting of females than males.

Trying not to be sexist. They want to be judged as an individual, not part of a group.

This person feels more secure and confident around people of his or her own sex. Though she isn't afraid of male companionship--due to the obvious acceptance of platonic relationships, she feels able to share more with a female friend.

This person realized that society treats males and females differently, especially in a personal realm. They
know that men and women have roles that are unique to each
gender. This person also realizes by communicating with
others of the opposite sex and looking for insight, they
will be able to communicate with more insight and
sensitivity.

**Type 2** [Some student responses directly contradict this case.]

This individual seeks approval from men. She confides
in them, prefers men as her closest friend, and she finds
men easier to talk with. Because of her confidence with the
opposite sex, she views herself as being outgoing and able
to handle deep conversations with the opposite sex. She has
had poor experiences with women, finding that they hold
grudges, and she feels more able to tell them off.

I think that this would be a young person. It would be
the opposite of the first person. They are more towards
that of a man's tendency.

They tend to be more positive towards a man and as it
goes down, the evidence supports that they don't support
women's actions.

He has a lot of friends and knows a lot of people.
This person will have more of a tendency to want more
out of a platonic relationship.
This person thinks men are a little easier to talk to.
They are active and interact well.
This personality is outgoing, extroverted, enjoys life
and the presence of others.

This person, if a man, is one who has been raised with
sisters or is married because he expresses favorable
attitudes toward women.

**Type 3**

An observer, quite introverted.

This person appears insecure and needs others to
reassure them. They seemed to notice people's actions and
appearances, are watchful of others.

They tend to talk about friends in the long-term.

Confident with a variety of people, she is more of a
realist and accepts life. More mature.

Does not have close friends. They have had
unsuccessful romantic encounters and would prefer to have
platonic relationships.

Seems to have had many relationships, platonic or
intimate that have fallen through. Seems untrusting of
their partner's platonic relationships or female-female
relationships. Believes that gender isn't as important as
the individual.

Women are shallow in this type's view. They seem to be
identifying with a traditional male attitude.
35. I sometimes have sexual fantasies about a platonic friend.

36. It is easier to "tell-off" someone of the opposite sex than of someone of my own gender.

37. Females are better at keeping secrets than males are.

38. Women talk to me about intimate things more than men do.

39. I am intimidated more by someone of my same gender than by one of my opposite gender.

40. Some of my closest platonic friends are members of the same sex as I am.

41. Platonic relationships are generally longer lasting than those with romantic and sexual involvement.

42. Women tend to spread rumors about a purely platonic relationship.

43. Long-term close friends don't have to worry about trust.

44. I have best friend relations between opposite sexes.

45. You can have best friend relations between opposite sexes before you are married, but after that, husband and wife have the only thing that might end our relationship, would be death of the individual.

46. Males are more focused and serious than the guys they know what needs to be done and the do it.

47. Men may show that they are angry by throwing something, whereas women are more likely to say things.

48. Males hold grudges longer than females.

49. Women's best friends change as they go through life.

50. It is easier to have a deep conversation with a friend of the opposite sex than one of my own gender.

51. I hate the way people spread rumors about a purely platonic relationship.

52. I would rather have platonic relationships than any other kind.

53. I have opened up more to someone of the opposite sex.

54. Men are more likely to get angry at each other.

55. Males are more competitive with each other than females.

56. Women are better at keeping secrets than males are.

57. Because males are more Likable than females, I tend to trust myself.

58. Women's best friends change as they go through life.

59. It is easier to have a deep conversation with a friend of the opposite sex than one of my own gender.
SEXUAL RELATIONSHIPS, I
MAINTAIN MORE ACTIVELY THAN MOST PEOPLE DO.
IN THE BASIC FEELINGS OF THE OPPOSITE SEX.
I SOMETIMES HAVE SEXUAL FANTASIES ABOUT A PLATONIC FRIEND.
I SHARE EVERYTHING WITH MY FIRES EXCEPT SEX.
MALE AND FEMALE GENDER IS NOT WHAT MAKES COMMUNICATION.
I HATE THE WAY MY MALE/FEMALE RELATIONSHIP IS PURELY A PURE.
IT MAKES ME ANGRY WHEN OTHER PEOPLE THINK THERE IS
GOING ON BETWEEN US.
I WOULD MORE OFTEN TRUST A MEMBER OF MY OWN SEX WITH
PLATONIC FRIENDS.
I TELL A MAN CONFIDENTIAL INFORMATION I CAN TRUST
MORE THAN FEMALE WHO ARE USUALLY MY BEST FRIENDS WHO ARE
JUST FRIENDS TROUBLE ABOUT BEING "JUST FRIENDS" ARE JEALOUS
BECAUSE THEY DON'T SHARE SUCH UNIQUE RELATIONSHIP WITH ANYONE.
WOMEN ARE THE SAME FRIENDS THROUGHOUT LIFE.
WOMEN TALK TO BE ABOUT INTIMATE THINGS MORE THAN MEN DO.
YOU CAN HAVE MORE RELATIONSHIPS WITH EACH OTHER THAN
BEFORE YOU ARE MARRIED, BUT AFTER THAT HUSBAND AND
WIFE SHOULD BE BEST FRIENDS.
THOSE WITH ROMANTIC AND SEXUAL INVOLVEMENT
WOMEN ARE MORE LIKELY TO HAVE A DEEPER CONVERSATION WITH A FRIEND.
MY CLOSEST FRIEND LIVES FAR AWAY, I IMAGINE TALK TO
IF I DISCUSS PROBLEMS IN MY RELATIONSHIP WITH MY PARTNER—IT WOULD
PROBABLY BE BECAUSE ONE OF MY BEST FRIENDS.
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MEN ARE MORE COMPETITIVE WITH EACH OTHER THAN
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A PAINFUL EXPERIENCE IN AN UNAPPRECIATED RELATIONSHIP—NOW IS EASIER TO BECOME FRIENDS WITH THE EXPECTATIONS AND
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I THINK MY BEST FRIEND WILL BE THERE FOREVER FOR ME.
THERE ISNOTHING THAT COULD NOT BE ACCEPTED IN OUR LOVE
THAT ALL THE DEEP, DARK SECRETS.
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MORE SECRETIVE.
BECAUSE I'M INVOLVED IN TEAR SPOTS, I FIND MYSELF
PLATONIC RELATIONSHIPS ARE EASIER TO MAINTAIN WITH
BETTER FRIENDS IN THE SAME GENDER, SHE COULD NEVER THINK OF
IF MY INTIMATE PARTNER HAS THE TIME TO DO SOMETHING WITH A
PLATONIC FRIEND—SHE SHOULD HAVE THE TIME TO DO SOMETHING.
FEMALES ARE BETTER LISTENERS AND "HELPERS" THAN MALES ARE.
SOME WOMEN ARE MORE FRIENDLY TO OTHER WOMEN THAN TO MEN.
WOMEN TO MEN RELATIONSHIPS IF THERE ARE CHILDREN.
AND DESIRE A RELATIONSHIP BETWEEN SEXES, MALES KNOW
HEED MORE TIME TO DEVELOP TRUST THAN THE WOMEN.
I LIE MORE THAN SOMEONE OF MY OWN GENDER.
IF I LIE, IT IS NOT MORE OPEN MINDED AND JOLLY—MALES.
IF I WORK OR STUDY WITH A FEMALE FRIEND BECAUSE
THEY ARE MORE FEELING AND SENSITIVE THAN THE GUYS, THEY KNOW WHAT
MALES ARE TOLD DRUGS LONGER THAN FEMALES.
TEACHING IS TOO INTIMATE FOR A PLATONIC
I WOULD RATHER HAVE A PLATONIC RELATIONSHIP THAN ANY
I AVOID OPPOSITE SEX PLATONIC RELATIONSHIPS BECAUSE OF
WHAT THE OTHER MAY THINK
I HAVE NEVER BEEN A MEMBER OF THE OPPOSITE SEX WITHOUT FIRST BEING LOVERS.
41. \text{I want my partner to be friends with my friends.} \quad 0.82
49. \text{Long-term close friends don't have to work about trust.} \quad 0.82
34. \text{Men have more casual close relationships than women, who} \quad 1.49
37. \text{Having a friend of the opposite sex helps open my eyes} \quad 1.27
13. \text{I get to the basic feelings of the opposite sex.} \quad 1.18
30. \text{If my intimate partner has time to do something with a} \quad 1.17
12. \text{I hate the way people spread rumors about a purely} \quad 1.16
16. \text{My male friends are friends for life.} \quad 1.01
44. \text{I would rather have more friends of my own sex with} \quad 0.98
45. \text{Platonic relationships are generally longer-lasting} \quad 0.88
42. \text{Platonic relationships last itself a rare form of} \quad 0.78
6. \text{I maintain more active friendships than post people do.} \quad 0.68
7. \text{It makes him feel I think there are other men.} \quad 0.68
27. \text{When men get personal information, I can trust} \quad 0.41
17. \text{Touching and hugging is too intimate for a platonic} \quad 0.40
48. \text{In developing a relationship between sexes, males I know} \quad 0.38
19. \text{Women are less susceptible from other women than men} \quad 0.38
33. \text{Women are easier to talk to than men.} \quad 0.29
21. \text{In woman to woman relationships, if there are children,} \quad 0.17
11. \text{Women are more open with their friends, while men are} \quad 0.17
39. \text{I am intimidated more by someone of my same gender than} \quad 0.12
51. \text{Usually they are male and female (who are} \quad 0.43
28. \text{I'd rather have male friends because they're more focused and} \quad 0.04
9. \text{You can't develop a relationship between opposite} \quad -0.05
4. \text{I think my best friend is someone of the opposite sex.} \quad -0.24
18. \text{It is easier to tell off someone of the opposite sex.} \quad -0.28
58. \text{At a party, it's easier to start talking to someone of} \quad -0.28
43. \text{My male friends are my sex.} \quad -0.93
10. \text{Some mother and son relationships make it hard for the} \quad -0.49
26. \text{Most men are like the opposite sex.} \quad -0.51
30. \text{I find females to be more open-minded and jolly.} \quad -0.53
6. \text{I feel that I can understand myself.} \quad -0.69
16. \text{It is easier to cooperate with a friend of the opposite sex than one of my own gender.} \quad -0.70
14. \text{Men may show that they are angry by throwing something} \quad -0.94
29. \text{I avoid opposite sex platonic relationships because of.} \quad -1.07
24. \text{My closest friend leaves far away, I imagine talks to} \quad -1.09
25. \text{Males are more verbal than females.} \quad -1.10
41. \text{I am easier for me to manipulate people of the opposite sex.} \quad -1.14
46. \text{I feel that everything with my friends except sex} \quad -1.19
23. \text{I think my best friends will be there forever, for me.} \quad -1.19
12. \text{I would rather have a platonic relationship than any.} \quad -1.22
40. \text{A person of the opposite sex who is unattractive or unappealing} \quad -1.52
35. \text{I sometimes have sexual fantasies about a platonic} \quad -1.89
52. \text{If I were unfaithful to my partner, it would probably} \quad -2.00
22. \text{I have never come close to a member of the opposite sex.} \quad -2.02