Q Methodology and Social Marketing: Interpreting Racial Attitudes toward Health Care

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Abstract: *Research indicates that African-Americans are more at risk than Caucasians for several diseases, such as cancer and high blood pressure. Large numbers of African-Americans delay treatment until their diseases become life threatening. This study compares the attitudes of African-Americans and Caucasians toward the American health care system. Q methodology and social marketing techniques are used to determine audience segmentation. There are specific attitudinal differences between African-Americans and Caucasians that may help explain why African-Americans have less satisfactory interaction with the American health care system than do Caucasians.*

Introduction

In the foreword to his 1967 report on medical communication, William Stephenson wrote:

> There is no lack of the means of communication — of books, brochures, pamphlets, films, telephones, lecturers, close-circuit [*sic*] television, and the rest. There is no lack of faith, also, in the belief that "to communicate is the beginning of understanding." This report, however, suggests the opposite, that "to understand is the beginning of communication" (Stephenson 1971, i).

Stephenson investigated many of the health concerns of African-Americans in Kansas City, Missouri, in the 1960s. His main goal was to increase participation in what was then the Wayne Miner Neighborhood Health Center (now the Samuel Rogers Health Center). He and a team of researchers (many of whom were his students) examined values, attitudes, and opinions of those who would most benefit from the Center and formulated pamphlets and films based on Stephenson's theories of communication and advertising. Stephenson summarizes the research he and his students completed in the Vergent Report as follows:

> It is widely held, to judge by the universality of its practice, that if only we could *inform* people about medical matters they would take notice and do what is necessary about them. Efforts are made to make the information

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> interesting, with lively copy, fine photography, expert typography, first-class film direction and production and the like: our studies show, however, that all of this is to no avail unless and until the intended audiences are studied, and their interests understood. For it is amongst the first laws of communication that audiences only really attend to what interests them in a personal sense — it is not an interesting film or pamphlet *per se*, but an *interest in the person* to which the pamphlet makes its ploy. A person ill with cancer is unlikely to care much about typography but a lot about the conditions of cancer, simply explained from his or her standpoint and not merely as items of information from the physician's standpoint (Stephenson 1971).

Thus, the primary purpose of this study was to use Q methodology, as Stephenson did, to study the attitudes of African-Americans and Caucasians toward the American health care system (Sylvester 1998). The secondary purpose was to determine whether the Q types could be used to segment a larger, random sample drawn from three urban areas with significant African-American populations.

African-American Health Problems

African-Americans are more affected than other races by some diseases — such as sickle cell anemia, diabetes, and high blood pressure. In the mid-1980s, black Americans had a 1½ times higher death rate than whites of the same age, and the rate of infant mortality for blacks was twice that of whites (U.S. Dept. of Health and Human Services 1986). More recent statistics show that in 1997 life expectancy at birth was approximately five years longer for white women than for black women and seven years longer for white men than for black men. Nineteen percent of African-American adults, compared with 14.9% of Caucasians, were without a usual source of health care (National Center for Health Statistics 1999a). Black infants continue to die at twice the rate of white infants, and they are more than four times as likely as white infants to die from the cause of death category disorders related to low birthweight (National Center for Health Statistics 1999b).

The generally poorer health status of African-Americans, particularly with regard to certain illnesses, mandates that effective messages be designed and delivered to this group. However, to date the American health care system has made very little effort to stratify and then target specific messages to the needs of the population market segments it serves. Although a large body of medical literature describes the specific health needs that afflict African-Americans — especially in the areas of cancer, heart disease, high blood pressure and diabetes — very little of it discusses the need for specific ways to reach this population with preventive interventions. There is, however, a general awareness that many African-Americans delay seeking conventional medical care until they are very ill.

This behavior frequently is attributed to economic factors and to health care barriers such as transportation and medication costs. Little attention is paid to other possible reasons that might have cultural roots. For example, the black culture has an active folk medicine system that encourages the use of folk remedies first or in combination with Western practices of biomedical treatment (Hopper 1983).

Looking toward the future, planning, and preventive health measures may be inconsistent with the strong "sense of the present" that exists in the African-American community (VanSon cited in Anderson et al. 1991). As a result, it may be difficult to convince some black patients to care for their diabetes today to prevent future complications. Members of minority groups, particularly older people, may exhibit a fatalistic or helpless attitude. If people believe there is little that they can do to influence their health, they may not seek treatment or follow prescribed treatment plans. Many white health care professionals do not understand or appreciate differences in verbal and non-verbal language usage by blacks. For example, English language as used by many blacks may have different pronunciations or meanings from those that a white would expect. Body language also differs. Blacks may move close while talking, for example, and look away while listening, exactly the opposite of most whites in America (VanSon 1981). Stephenson argued that simply bombarding people with facts or information does not work. Rather, individuals have to be approached in terms their own priorities, their values, beliefs, and opinions (Stephenson 1971, i).

Stephenson's Q Applications

Stephenson, of course, used Q methodology to study the values, beliefs, and opinions of employees and patients at the Wayne Miner Neighborhood Health Center (Stephenson 1971, 7). He determined that people form images of the world around them, which he called "schemata." Further, he believed it is possible to communicate with people only in terms of *their* schemata (Stephenson 1971, 9). In subsequent work, Stephenson refers to "concourses" rather than "schemata" when discussing how people form attitudes. Four schemata were found in the population he studied in the 1960s, and they were described as follows:

> One (A) was that of the relatively poor (lower middle class), which was in some sense fatalist and unhappy about medical matters in general, with no conceptions about how to deal with medical and health problems at a national level. Another (B) was highly supportive of the medical profession as it was — of course physicians and nurses were so inclined. The third (C) was critical of medicine, feeling that something should be done for the aged, and the poor. The fourth (D) were housewives who had a special relationship to physicians, chiefly through child care practices in the schools. No one, at that time (1965-67) displayed any feeling or belief in what would be described as "socialized medicine" in other Western nations (Stephenson 1971, 14).

Stephenson and his team of researchers used this information to develop a series of people-oriented pamphlets. His overall conclusion was that selecting content and design in accord with the various population schemata and then finding ways to facilitate the communication achieved the most effective communication.

Stephenson's work in the health care area has many commonalities with social marketing as it is applied to health campaigns. Similar to other campaign techniques, social marketing includes a definition of the problem and a set of objectives that can be clearly specified and implemented, such as identifying the health problem, conducting research, and pinpointing the target audience (Manoff 1985, 106-15). Grunig advocates the reliance on a "nested approach" to segment audiences — that is targeting easily identifiable groups in order to reach the smaller, more subtle and hard-to-assess segments included within the groups. However, social marketing most often relies on focus groups as the way to determine these "nests" (Grunig 1989, 206). Q methodology provides an alternative and more efficient method to accomplish segmentation.

Methods

Two methods were used in this study to accomplish audience segmentation and to suggest how health care messages might be targeted toward them. Q methodology was used for the initial segmentation, and then a large-sample telephone survey was conducted using the Q statements. The R method survey was used to extend the Q types to a large, random sample.

The Q Study

The first step was the use of several sources such as focus groups and medical literature to identify self-referent statements that reflected various opinions about the American health care system. Focus group interviews, used since the 1930s, are useful for instrument development, illustration, sensitization, or conceptualization (Knafl and Howard, 17-24). In this study focused discussions were used to gain a better understanding of African-American health concerns, test terminology, formulate hypotheses, and elicit statements for the Q sort.

The first group was convened in St. Louis, Missouri, in 1992, with members of a diabetes support group that met at St. Louis County Hospital in the inner city area. Because more than 30 people attended and no control was exercised over those who attended, it was more of a group discussion than a traditional focus group. These participants discussed why they attended a support group and several described how they first learned that they had diabetes. Some said that although they had a parent or grandparent with the disease, it was not discussed openly in the family. Therefore, they had no

knowledge of the inherited tendency to develop diabetes. They also discussed some barriers they faced in obtaining proper diagnosis and treatment.

In 1993 three traditional focus groups were convened. These ranged in size from 6 to 12 and included both male and female African-Americans between the ages of 30 and 70. Participants in the first group had participated in glaucoma, diabetes, and hypertension screenings at black church clinics sponsored by the Black Healthcare Coalition in Kansas City, Missouri. This group discussed the role of religion in health care as well as how poverty and segregation had influenced their health care and their attitudes toward the health care system.

The other two groups, held in St. Louis, Missouri, and Atlanta, Georgia, in 1993 were part of a Sears Foundation/National Newspaper Association project intended to help redesign African-American newspapers. A newspaper health page prototype was used to facilitate the discussion about what kinds of stories might gain their attention and how much credibility black newspapers and the media in general had when reporting health information. Groups also talked about their attitudes toward the health care system and how personal experiences had shaped those attitudes. The author, who has conducted a number of focus groups unrelated to this topic, was the moderator for each group and, thus, was able to include discussions relevant to this study.

All the self-referent statements of relevance were extracted from the focus/ discussion group transcripts and relevant health-related journal articles. The following underlying constructs emerged:

1) Specific problems of blacks (7 statements)
2) Facilitators (3 statements)
3) Attitudes toward the health care system (7 statements)
4) Attitudes toward health (9 statements)
5) Access (14 statements)
6) Prevention (2 statements)
7) Health information (7 statements)

These 49 statements of opinion made up the structured Q sample. The number of statements in each underlying structural component was weighted proportionally with the total number of statements representing that idea in the concourse. For example, access to health care was the area that provided the most statements overall; and all of the access issues that surfaced in the discussion were represented in the Q sample.

Some of the subjects who participated in the focus groups were also selected to make Q sorts because their demographics (including race) were known. Additional subjects were selected from a list of attendees at the 4th Biennial Symposium on Minorities, the Medically Underserved and Cancer:

Cultural Diversity, Poverty, and Health Care Reform that the author attended in 1993. An administrator at a state university also assisted in the recruitment of some black and low-income subjects. Two subjects were identified from their responses to an advertisement placed in a church newsletter. These subjects were sent the study materials, including a demographic/media use questionnaire, through the mail. Every effort was made to get a balance of males and females, blacks and whites, high, middle, and low income levels and high and low education levels. In addition, two physicians (one black and one white) were asked to participate. Subjects were given a grid to complete that contained 11 columns numbered from -5 to +5 (most disagree to most agree), resulting in a forced distribution that approximated a normal curve.

The Q sort data were analyzed using PCQUANAL (Van Tubergen 1986). The intercorrelation matrix of 57 by 57 persons was examined using Pearson product moment correlation coefficients. Five Q types were obtained from factor extraction followed by rotation, and descriptive labels were assigned: Equalizers, Preventers, Empathizers, Adjusters, and Fixers. Each factor had unique perspectives (which revealed a racial bias) on the health care system, barriers to health care, disease prevention, solutions to health care problems, and the credibility of various sources of health care information. One person completed a unique Q sort that did not load significantly on any factor and is not included in the discussion of the types.

Results

Two of the types were highly correlated (0.825). Equalizers and Adjusters might be considered as subcategories of the same overall attitude, although the first type was more racially mixed than the second.

Equalizers and Adjusters

"Equalizers" were so named because they saw discrepancies in equal access and rights to receive comparable health care. Participants who defined or loaded strongly on this type wanted to see those discrepancies equalized. The health needs of children and the elderly poor were of special concern to this factor. Above all, they want everyone to enjoy equal access. Comments collected from the subjects indicated a particular concern for the poor and disadvantaged in American society. Some obviously saw the issue as an economic problem, while others focused more on access. Equalizers strongly believed that lack of access to basic health care had reached a crisis point. Some blamed economic factors while others saw the spread of serious illnesses, such as AIDS, as the trigger. Lack of adequate insurance coverage also was an important issue for them. Equalizers cared about the way people were treated. They felt people were more likely to participate (in the healthcare system) if they were recognized as persons rather than labeled in minority

Factor 1: Equalizers - Strongest Agreement (Z-Scores of +1 or greater)

No.	Statement	Z
24	Lack of access to basic health care is an urgent issue currently troubling American society.	1.85
21	I believe that all Americans have a right — not a privilege — to health care.	1.62
36	Everyone does not have equal access to health care.	1.57
31	People are more likely to participate when they are recognized as a person, rather than labeled into minority groups.	1.48
38	Preventive health efforts must be improved in disadvantaged areas.	1.33
14	It is appropriate to use newspapers to try to get information out about health risks.	1.12
44	The whole health care delivery system needs to be overhauled.	1.11
13	If I felt by taking some precautions I could save myself money down the line I might take preventive measures to avoid that.	1.07

Factor 1: Equalizers - Strongest Disagreement (Z-Scores of -1 or greater)

No.	Statement	Z
10	Getting the health care I need is usually too much trouble.	-1.00
30	Churches really have no role in promoting better physical health.	-1.02
45	I have a great deal of pride in the American health care system.	-1.03
34	I know all I need to know about how to stay well.	-1.25
16	If I need medical care, I will most likely go to a hospital emergency room rather than to a private physician.	-1.30
43	My inclination is to stay away from doctors because you're not really sick until the doctor says you are.	-1.32
40	Racial barriers to health care are not an issue.	-1.35
7	There is not much I can do to keep from getting sick.	-1.49
17	Illness can be a punishment from God.	-1.50
33	Illnesses are not discussed in my family.	-1.60
6	I only need to worry about today because the future will take care of itself.	-1.65
5	We do not have a health care crisis in this country.	-1.97

groups. They expected physicians and health care practitioners to respect the culture of the people they were trying to reach.

The Equalizer factor was composed of 59% African-Americans and 36% whites. The one Hispanic in the P sample also was included in this factor. This group was the most diverse in terms of race and income, and its members were more highly educated than others in the P sample. Equalizers trusted their sources of health information, but perhaps this was partly because they relied on medical personnel and medicine-related publications more than the Adjusters.

Factor 2: Adjusters - Strongest Disagreement (Z-Scores of -1 or greater)

No.	*Statement*	*Z*
33	Illnesses are not discussed in my family.	-1.08
30	Churches really have no role in promoting better physical health.	-1.10
16	If I need medical care, I will most likely go to a hospital emergency room rather than to a private physician.	-1.12
10	Getting the health care I need is usually too much trouble.	-1.16
2	Doctors are prejudiced against Blacks.	-1.22
43	My inclination is to stay away from doctors because you're not really sick until the doctor says you are.	-1.26
5	We do not have a health care crisis in this country.	-1.38
6	I only need to worry about today because the future will take care of itself.	-1.42
34	I know all I need to know about how to stay well.	-1.49
1	Blacks are reluctant to obtain early treatment for illnesses because care is provided by white medical personnel.	-1.64
17	Illness can be a punishment from God.	-1.78
7	There is not much I can do to keep from getting sick.	-1.49

Similarly, Adjusters believed that health care is most available to those who have the means to pay for it and that education is the key to improving the general health of the population. Adjusters were less likely than Equalizers to think the entire health care system needed to be overhauled. They preferred to "adjust" the system, rather than to move to an entirely new one. Adjusters were partly distinguished from the other types by their attitude about the reason for inequity in access; they strongly believed economic differences were to blame for the access problem. Rich people simply got better medical care than poor people. They believed access to health care and the means for

maintaining health were out of the reach of those not able to pay. Eighty percent of the Adjusters were African-American and 60 percent were male, a greater percentage of males than any other type.

Factor 2: Adjusters - Strongest Agreement (Z-Scores of +1 or greater)

No.	Statement	Z
36	Everyone does not have equal access to health care.	1.92
42	Rich people get better medical care than poor people.	1.91
21	I believe that all Americans have a right — not a privilege — to health care.	1.74
38	Preventive health efforts must be improved in disadvantaged areas.	1.40
24	Lack of access to basic health care is an urgent issue currently troubling American society.	1.35
29	Access to health care and to the means of maintaining health are simply out of the reach of those not able to pay.	1.16
48	It doesn't matter to me whether doctors are black or white as long as they pay attention to my needs.	1.08
3	Blacks are the victims of an economic system that dictates both their ability to receive health services and the quality of their health.	1.06
4	Support groups are important because many people can relate to others who are like themselves.	1.00

Oblivious Preventers

Although they shared areas of agreement with the previous two groups, Preventers differed in important ways. They were the more affluent medical consumers in the study with the highest average income of all the types, and seventy-three percent were white. They appeared oblivious to any racial barriers that might stand in the way of good health because they personally do not have to deal with them. They believed that it was important to avail oneself of medical intervention and to use community programs and health campaigns to encourage disease prevention strategies. Unlike Equalizers and Adjusters, they expressed pride in the American health care system, because their personal experience had been positive and they got personal attention. Preventers did not care whether their physicians were black or white as long as the doctors paid attention to their personal needs.

Empathizers

"Empathizers" was chosen as the factor label because the participants exhibited a subjective and internalized understanding of the concerns of many

Factor 3: Preventers - Strongest Agreement (Z-Scores of +1 or greater)

No.	Statement	Z
48	It doesn't matter to me whether doctors are black or white as long as they pay attention to my needs.	1.95
19	Physicians and health care practitioners need to respect the pride, values and folkways of people they are trying to reach.	1.90
38	Preventive health efforts must be improved in disadvantaged areas.	1.62
31	People are more likely to participate when they are recognized as a person, rather than labeled into minority groups.	1.62
20	Community leaders are important to the success of any health care campaign.	1.34
22	If I'm not feeling well, I have no trouble finding time to go to the doctor.	1.24
4	Support groups are important because many people can relate to others who are like themselves.	1.17
13	If I felt by taking some precautions I could save myself money down the line I might take preventive measure to avoid that.	1.15
45	I have a great deal of pride in the American health care system.	1.14
37	I take the time to read health stories in newspapers and magazines.	1.06

African-Americans and the poor. Their empathy may have been rooted in the fact that they *were* the African-American poor. Empathizers strongly agreed that the media cared more about a disease if it affected white rather than black people. They believed that a message labeled as a black health care concern was dismissible by white people. Empathizers believed that rich people got better medical care than poor people, perhaps not because they could afford better care but because the wealthy did not have to deal as much with government programs. Thus, they believed there was a health care crisis in America, and they lacked pride in the health care system. They delayed doctor visits because they feared being told they were ill. All the Empathizers were low-income African-Americans. At the time this study was conducted, the Clinton administration was trying to reform the American health care system. This effort brought a lot of attention to the shortcomings of Medicare, private insurance, and (for the poorer subjects in the study) Medicaid. The anecdotal evidence collected from focus group discussions and written comments on questionnaires suggested that dealing with government programs was difficult, because of red tape, denial of claims, etc. In addition, those who did not have

Factor 3: Preventers - Strongest Disagreement (Z-Scores of -1 or greater)

No.	Statement	Z
47	The ultimate solution to providing adequate health care for Blacks is to educate enough black health care providers.	-1.09
29	Access to health care and to the means of maintaining health are simply out of the reach of those not able to pay.	-1.10
16	If I need medical care, I will most likely go to a hospital emergency room rather than to a private physician.	-1.22
39	The federal government's health policies are geared for the general population. They don't help minorities very much.	-1.27
1	Blacks are reluctant to obtain early treatment for illnesses because care is provided by white medical personnel.	-1.28
7	There is not much I can do to keep from getting sick.	-1.28
2	Doctors are prejudiced against Blacks.	-1.43
17	Illness can be a punishment from God.	-1.48
3	Blacks are the victims of an economic system that dictates both their ability to receive health services and the quality of their health.	-1.58
49	As long as a disease is hitting white people, the media care. But if it's hitting mainly Blacks, they don't worry about it too much.	-1.58

private insurance felt that they went to the bottom of the priority pile, so to speak, when dealing with the health care system. They felt stigmatized when they were identified as a Medicaid patient. Many of those involved in this study were opposed to the Clinton reforms, because government would have more control over the availability and quality of health care.

The evidence for these conclusions is based on the stated frequency of physician contact and responses to two statements included in the Q sort. This was the least likely factor to have to have seen a physician during the previous year (84 percent compared to 90 percent of the Equalizers, the type with the most physician contact). Members of this factor were just below Preventers in terms of chronic diseases reported: 12 percent had diabetes, 27 percent had high blood pressure, and 26 percent had arthritis. The pertinent statements were:

1) The ability of a doctor to help me depends in large part on my belief that the doctor will help me.
2) My inclination is to stay away from doctors because you're not really sick until the doctor says you are.

Factor 4: Empathizers - Strongest Agreement (Z-Scores of +1 or greater)

No.	Statement	Z
48	It doesn't matter to me whether doctors are black or white as long as they pay attention to my needs.	1.96
49	As long as a disease is hitting white people, the media care. But if it's hitting mainly Blacks, they don't worry about it too much.	1.94
31	People are more likely to participate when they are recognized as a person, rather than labeled into minority groups.	1.92
42	Rich people get better medical care than poor people.	1.70
35	If you go to a hospital and they figure you may not have insurance or you're undercovered, they always make you wait.	1.37
9	It is more important for an American health care system to give free medical care to the poor than to middle, upper income.	1.33
32	The ability of a doctor to help me depends in large part on my belief that the doctor will help me.	1.32
26	If you label the message as a black health care concern, then white people will say "that's for Blacks" right away.	1.26
23	Federal policies prohibiting discrimination in health service delivery should be enforced.	1.02

Factor 4: Empathizers - Strongest Disagreement (Z-Scores of -1 or greater)

No.	Statement	Z
14	It is appropriate to use newspapers to try to get information out about health risks.	-1.05
1	Blacks are reluctant to obtain early treatment for illnesses because care is provided by white medical personnel.	-1.07
33	Illnesses are not discussed in my family.	-1.24
45	I have a great deal of pride in the American health care system.	-1.37
10	Getting the health care I need is usually too much trouble.	-1.40
46	Minorities have not been taught how to use the health care system.	-1.43
5	We do not have a health care crisis in this country.	-1.72
12	The real key to good health is to lead a clean, moral life.	-1.77
47	The ultimate solution to providing adequate health care for Blacks is to educate enough black health care providers.	-2.11

Empathizers strongly agreed with the first statement (z = 1.32) and were the only ones who agreed with the second statement (although weakly, z = 0.35).

Fixers

The fifth group was called "Fixers" because its members showed traits of seeing the systemic problems and wanting to rectify them. For example, they

Factor 5: Fixers - Strongest Agreement (Z-Scores of +1 or greater)

No.	*Statement*	*Z*
36	Everyone does not have equal access to health care.	2.22
38	Preventive health efforts must be improved in disadvantaged areas.	2.22
23	Federal policies prohibiting discrimination in health service delivery should be enforced.	1.40
21	I believe that all Americans have a right—not a privilege—to health care.	1.37
27	To reach minority populations effectively with prevention information requires messages, programs tailored for a specific audience.	1.31
42	Rich people get better medical care than poor people.	1.19
31	People are more likely to participate when they are recognized as a person, rather than labeled into minority groups.	1.08

believed equal access to health care was not a reality. This factor was interesting for at least three reasons.

1) This was the only type that included subjects who believed illness was a punishment from God.
2) They strongly disagreed that they knew all they needed about how to stay well.
3) They thought that government policies benefited minorities, even though they had no pride in the American health care system.

Extending the Q Types

Although Q methodology provided a means of segmenting the audience into 5 attitudinal factors, it did not provide a statistical means for determining the prevalence of each Q type in the population — useful information to have when planning a health campaign. Consequently, in this study a second method was used to determine by telephone survey how the factors might actually be distributed in a large, urban population. The Q statements were

Factor 5: Fixers - Strongest Disagreement (Z-Scores of -1 or greater)

No.	*Statement*	*Z*
1	Blacks are reluctant to obtain early treatment for illnesses because care is provided by white medical personnel.	-1.02
9	It is more important for an American health care system to give free medical care to the poor than to middle, upper income.	-1.15
45	I have a great deal of pride in the American health care system.	-1.26
39	The federal government's health policies are geared for the general population. They don't help minorities very much.	-1.30
8	Many people can't get health care because they have no transportation to a doctor's office, clinic, hospital.	-1.35
5	We do not have a health care crisis in this country.	-1.42
16	If I need medical care, I will most likely go to a hospital emergency room rather than to a private physician.	-1.48
6	I only need to worry about today because the future will take care of itself.	-1.59
7	There is not much I can do to keep from getting sick.	-1.74
34	I know all I need to know about how to stay well.	-1.81

used to prepare a 5-point Likert scale to simulate the columns in the Q grid (strongly agree to strongly disagree). For example:

We do not have a health care crisis in this country.

Strongly Agree	Agree	Neutral/ Don't know	Disagree	Strongly Disagree
<1>	<2>	<3>	<4>	<5>

The media-reliance and demographic data collected for Q subjects were included in the telephone instrument. Using random-digit dialing telephone survey techniques, interviews were completed in Kansas City, Missouri (207); St. Louis, Missouri (207); and Baton Rouge, Louisiana (112). These cities were chosen because all had substantial urban African-American populations, and they provided some geographic diversity. The sample was stratified to assure an adequate number of African-Americans for analysis. In all, 526 adults completed the interview (49 percent African-American and 51 percent Caucasian).

Once the telephone survey data were collected, the respondents were mapped onto the Q types described in the Q sort phase. No attempt was made to conduct an R method factor analysis on the statements. The point was to place the *subjects* into clusters similar to the 5 factors described above.

In order to treat each of the 5 types (as defined by the PCQUANAL arrays) as an additional hypothetical subject who participated in the telephone survey, the following procedural steps were taken. First, the original z values for each of the factor scores in the array were converted into a five-point scale. For example, in the Equalizer array, the most positive z scores were 1.85 for statement 24, 1.62 for statement 21, and 1.57 for statement 36. These statements occupied the 3 cells in the +5 column in the array on the Q sort grid. The statements placed in the 3 cells in the -5 column on the Q sort grid had received the largest negative z scores. In this manner, an entire hypothetical 11-column grid was completed for each of the 5 types.

Once the grids were completed, the items were assigned the corresponding value in the original five-point scale. The statements in columns +4 and +5 became "strongly agree" responses on the scale, the ones in -4 and -5 became "strongly disagree" and so on. Then the Q sort score assignments were entered into the results database along with all the 526 telephone subjects as if they had responded to the statements by telephone. The result of this process was the addition of a hypothetical or reference Q sort for each factor type.

Cluster centers were identified using mean scores for the variables selected (Q statements) for these 5 "theoretical" persons. An SPSS cluster analysis then placed each telephone survey subject into one of the 5 clusters based on how closely the subject's mean scores matched those of the Q cluster centers. This method made it possible to match the theoretical Q sorts for Equalizers, Adjusters, Preventers, Empathizers, and Fixers with the telephone survey data.

Discriminant function analysis was also used (this is similar to the process of placing a person on a particular Q factor) to place into groups subjects who had not responded to one or more of the Q statements in the telephone instrument. This procedure performed linear discriminant analysis for 2 or more groups (in this case, 5 groups).

Each of the factors from the Q study was entered in the telephone database as a "theoretic" telephone respondent. Using these "theoretic" respondents as the center points, the analysis clusters telephone subjects with the Q type having the most similar response pattern. Although members of the cluster might not respond to a statement as strongly as the Q sorters did, their responses were similar in direction. For example, a respondent is assigned to the cluster most resembling Equalizers, if the person's pattern of agreement and disagreement with statements is similar to that of the Q sorters who formed that factor.

Statistical probabilities are generated to verify group membership. Subjects are assigned to the group for which they had the highest probability of membership. Thus, all randomly selected telephone subjects (a representative sample of the mass audience) were assigned to one of the initial Q types defined using small sample analytic technique.

Finally, individual factor average scores were calculated for each statement. Statistical significance of the differences between statement factor scores was determined by subtracting the mean score for each statement in the factor from the midpoint of the 5-point scales (that is 3). If the difference was more than twice the standard error of the statement, the result was declared significant at the 0.05 level. If it was 3 times greater than the standard error, the result was significant at the 0.01 level. Three of the 5 telephone groups matched the Q types very closely in attitudes and demographics. The other 2 groups did not match as closely, but still showed distinct differences in attitude from all other clusters.

Factor membership characteristics were analyzed further by noting each person's factor membership, 1 through 5 in the dataset. Then, cross tabulation tables using clusters as the independent variable were applied to the demographic and media dependence information collected during the telephone interview. Both Q subjects and telephone subjects were asked several questions regarding their media use, such as how many hours per week they watch television, listen to the radio (including black radio), read newspapers (including black newspapers) and whether they read health articles in magazines. They also were asked which was their single most important media source of health information. This included medical books and publications in addition to newspapers, magazines, radio, and television. These helped to test for proportional similarities among the demographic characteristics of individuals loading on each factor.

Comparing demographic information (age, gender, race, etc.) among the Q types and telephone clusters gave additional validity to the method. Although results were not exact, the racial distributions found in both results were essentially the same. Q factors that were predominantly black aligned with clusters of telephone respondents that were predominantly black.

The Equalizers formed the largest cluster with 135 members (26 percent). The Fixers were the smallest group with only 63 members (12 percent). The other 3 types formed nearly equal cluster membership: The Adjusters had 108 members (21 percent), the Preventers had 105 members (20 percent), and the Empathizers had 115 members (22 percent).

Discussion

Matching the telephone survey results with Q types defined earlier was difficult. Respondents encountered difficulty in reacting to and rating the

statements based only on hearing them read in random order over the telephone. The subtleties of the Q sort rankings were difficult to retain. A few of the statements had to be shortened through editing for the telephone survey, because subjects had trouble comprehending the longer versions. Although the meanings of the statements were never intentionally changed; it is likely that the telephone subjects had more latitude for interpretation than those who performed the Q sort.

This procedure might have been expedited if statements defining the types had been mutually exclusive. In this study, 2 or more types ranked some statements similarly, although the subjects' comments clearly indicated their different interpretations of the statements.

From the perspective of social marketing, perhaps the most important result from this study was the catalog of distinct attitudes held by some African-Americans and different attitudes held by some whites. Sample size makes it impossible to isolate the attitudinal effect of economic differences among the participants. However, this study was not designed to specifically examine that point, and confounding makes this impossible after the fact.

This study attempted to demonstrate two things:

1) There isn't just one African-American attitude.
2) There could be some identifiable attitudinal differences between blacks and whites.

Groups that were predominately white indicated pride in the American health care system, while predominately black groups did not. The views of middle class respondents of both colors appeared more in agreement than did those of upper income whites and low income blacks.

This study provides guidance in designing messages that might be effective as part of a health care campaign. It shows that effective messages should be tailored to specific interests, needs, values, and beliefs of the various audience segments identified through focus groups and Q sorts. If the goal of a health campaign is to encourage people to take primary preventive action (obtain screening and vaccines for preventable or treatable illnesses, for example), different messages, corresponding to the receptivity of the Q types should be formulated.

For example, the Fixers believe that any successful health campaign should originate at the community, not at the state or national level; but the Equalizers disagree. Thus, local campaigns are more likely to be effective in attracting Fixers than Equalizers. Equalizers believe that health campaigns should not be labeled as concerns only for African-Americans, although they think messages should be targeted toward minority audiences. Preventers, on the other hand, believe that support groups and community leaders are important to the success of a health campaign. They also are more likely to pay attention to

television rather than print messages. Empathizers may be most attracted to preventive messages because they do not believe that they have all the knowledge they need to stay well. Adjusters are distinguished from the Equalizers by their emphasis on the poor or disadvantaged and the urgency they feel in adjusting the healthcare system.

When funds to support a campaign are in short supply, an efficient approach would be to look for messages and attitudes that impact all types or at least can appeal to the types that account for the largest percentage of the total audience. For example, a multi-cultural message approach would likely appeal to both Equalizers and Adjusters because the main difference between these groups involves race-specific experiences.

A suitable solution would be to develop one basic message but tailor its presentation differently for each type. For example, one message should feature an African-American spokesperson, and the second message should feature a white spokesperson. However, it also is possible to create one message with both black and white spokespersons together. At any rate, it is important to avoid the "one message fits all" approach. As a pragmatic approach, however, it is possible to appeal to combined segments of such an audience by using consensus statements to locate an attitude that is present to some extent in both groups.

The literacy level of the target audience must be considered so messages are neither too complicated nor too patronizing. Also, isolating those who said they do not read newspapers or magazines can be a good indication that a segment of the target audience cannot be reached through written communication. Consequently, messages designed for low literacy groups should rely on pictures, and television and radio messages should be included. One component of this approach would be to determine which types are more dependent on media sources than on health care professionals for health information. The most effective delivery methods can then be selected for each message.

The messages should, if possible, include some incentive (Stephenson referred to this as a "facilitator" in The Vergent Report) for behavior change. An incentive is something specific, such as "free" or "low-cost" screenings that appeal to those who think the rich get better treatment than the poor, or free transportation from housing developments to clinics sites for those who believe transportation is a barrier to obtaining health care.

Specific concerns that differentiate the types also should be addressed. For example, Empathizers were inclined to delay visits to the doctor for routine checkups. Messages designed for them should stress the importance of screening for peace of mind or to set a positive example for family members. They are unlikely to be receptive to a message that reminds them that

screenings find illnesses. It is important to identify and counter message dissonance as much as possible, especially for those individuals who will be difficult to motivate. Letting people know that there is hope — in the form of relief of symptoms, cures, or management — can greatly relieve anxiety.

Messages should examine the relative advantage of participating in health care screenings. The relative advantage can be different for each of the types. For example, both Equalizers and Preventers were concerned about taking preventive actions that will save them money in the long run. The relative advantage for them could be saving money that might otherwise have to be spent on hospital bills and medications. On the other hand, The Empathizers were concerned about dignity and not being labeled or placed in a group. Screenings for them could promote the feeling of being included in an inclusive health care system.

Screening should be viewed as part of an effective preventive health care regimen rather than as a separate activity. Adjusters believe lack of access is an urgent social issue, they want discrimination in health service delivery to be prohibited, and feel preventive health efforts must be improved in disadvantaged areas. Adjusters, for example, did not believe that everyone has equal access to health care. For this type, access was viewed as being compatible with their view of an ideal health care system, and screenings might be compatible with the goals and desire of Adjusters for preventive action.

As much as possible, health care mass communication messages should avoid complex explanations and plans of action. Keeping the message simple and the required action as easy and accessible as possible likely will be more effective. This is especially important for those in every type who find getting health care too much trouble.

This study attempts to bring social marketing and Q methodology together in a way that Stephenson envisioned in the 1960s. He knew that audiences or patients could be segmented along attitudinal lines, and that effective messages could then be developed for each specific attitudinal group. It further explores a method of applying the results of a Q study to a large sample to facilitate the aims of social marketing and message targeting. Combining Q methodology with social marketing should result in improved communication through better understanding of the motivations and needs of various audience segments.

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Appendix: Q Set

No	Statement
1	Blacks are reluctant to obtain early treatment for illnesses because care is provided by nonblack medical personnel.
2	Doctors are prejudiced against blacks.
3	Blacks are the victims of an economic system that dictates both their ability to receive health services and the quality of their health.
4	Support groups, especially for minorities, are important because many people can relate to others who are like themselves.
5	We don't have a health care crisis in this country.
6	The future will take care of itself; I only need to worry about today.
7	There is not much I can do to keep from getting sick.
8	Many people can't get health care because they have no transportation to and from a doctor's office, clinic or hospital.
9	It is more important for an American health care system to give free medical care to the poor and disadvantaged than to give free care to middle and upper income citizens.
10	Getting the health care I need is usually too much trouble.
11	In health care promotions and advertising, white faces bringing bad news to blacks will not work.
12	The real key to good health is to lead a clean, moral life.
13	If I felt by taking some precautions I could save myself money down the line — the expense of having a heart attack and paying doctors bills or whatever — then I might take preventive measure to avoid that.
14	It is appropriate to use newspapers to try to get information out about health risks — hypertension, heart disease, diabetes, glaucoma, sickle cell anemia, etc.
15	If you have an important message about health care, put it on television.
16	If I need medical care, I will most likely go to a hospital emergency room rather than to a private physician.
17	Illness can be a punishment from God.
18	The health care system makes me feel like I'm poor.
19	Physicians and health care practitioners need to respect the pride, values and folkways of people they are trying to reach.
20	Community leaders (such as teachers, preachers, nurses, social workers and leaders of civic organizations) are important to the success of any health care campaign aimed at minorities.
21	I believe that all Americans have a right — not a privilege — to health care.
22	If I'm not feeling well, I have no trouble finding time to go to the doctor.
23	Federal policies prohibiting discrimination in health service delivery should be enforced.
24	Lack of access to basic health care is an urgent issue currently troubling American society.

No	Statement
25	Any successful health campaign that could change behaviors would have to originate in the community rather than at the state or national level.
26	If you label the message as a black health care concern, then white people will say "that's for blacks" right away. But if you say, this is a health care concern for all people, then most people will pick up on it.
27	To reach minority populations effectively with prevention information requires messages and programs that are tailored for and targeted to reach a specific audience.
28	A health care system that gives everyone the help they need is never going to happen.
29	Access to health care and to the means of maintaining health are simply out of the reach of those not able to pay.
30	Churches really have no role in promoting better physical health.
31	People are more likely to participate when they are recognized as a person, rather than being labeled, isolated and separated into minority groups.
32	The ability of a doctor to help me depends in large part on my belief that the doctor will help me.
33	Illnesses are not discussed in my family.
34	I know all I need to know about how to stay well.
35	If you go to a hospital and they figure you may not have insurance or you're under covered, they always make you wait. But, if you have insurance, they take you right in there because they know they are going to get their money.
36	Everyone does not have equal access to health care.
37	I take the time to read health stories in newspapers and magazines.
38	Preventive health efforts must be improved in disadvantaged areas.
39	The federal government's health policies are geared for the general population. They don't help minorities very much.
40	Racial barriers to health care are not an issue.
41	I will go to a doctor only if I think something is wrong with my health.
42	Rich people get better medical care than poor people.
43	My inclination is to stay away from doctors because, when you come right down to it, you're not really sick until the doctor says you are.
44	The whole health care delivery system needs to be overhauled.
45	I have a great deal of pride in the American health care system.
46	Black people have not been taught how to use the health care system.
47	The ultimate solution to providing adequate health care for black people is to educate enough black health care providers to do it.
48	It doesn't matter to me whether doctors are black or white as long as they pay attention to my needs.
49	As long as a disease is hitting white people, the media care. But if it's hitting black people, they are not going to worry about it too much.