STRUCTURED INTERVIEWING OVERVIEW

1. Domain Definition & Item Generation

2. Structured Interviewing
   - A. General Information Questions
   - B. Knowledge Tests
   - C. Attitudinal Scales & Tests
   - **D. Classification studies**
   - E. Beliefs

STRUCTURED INTERVIEWING (Cont'd)

D. Exploration of classification or categorization of items

1. No a priori definition of dimensions nor criteria for making comparisons

2. Classification/similarity data: sorting and triadic comparisons

SIMILARITY DATA

To study the interrelationships among variables or people, the “similarity” between items must be estimated.

This can be done by quantifying similarity with statistical coefficients or by collecting direct judgments of similarity.

1. Similarity can be measured between individual profiles

Or

2.Direct, judged similarity can be collected.

DIRECT JUDGED SIMILARITY MAY BE COLLECTED WITH:

- Pile-sorting of names of items
  (or pictures or items themselves)
- Triadic comparisons
- Ratings of similarity of pairs of items

JUDGED SIMILARITY PILE-SORTING

After items have been selected for study,

1) The name of each may be written on a card, or
2) Actual objects or pictures can be used.

Subjects are asked to review/read all the items and to put them into piles so that similar items are together in the same pile.

In the unconstrained sorting task, subjects may make as few or as many piles as they wish. (In the "constrained" version they must make a specified number of piles.)

Subjects are generally asked to group items according to their similarity without reference to specific criteria.

PILE-SORT DATA
"Single" Pile Sort

1. Write the names of descriptions on cards

2. Number the back of the cards (1 to n)

3. Optional: have another stack of colored cards.

4. Ask someone to sort the cards into piles according to their similarity.

5. To record the data you can:

   a) write each pile number and the items in each pile:

   1 = 1, 2, 3
   2 = 4, 5
   3 = 6
   4 = 7

   b) Put the colored cards between the piles, close the pile with a rubber band and record them later:

   1 2 3 / 4 5 / 6 / 7

PILE-SORTING TABULATION OF RESPONSES

Assume there are
7things: A, B, C, D, E, F, G
and that a person makes 4 piles:

1 = A, B, C
2 = D, E
3 = F
4 = G

This means that
A, B, and C are alike:
D and E are alike; and
F and G are unique
(NO INFO on F and G)

In a matrix this would be:

	A	B	C	D	E	F	G
A	1	1	1	0	0	0	0
B	1	1	1	0	0	0	0
C	1	1	1	0	0	0	0
D	0	0	0	1	1	0	0
E	0	0	0	1	1	0	0
F	0	0	0	0	0	1	0
G	0	0	0	0	0	0	1

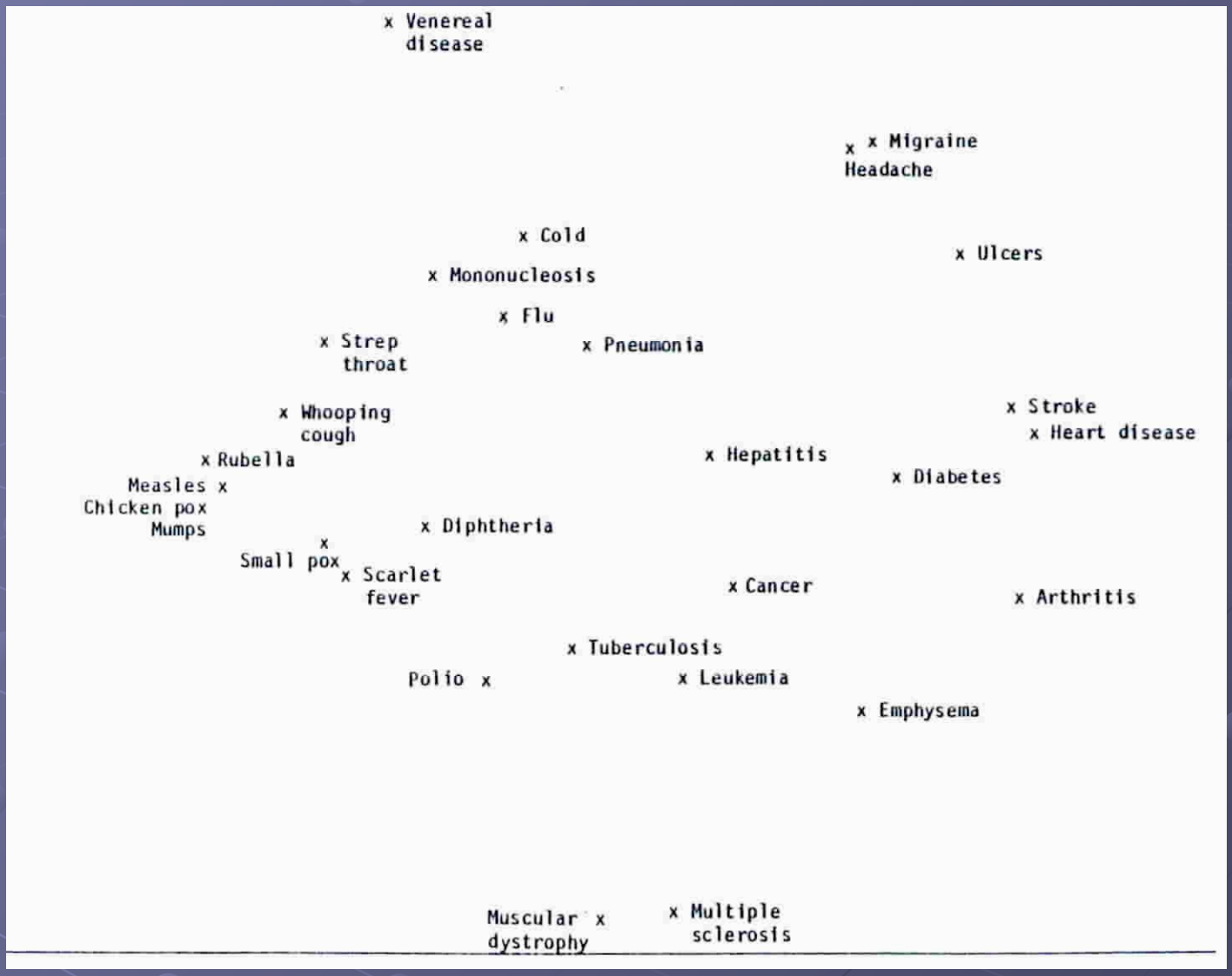
EXAMPLE I: PERCEPTION OF ILLNESSES (Weller 1984)

To compare the perception of urban Guatemalan women with urban women from the U.S.,

- Disease terms were first elicited with free-listing (20 women in each country)
- Names of the illnesses were printed on 3x5 index cards (29 in English and 27 in Spanish)
- To understand the perceptual categories of illnesses, a sample of 24 women from each country was asked to sort the cards into piles according to their similarity, making as few or as many piles as they wished.

PERCEPTION OF ILLNESSES

- Class example


x Venereal disease
x Migraine Headache
x Cold
x Ulcers
x Mononucleosis
x Flu
x Strep throat
x Pneumonia
x Stroke
x Heart disease
x Whooping cough
x Hepatitis
x Rubella
x Diabetes
Measles x
Chicken pox
Mumps
x Diphtheria
x
Small pox
x Scarlet fever
x Cancer
x Arthritis
x Tuberculosis
Polio x
x Leukemia
x Emphysema
Muscular x dystrophy
x Multiple sclerosis

EXAMPLE II: PERCEPTION OF DRUGS (esp. COCA)

(Kirk & Miller 1978)

A study was undertaken in South America to explore the relative perception of "Coca."

Do various groups of individuals vary in their perceptions of coca? Is coca considered as a food product, beverage, or drug?

12 subjects in each of 12 samples:

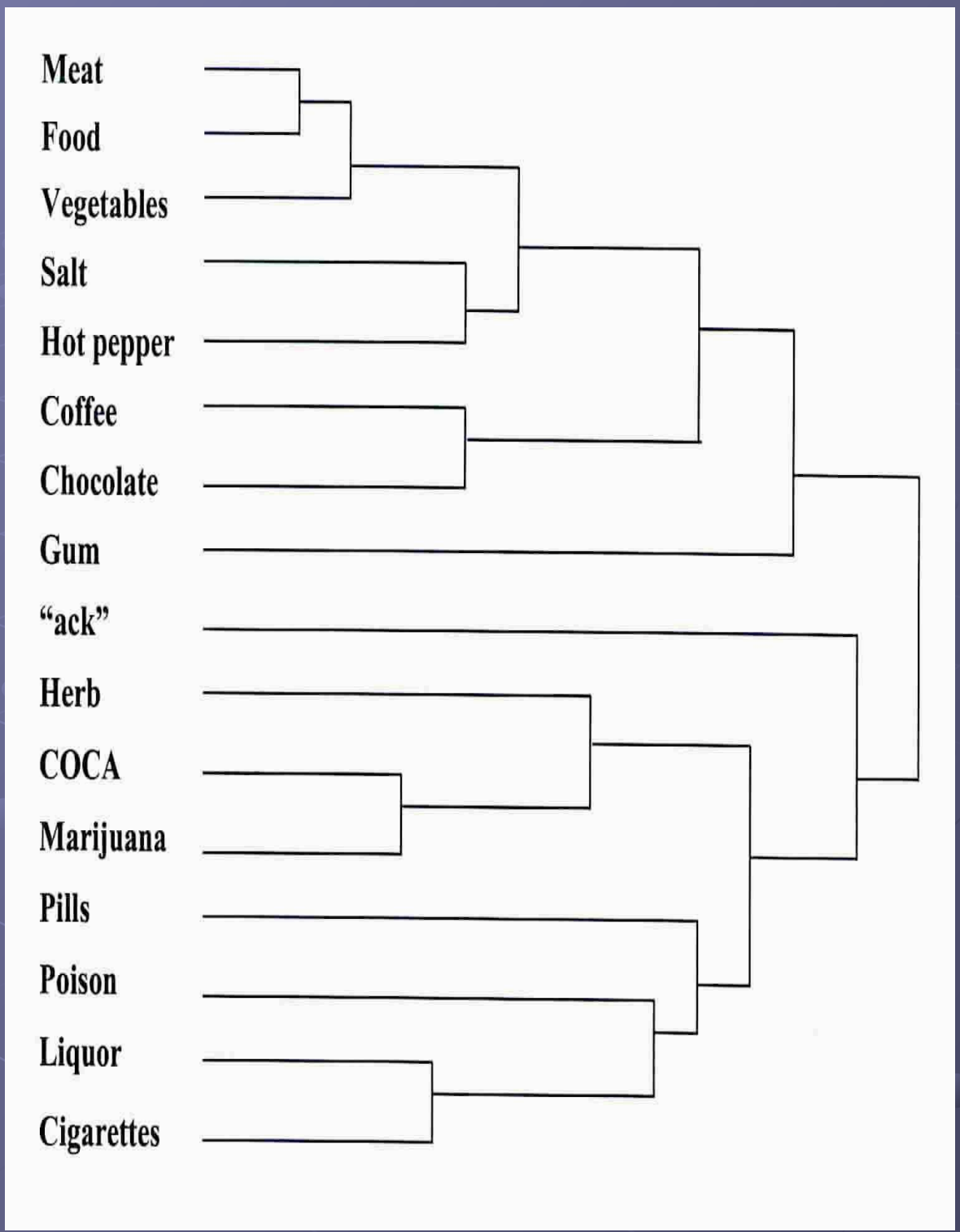
- Columbia - in Bogotá y Popayán
- Ecuador - Quito
- Peru - Cuzco, Iquitos, Lima, Quillabamba, Rio Napo, y Trujillo

(4 different samples were selected in Lima)

PERCEPTION OF DRUGS

In this study, the following stimuli were used:

- Coca - The plant source for cocaine
- Chicle - gum
- Pastillas para no dormirse - pills to stay awake
- Sal - salt
- Carne - meat
- Café - coffee
- Alimento - food
- Licor - liquor
- Aji - hot pepper
- Veneno - poison
- Cigarrillos - cigarettes
- Marihuana - marijuana
- Yerba - herb
- Verduras - greens, vegetables
- Cacao - raw chocolate
- Ack (a nonsense word)


Meat
Food
Vegetables
Salt
Hot pepper
Coffee
Chocolate
Gum
“ack”
Herb
COCA
Marijuana
Pills
Poison
Liquor
Cigarettes

JUDGED SIMILARITY WITH TRIADIC COMPARISIONS

Similarity between items can be estimated by having people compare items in sets. For example, when items are presented in a set of three:

MAN HOUSE WOMAN

One can pick the two things that are most alike (MAN and WOMAN because they are people), Or more simply, one can pick the item that is the most different of the three (HOUSE).

Both provide the same information.

TRIADIC COMPARISIONS

Say we wanted to compare 4 items:
Measles, Chicken Pox, Cancer and AIDS

We could make sets of three:

1)	Measles	Chicken Pox	Cancer
2)	Measles	Chicken Pox	AIDS
3)	Chicken Pox	Cancer	AIDS
4)	Measles	Cancer	AIDS

For 4 things there would be:

$$\binom{4}{3} = \frac{4 \cdot 3 \cdot 2 \cdot 1}{3 \cdot 2 \cdot 1 \cdot 1} = 4$$

$$\binom{n}{k} = \frac{n!}{k!(n-k)!}$$

TRIADIC COMPARISONS

Measles	Chicken Pox	Cancer
Measles	Chicken Pox	AIDS
Chicken Pox	Cancer	AIDS
Measles	Cancer	AIDS

Since each set of 3 actually contains information on 3 pairs,

we can tabulate this as follows:

	Measles	Chicken Pox	Cancer	AIDS
Measles	X	2	0	0
Chicken Pox	2	X	0	0
Cancer	0	0	X	2
AIDS	0	0	2	X

TRIADIC COMPARISONS

- The advantage of this method is that it can be done orally. Thus, you can obtain similarity data from those who cannot read.

- Because a triads interview can become lengthy if there are a large number of items, special designs have been created that compare all pairs of items in a balanced, although "incomplete" set of triads

  (BALANCED, INCOMPLETE BLOCK DESIGNS)

TRIADIC COMPARISONS: Balanced, Incomplete Block Designs

BIB designs are identified by

- the number of items in a set or block (k=3)
- the number of items to be compared (n)
- and the number of items each pair of items occurs (λ)

With 13 items: $\binom{13}{3} = 286$

There are

triads in a complete design .

But only 26 triads are necessary if each pair occurs only once.

(There would be 52 triads if each pair occurred twice)

Thus, BIB designs can considerably shorten an interview.

VARIATION IN THE CHOICE OF HEALTH CARE SOURCES IN TWO MEXICAN PUEBLOS

(Young & Garro 1982)

- A question of interest is whether differences in utilization of health care sources are due to differences in beliefs (eg., do individuals choose health care sources in which they have confidence or that are concordant with their beliefs);

- Or, are differences in utilization of services due to access (eg., do people only get services that are close and economical).

CHOICE OF HEALTH CARE SERVICES: DESIGN

To answer the question of differences in utilization of health care services

Two towns were chosen for the study that had different degree of access to care.

- In Pichátaro, Mexico (prior to 1980) there was no physician. The closest doctor was in Patzcuaro, approximately an hour-long ride over partly unpaved road.
- In contrast, Uricho, Mexico is located 1km from a government (MSS) clinic. It is also approximately 20 minutes from Pátzcuaro by bus over paved road.
- Both communities are similar in many other respects: the people are of Tarascan Indian background, and the towns are rural agricultural communities.

USE OF HEALTH CARE SOURCES

Illness cases were collected from a random sample of households in each community: 50 in Pichátaro and 32 in Uricho.

Percentage of Cases for each Source:

	Self Treat	Folk Curer	Local Lay	Pharm	Med
Pichát	85	7	21	8	19
Urich	69	6	8	30	35

(adapted from Table 2, Young & Garro)

Thus, the two communities differed dramatically in their utilization of sources. Pichátaro used "self treatment" and "lay medical" choices and Uricho used western care, "farmacia" and "medico" more.

CHOICE OF HEALTH CARE SOURCES

The two communities had different access to health care

- In Uricho health care was closer and cheaper than in Pichátaro.

The two communities were also different in their utilization of sources.

- In Uricho, people used physician (and pharmacy) significantly more often than in Pichátaro.

But, do the communities have different beliefs?

- If their beliefs about illness and curing are the same, then we may conclude that differences in utilization are due to differences in access.
- If beliefs are different, differences in utilization could be due to either beliefs or access.

CHOICE OF HEALTH CARE SOURCES

To study the illness beliefs of the residents of Pichátaro and Uricho, Young & Garro used two separate approaches:

- They examined the overall perceived similarity among illnesses:
  - 10 illness terms were selected and compared with triad similarity judgments, in a BIB (λ=2) triad design. The data were analyzed with multidimensional scaling.
- They examined specific illness attributes (causes, symptoms, and treatments):
  - 18 illness terms were paired with 22 attributes to create 396 yes/no questions.

Two separate approaches were used to make the results more "reliable".

- If results from both methods agreed and both samples agree, the evidence would be stronger

(Convergent validity = different methods yield similar results)

CHOICE OF HEALTH CARE SOURCES

The analyses indicated

- Similar representations for the similarity among illnesses (between Pichátaro y Uricho).

- Similar patterns between illnesses and attributes (between the two towns).

Thus, the authors concluded that the differences in the utilization of health care

- were not due to differences in beliefs

but was due to

- access to health care.

SOCIETAL PROBLEMS
(Kruskal & Wish 1978)

1. In 1972, 14 students rated the similarity between each pair of 22 societal problems

2. The problems were also rated on 15 ten-point (0-9) rating scales

3. Similarity data were represented with multidimensional scaling (MDS) and the rating scale responses were used to interpret the results

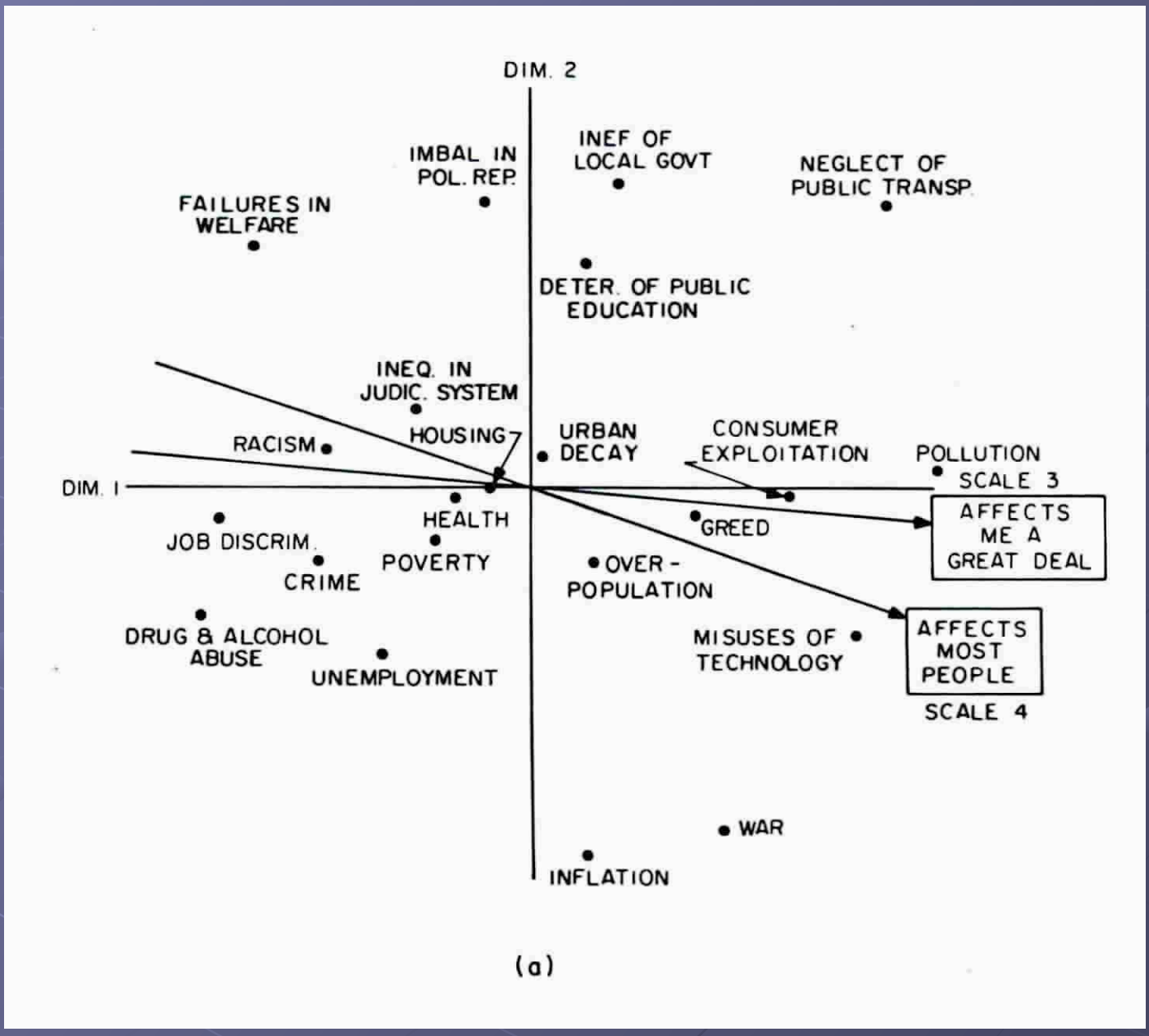
4. The dimensions were explained by:
   a. "Affects me a great deal"
      "Affects most people"
   b. "Responsibility of Local Gov' t"
   c. "Technological problem"

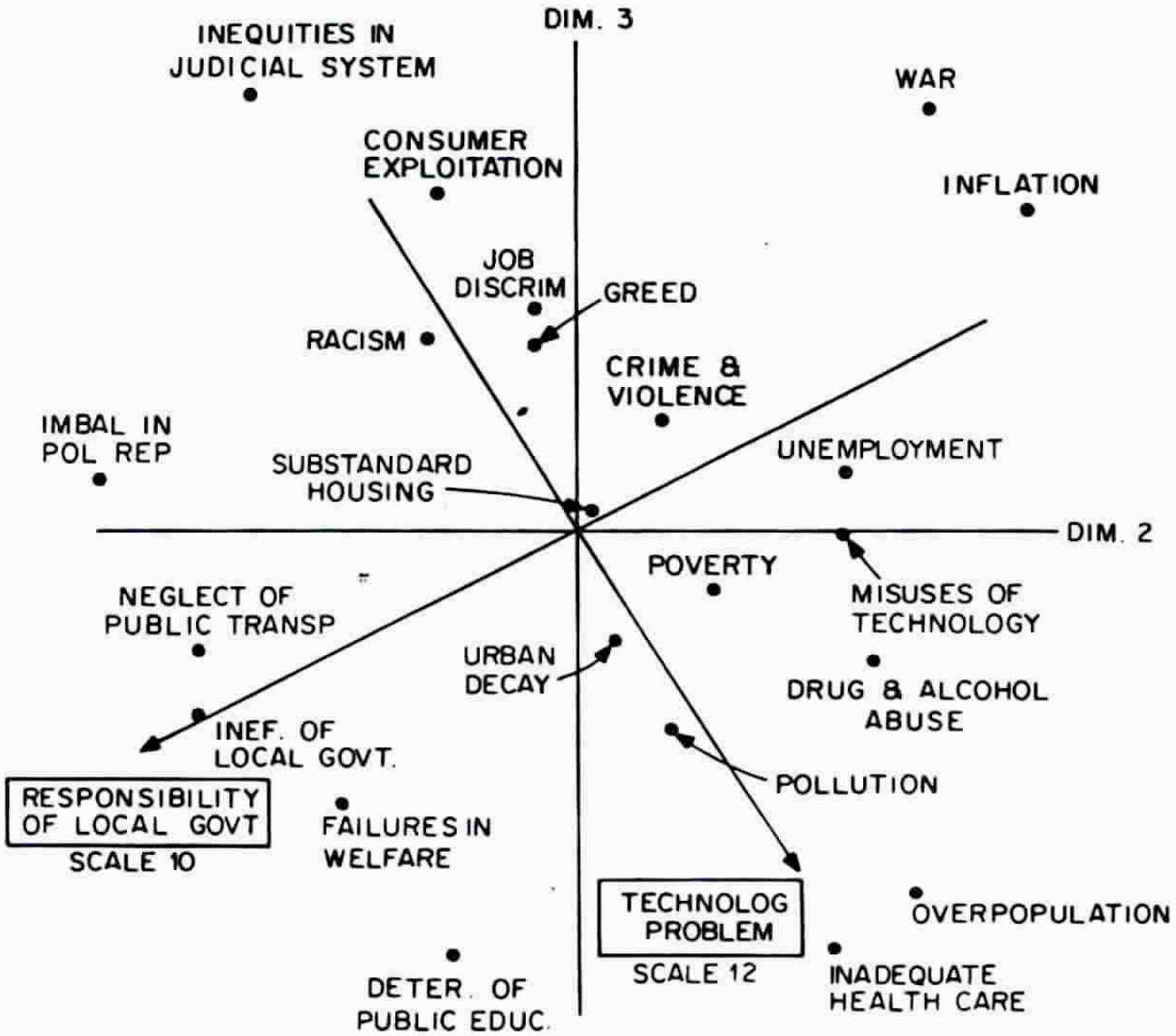
22 SOCIETAL PROBLEMS
(Kruskal & Wish 1978:38)

1) Consumer Exploitation
2) Crime and Violence
3) Deterioration of Public Education
4) Drug and Alcohol Abuse
5) Failures in Welfare
6) Imbalances in Political Representation
7) Inadequate Health Care
8) Ineffectiveness of local government
9) Inequities in the Judicial System
10) Inflation
11) Job Discrimination
12) Misuses of Technology
13) Neglect of Public Transportation
14) Overpopulation
15) Pollution of the Environment
16) Poverty
17) Public and Private Greed
18) Racism and Bigotry
19) Substandard Housing
20) Unemployment
21) Urban Decay
22) War

15 Rating Scales

1. Very Important
2. Very Interested
3. Affects Me a Great Deal
4. Affects Most People
5. Action Urgently Needed
6. Economic Problem
7. Moral Problem
8. Political Problem
9. Organizational Problem
10. Technological Problem
11. Responsibility of Federal Government
12. Responsibility of Local Government
13. Responsibility of Non-Profit Institutions
14. Responsibility of Profit-Making Institutions
15. Responsibility of People Directly Affected


DIM. 2
IMBAL IN POL. REP.
INEF OF LOCAL GOVT
NEGLECT OF PUBLIC TRANSP.
FAILURES IN WELFARE
DETER. OF PUBLIC EDUCATION
INEQ. IN JUDIC. SYSTEM
HOUSING
URBAN DECAY
CONSUMER EXPLOITATION
POLLUTION
SCALE 3
RACISM
DIM. I
HEALTH
GREED
AFFECTS ME A GREAT DEAL
JOB DISCRIM.
POVERTY
CRIME
OVER-POPULATION
DRUG & ALCOHOL ABUSE
UNEMPLOYMENT
MISUSES OF TECHNOLOGY
AFFECTS MOST PEOPLE
SCALE 4
WAR
INFLATION
(a)


DIM. 3
INEQUITIES IN JUDICIAL SYSTEM
WAR
CONSUMER EXPLOITATION
INFLATION
JOB DISCRIM
GREED
RACISM
CRIME & VIOLENCE
IMBAL IN POL REP
SUBSTANDARD HOUSING
UNEMPLOYMENT
DIM. 2
POVERTY
NEGLECT OF PUBLIC TRANSP
MISUSES OF TECHNOLOGY
URBAN DECAY
DRUG & ALCOHOL ABUSE
INEF. OF LOCAL GOVT.
POLLUTION
RESPONSIBILITY OF LOCAL GOVT
SCALE 10
FAILURES IN WELFARE
TECHNOLOG PROBLEM
SCALE 12
OVERPOPULATION
INADEQUATE HEALTH CARE
DETER. OF PUBLIC EDUC.

(b)

COMPARISON OF DIRECT, JUDGED SIMILARITY DATA METHODS

1. Pile Sort
   - Needs literate informants (or visual items)
   + Good with large number of items
   + Can facilitate conversation

2. Triads
   + Can be administered orally
   - Can be lengthy, but can provide more info
   - Can be "test-like"

3. Pairs
   - Lengthy, but can provide more info
   - Test-like
   - Literate informants needed for rating scales

SIMILARITY DATA FOR CATEGORIZATION OF ITEMS

Similarity data between items

1. Direct, judged similarity (pile, triad, pairs)
2. Indirect measured similarity (correlations)
   SQUARE, SYMMETRIC, MATRIX

Visual display of results

1. MDS or Correspondence Analysis (CA)
2. Hierarchical Clustering
   (use correlation coefficient, not default)
   (Algorithm = Average-Link)