

Pile sorts

Eliciting judged similarities

Pile Sort Technique

- Basic idea:
 - On each of these cards is written the name of a thing. Please sort the cards into piles according to how similar they are. You can use as many or as few piles as you like.

Why do we do it?

- Understand structure of the domain, via a fundamental perceptual relation: similarity
- To uncover attributes of items that people use to distinguish among them
 - Like componential analysis

Special Advantages

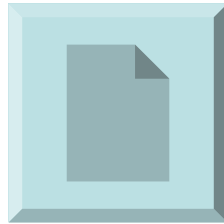
- Respondents only asked for non-quantitative judgments
- Can handle large domains (up to 200)
- Respondents like it

Processing

- For each pair of items, count the proportion of respondents who put them in the same pile
 - Called approx – the aggregate proximity matrix
- Assuming consensus, this is a measure of the similarity of each pair of items

Aggregate Proximity Matrix

- Item by item matrix gives the percent of respondents placing the two items in the same pile

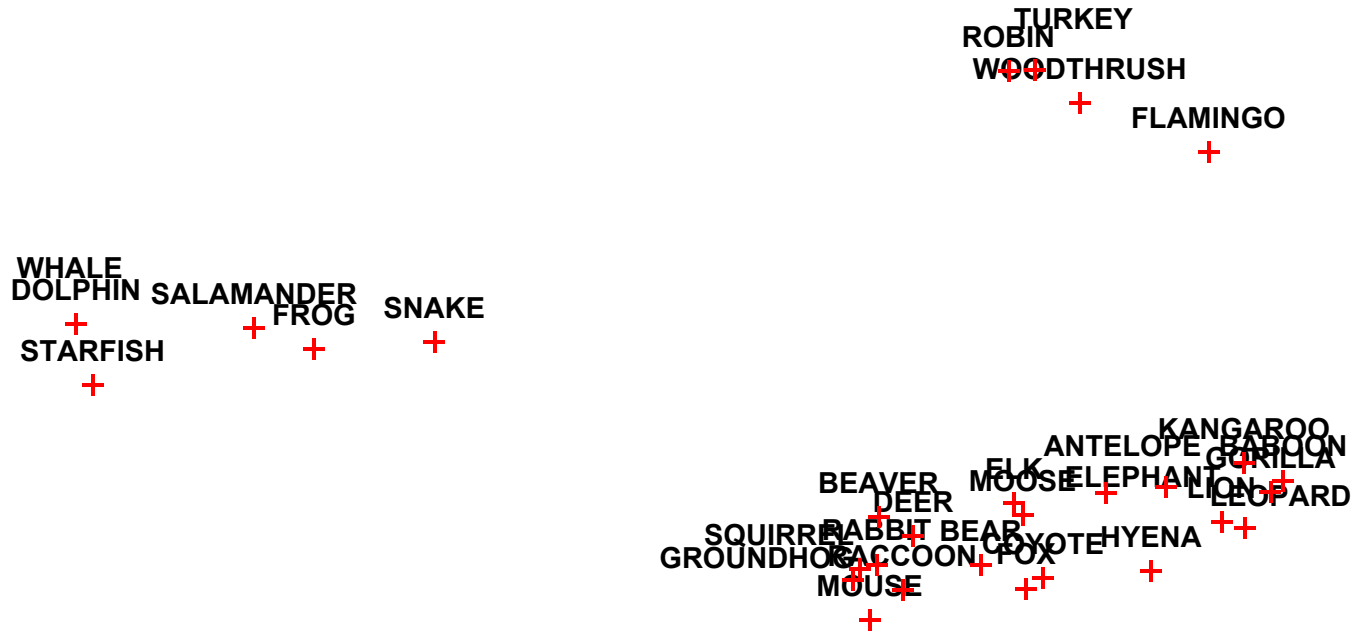


- Typically visualize with MDS and cluster analysis

Representing Proximities

- Multidimensional scaling (MDS)
 - Maps items to points in Euclidean space such that points corresponding to more similar items are placed nearer to each other in the space
- Cluster analysis
- Network analysis techniques

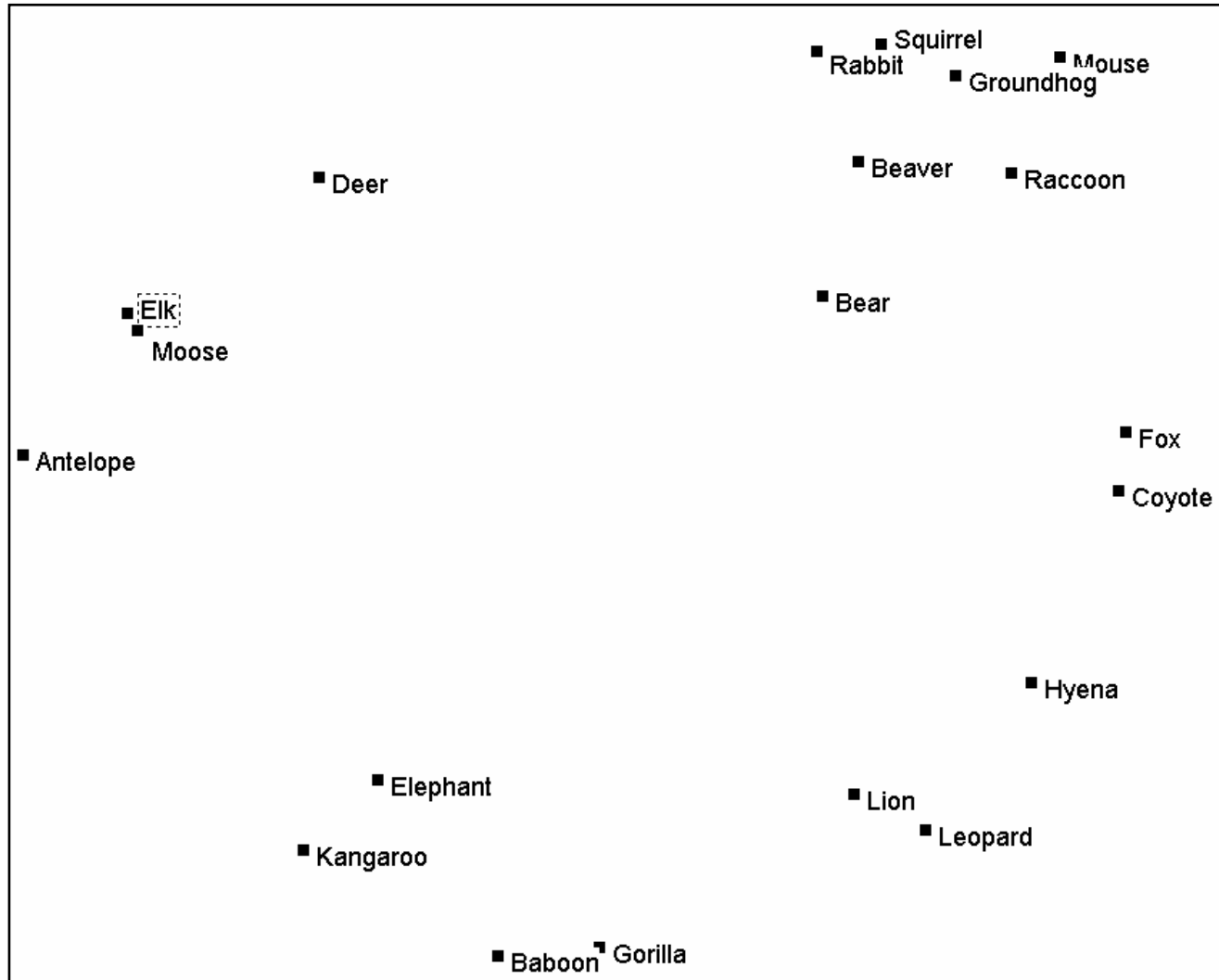
MDS of animals domain



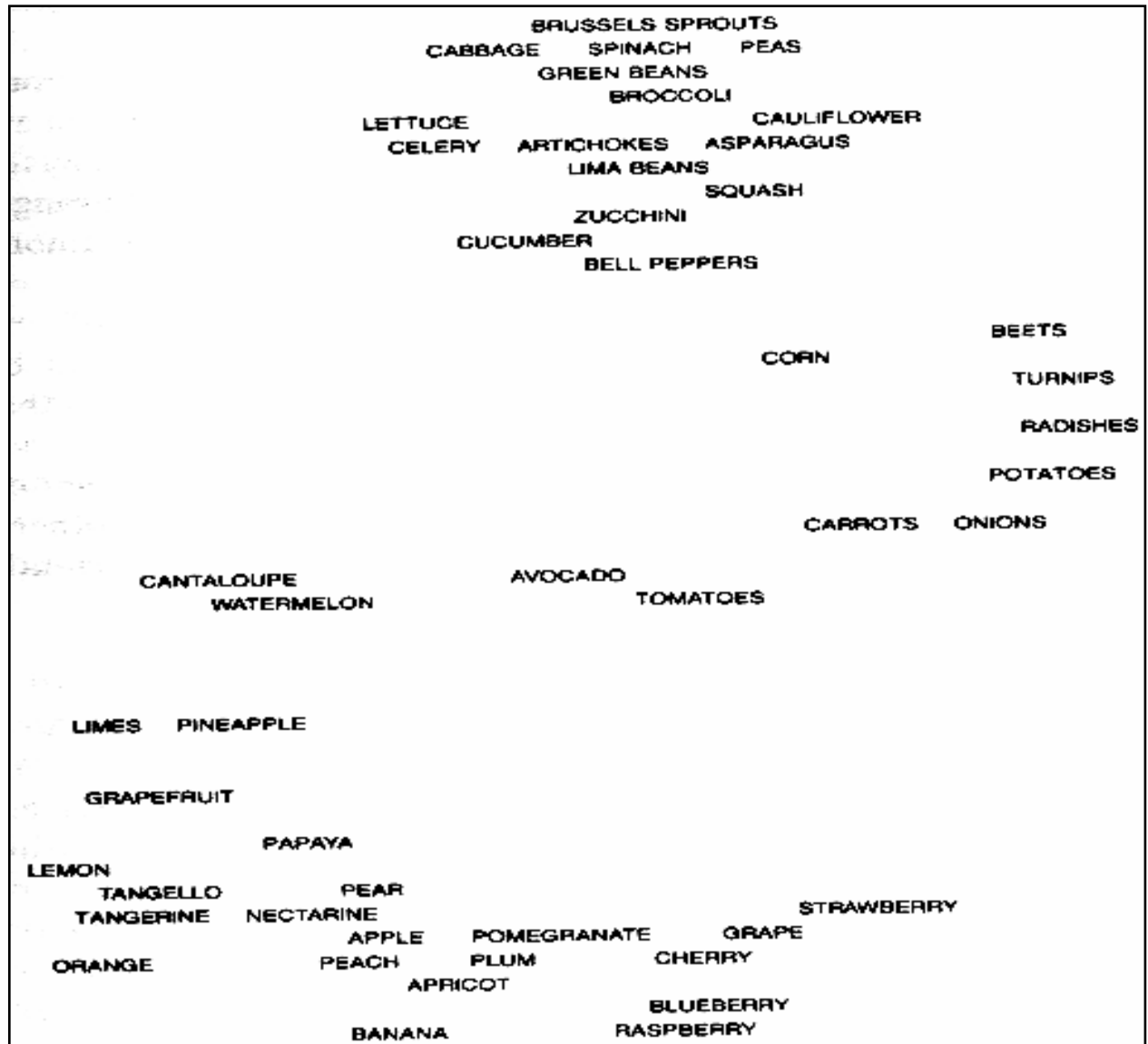
-Strong clustering indicates subdomains

Stress = 0.12

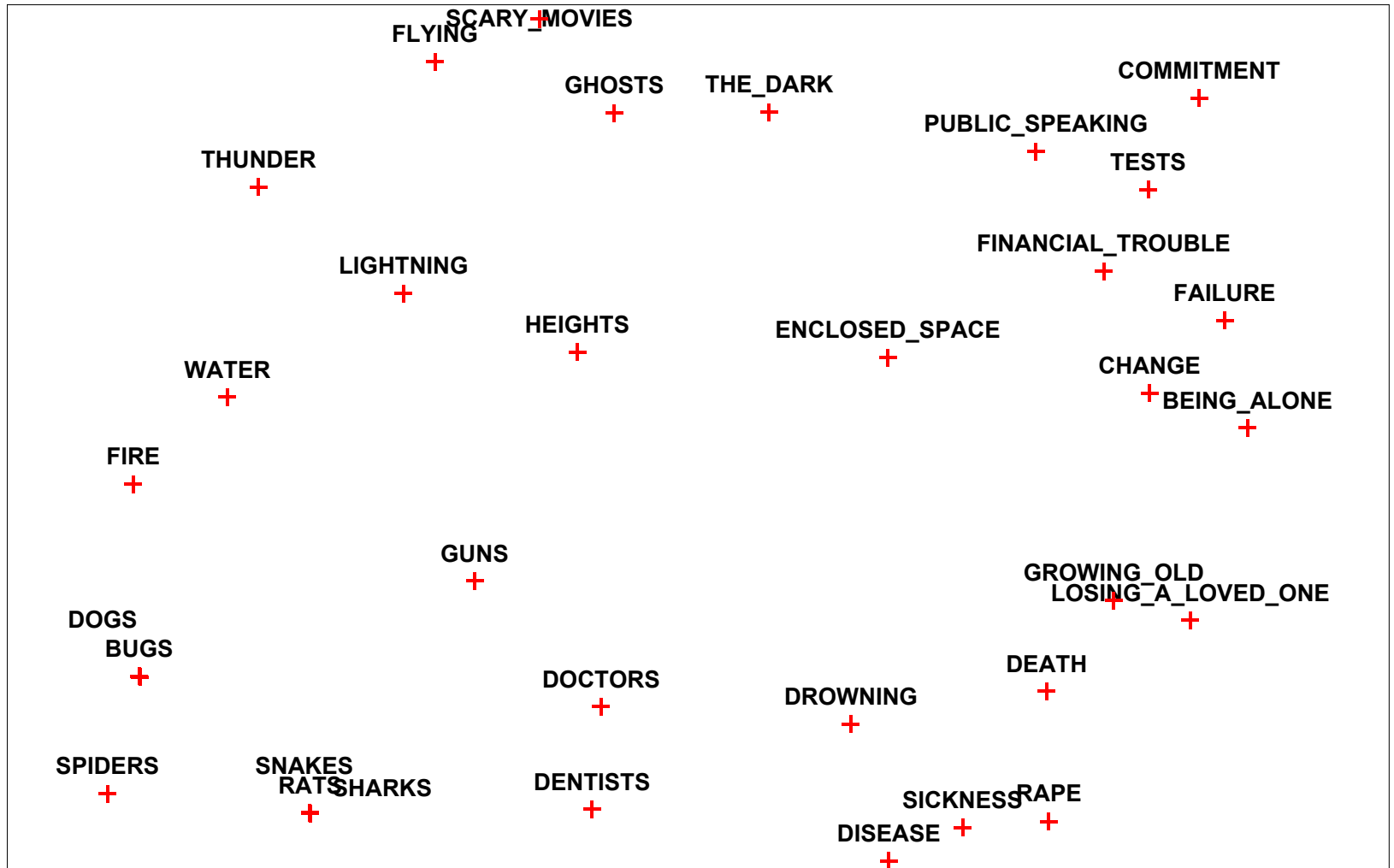
MDS of land animals only



Fruits & Vegetables



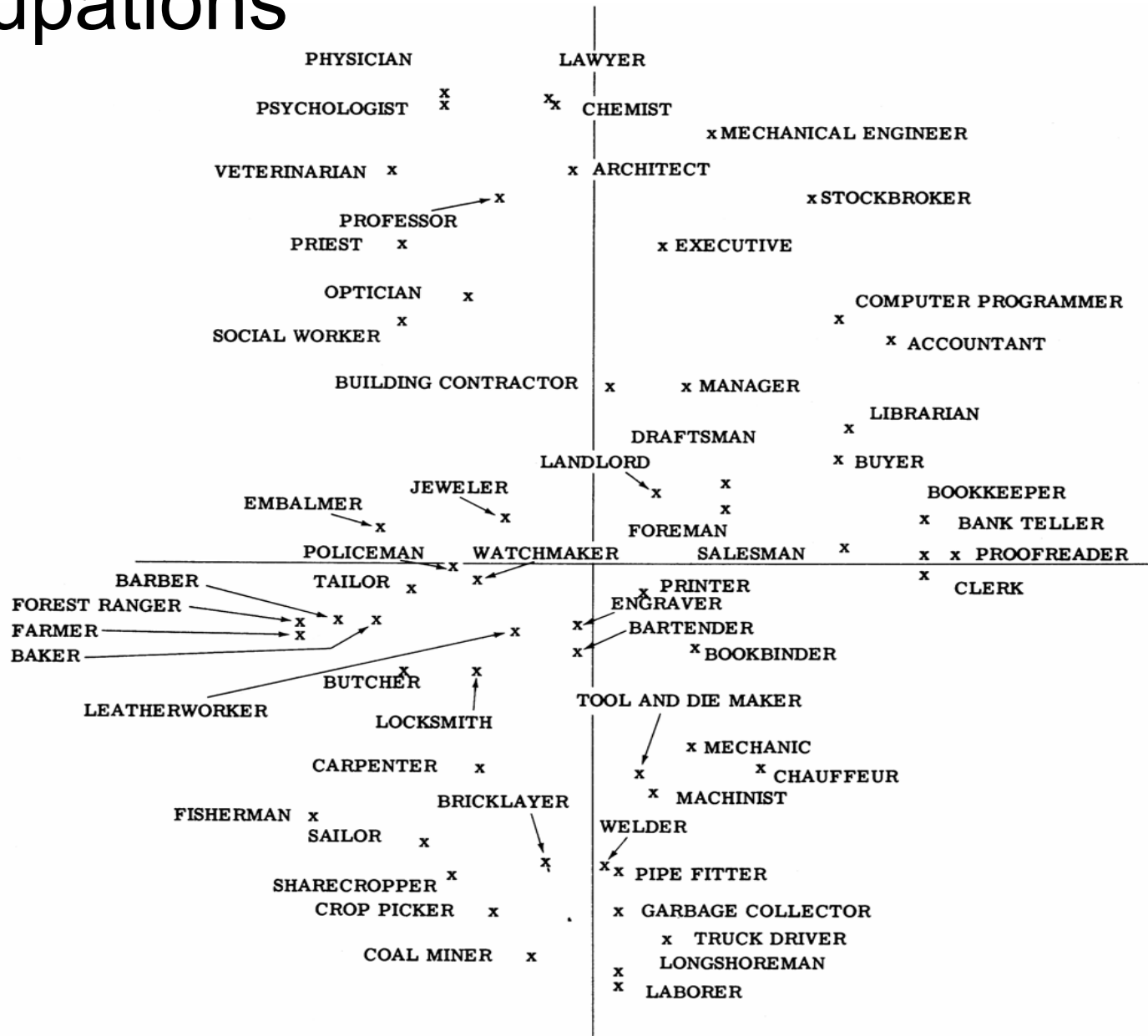
Things people are scared of



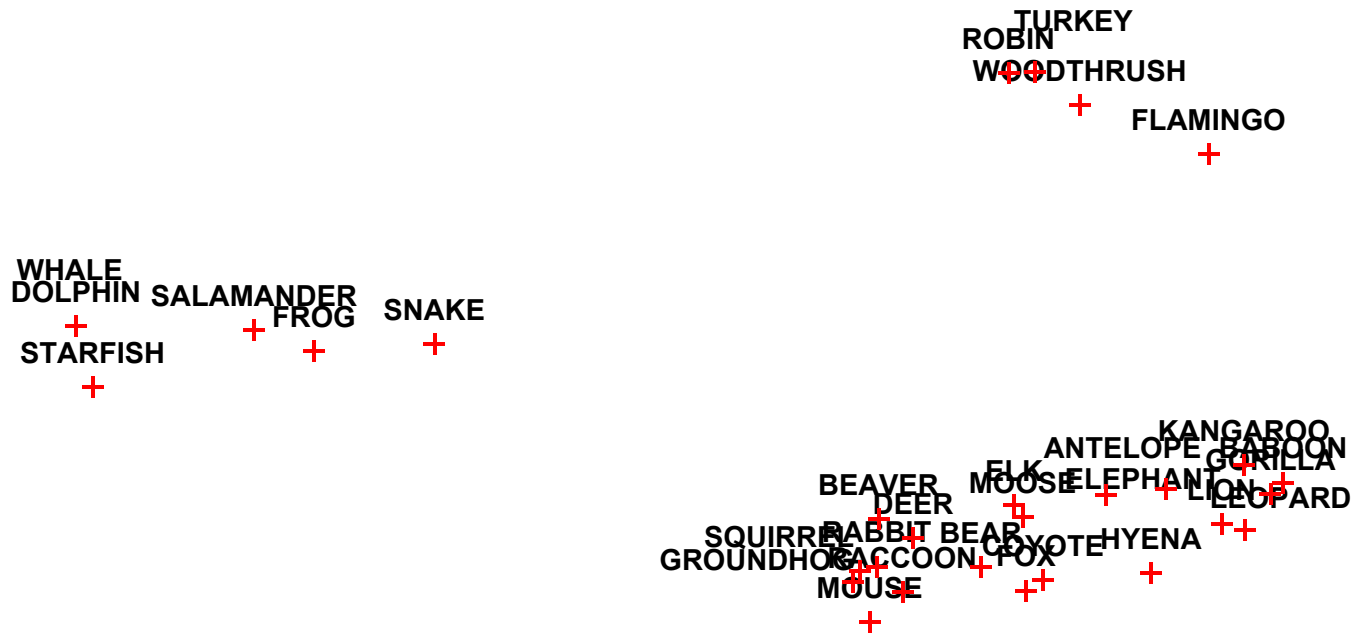
Things to notice ...

- Can use MDS with any proximity matrix
 - Aggregate similarities, Direct ratings, Confusion matrices, Correlation matrices, etc.
- Typically use 1-3 dimensions (mostly 2)
- Measure of fit (stress)
- Simplifies complex data
- Interpretation centers on
 - Looking for dimensions (quantitative item attributes)
 - Looking for clusters (qualitative item attributes)

Occupations



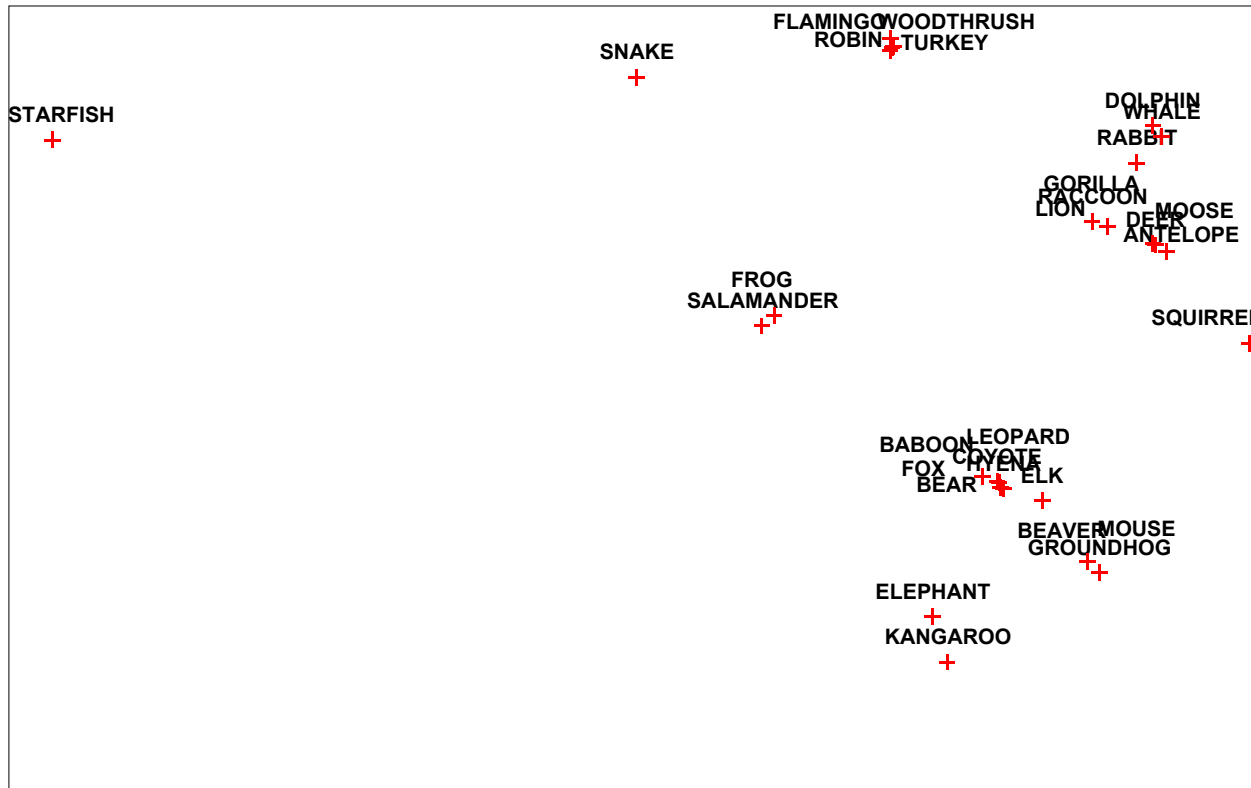
Undergraduates' view of animals domain



-Strong clustering indicates subdomains

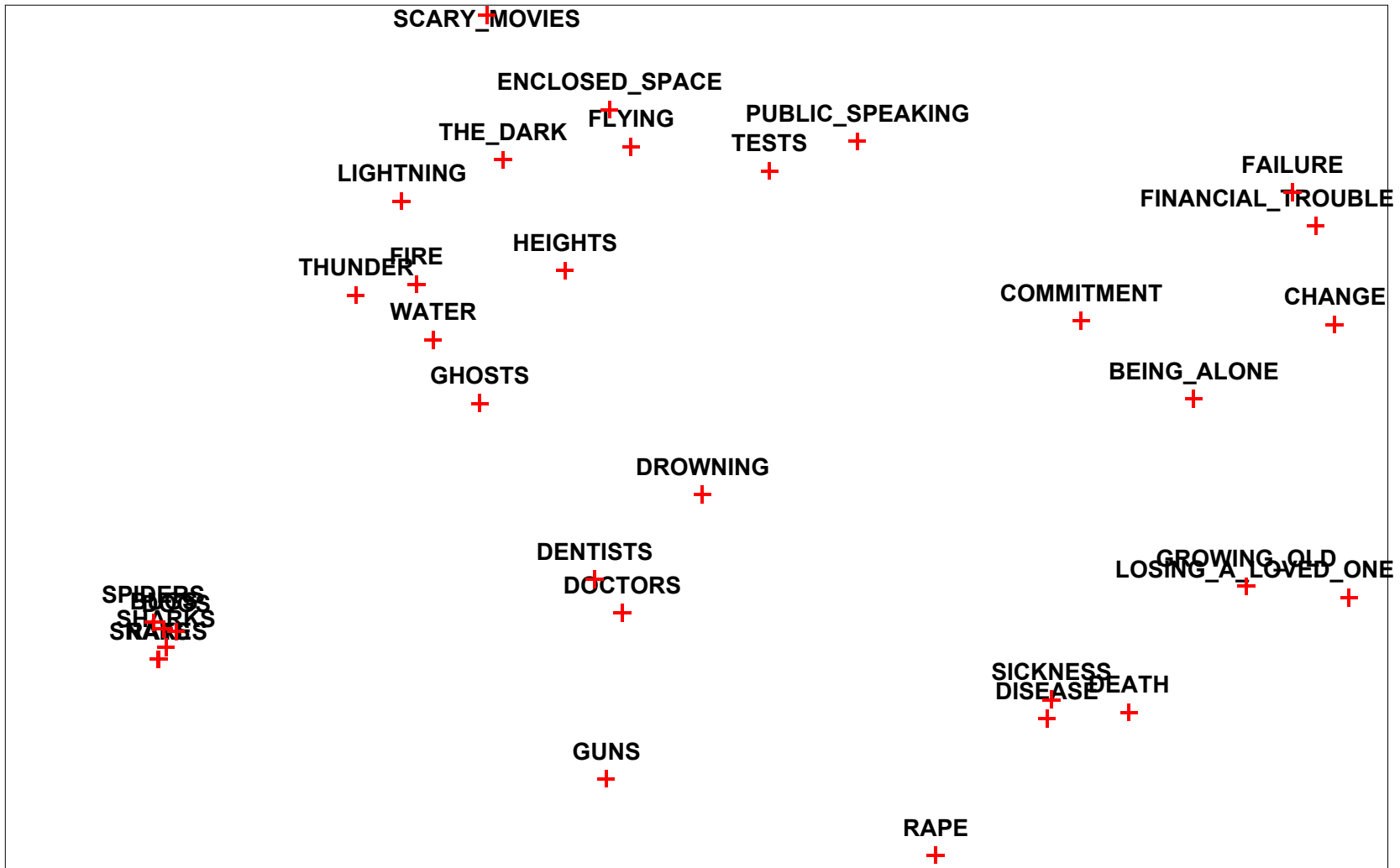
Stress = 0.12

Biologists' view of animal domain



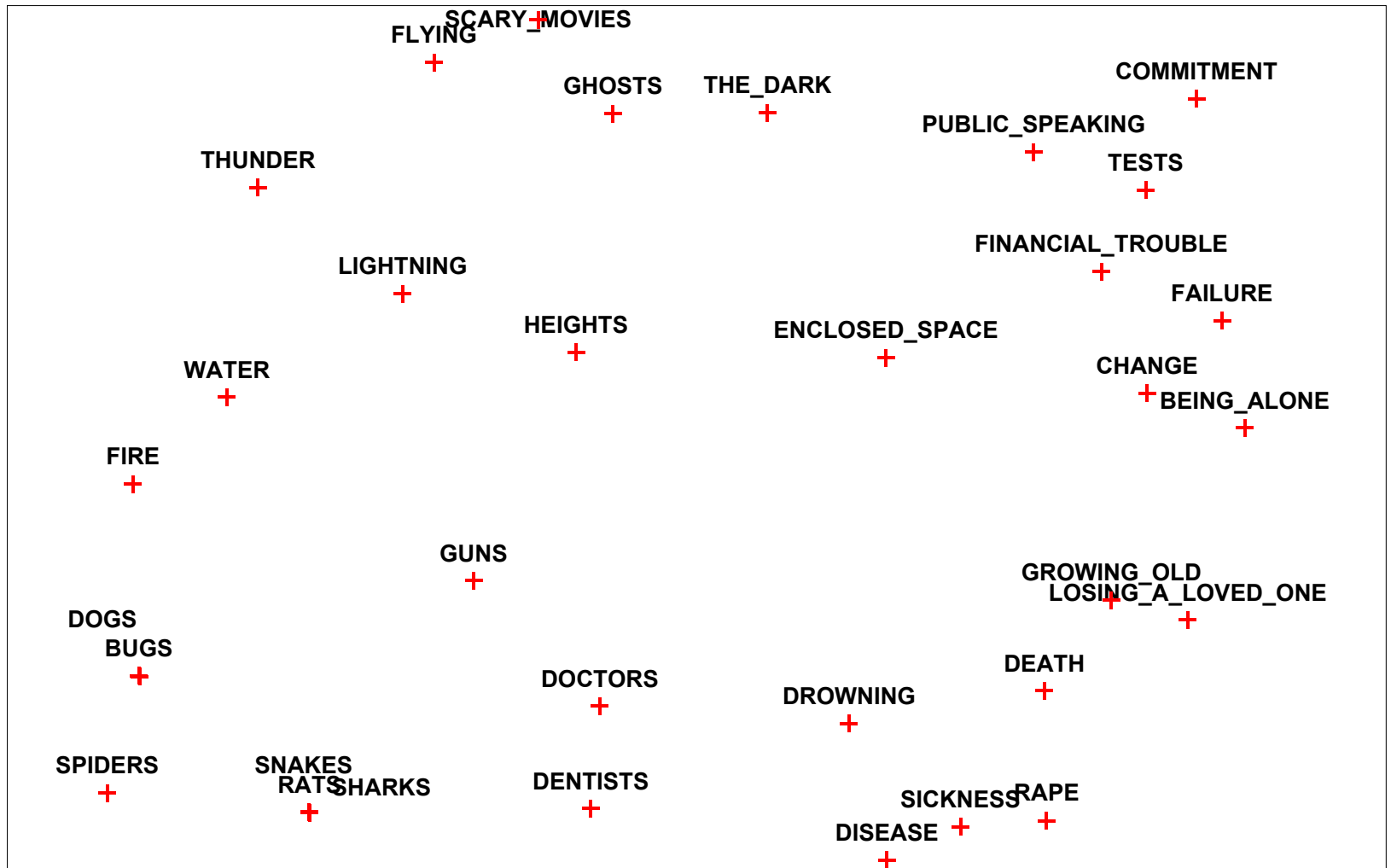
Things people are scared of

Female respondents

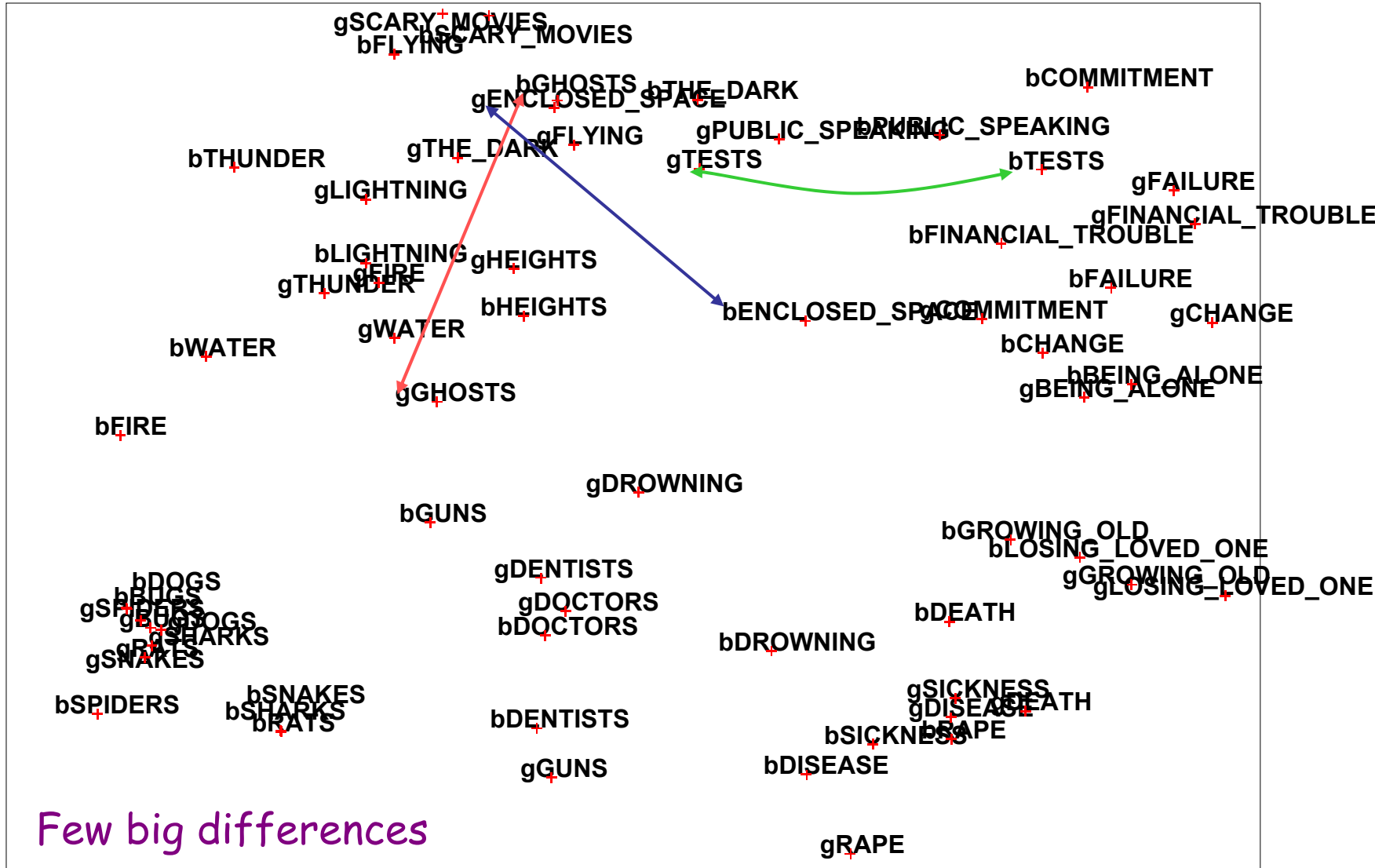


Things people are scared of

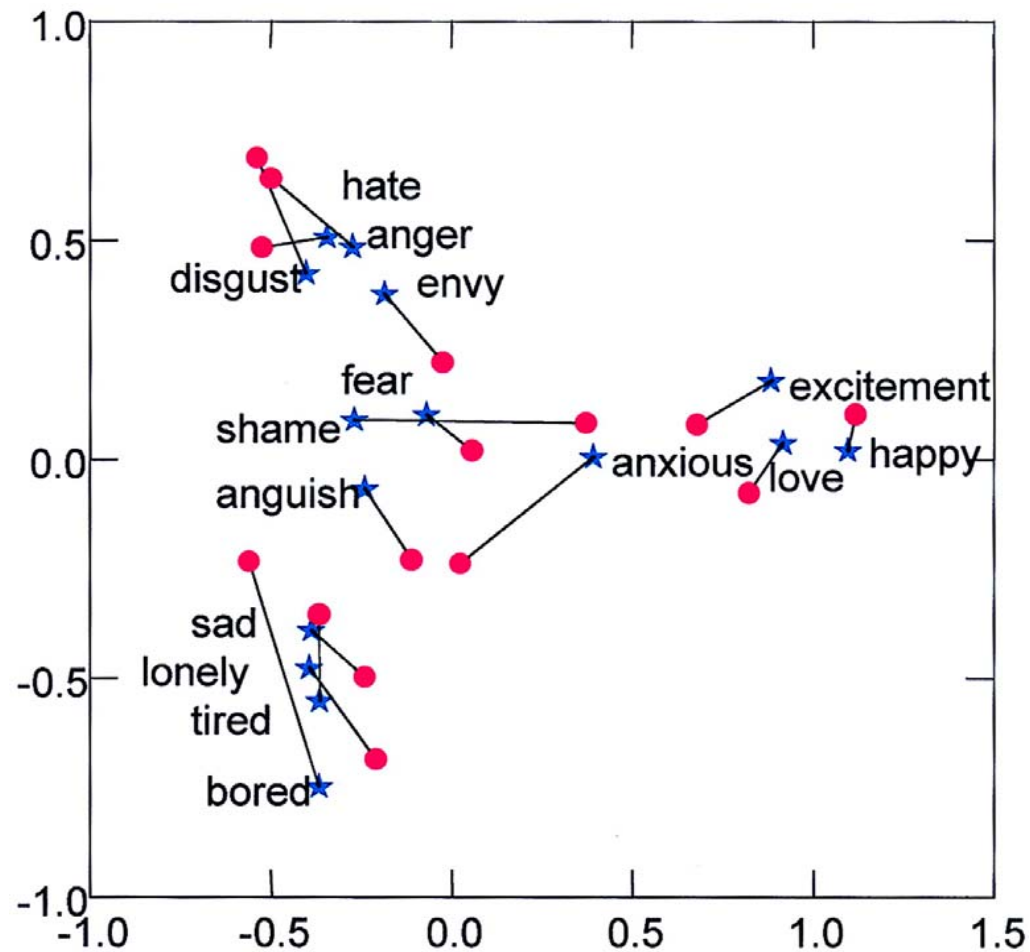
Male respondents



Juxtaposed Boys & Girls

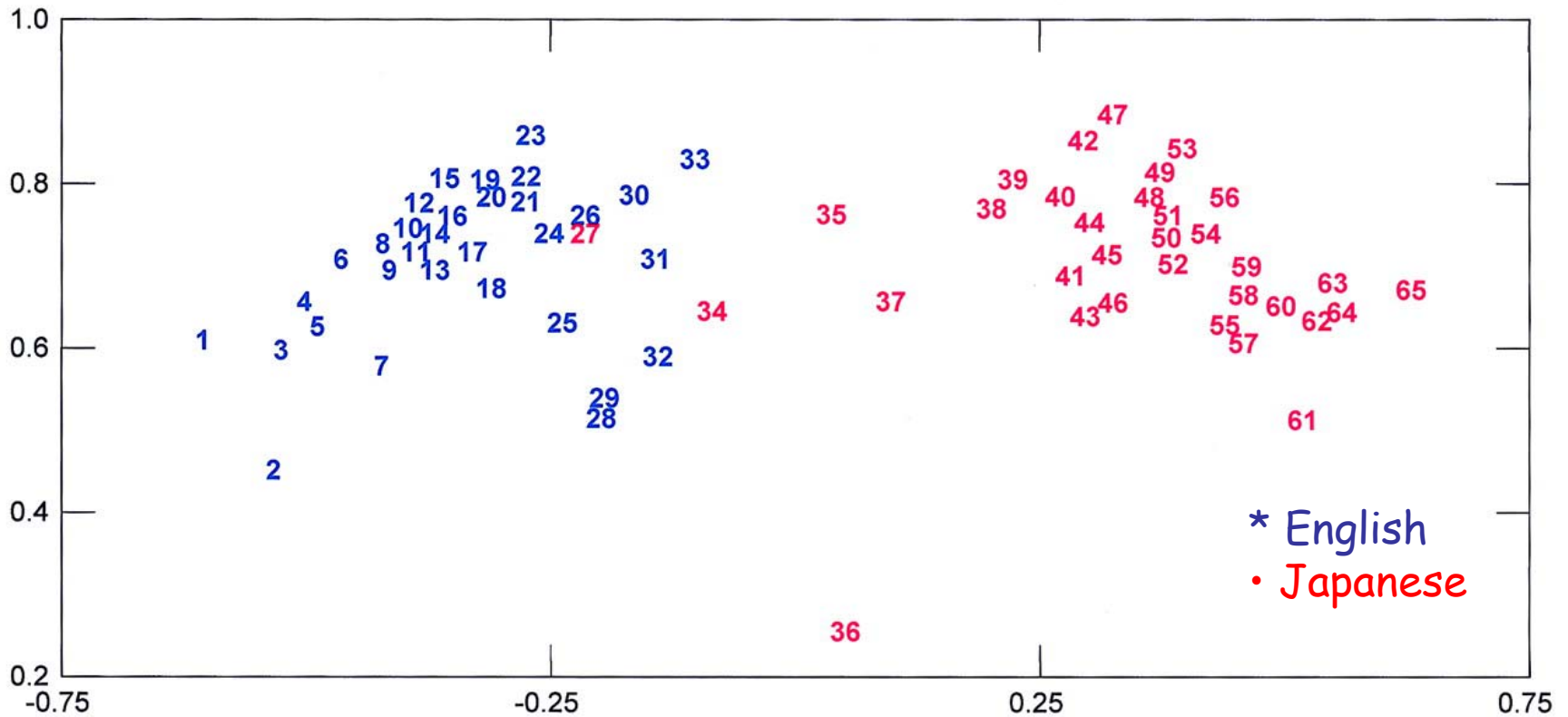


Discrepancy Analysis

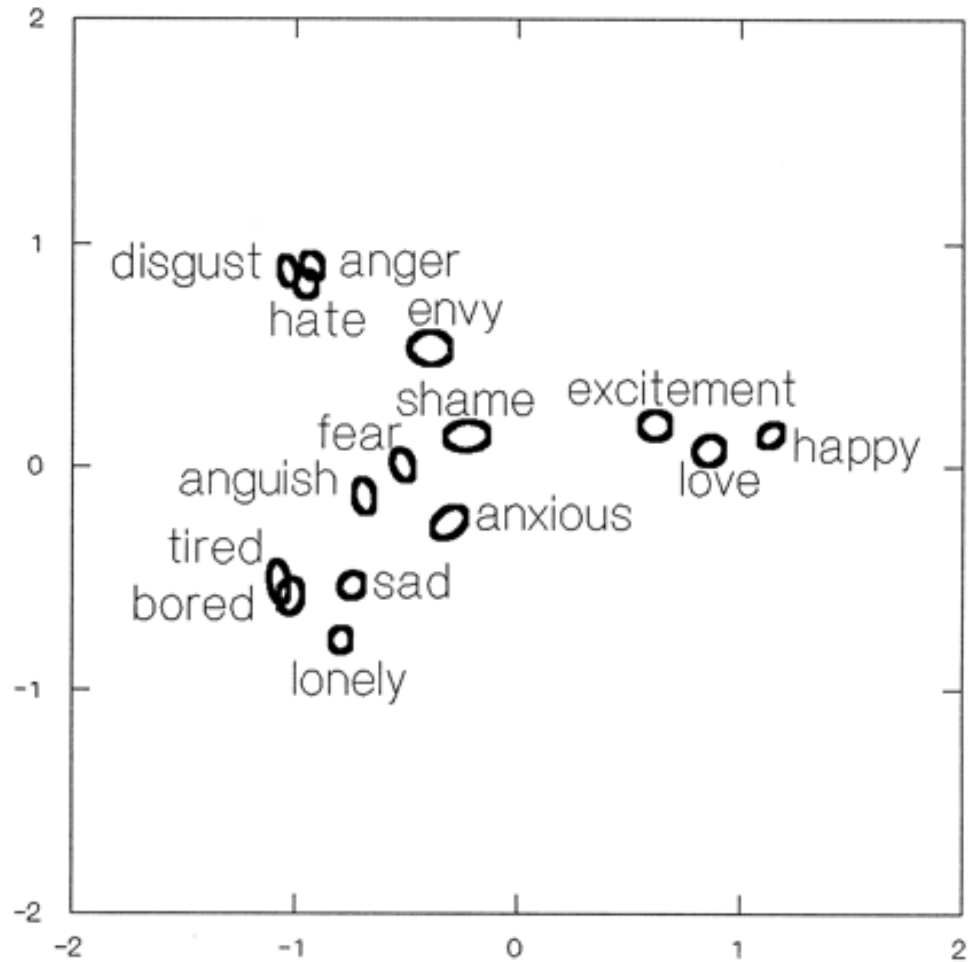
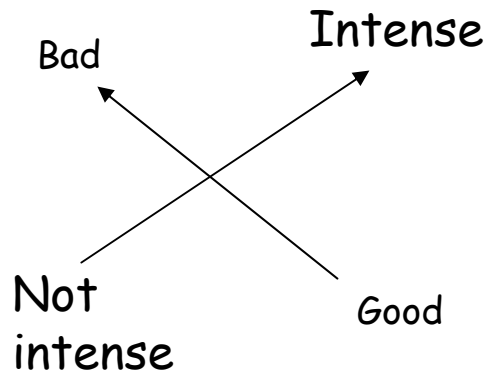


* English
• Japanese

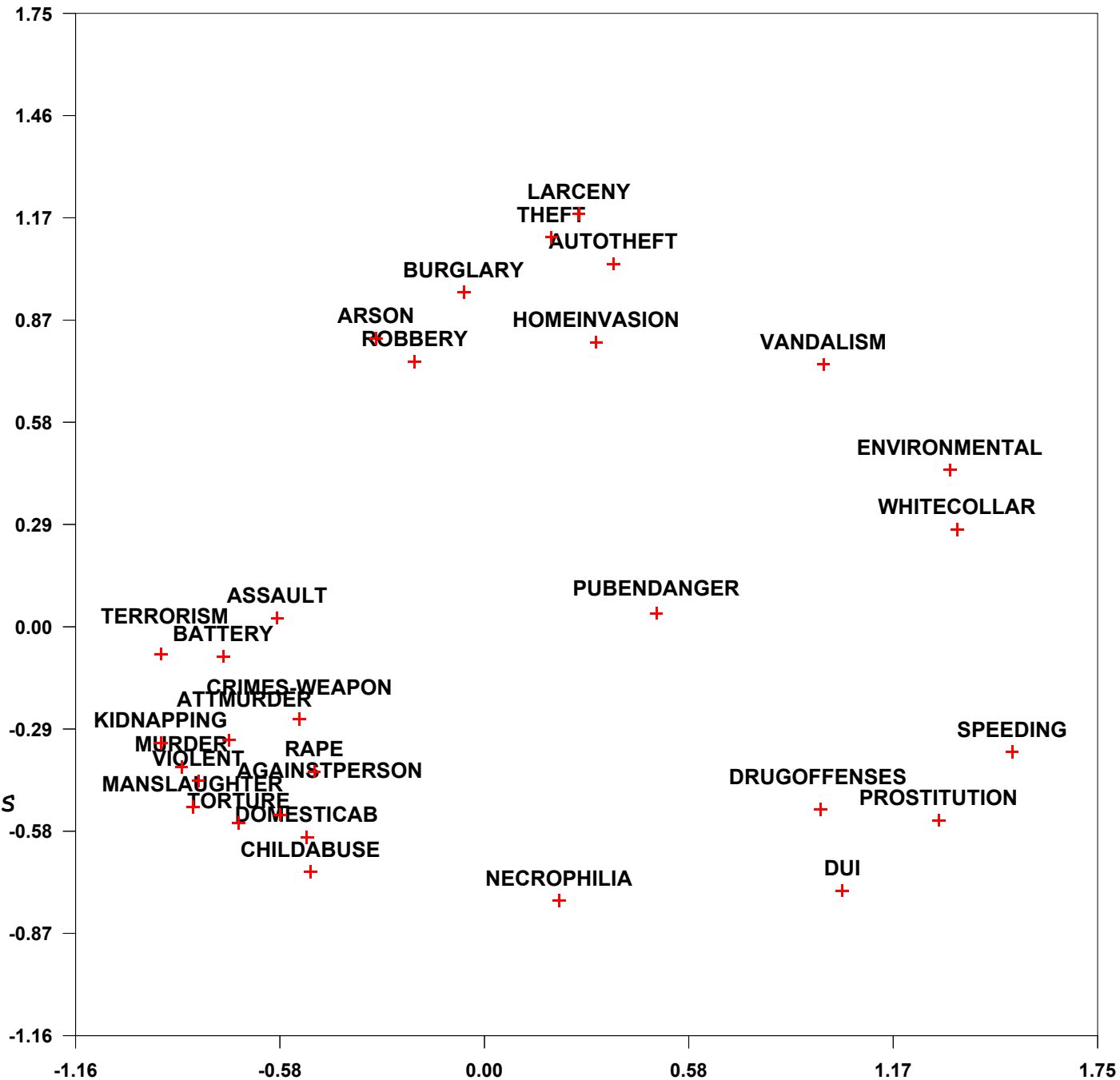
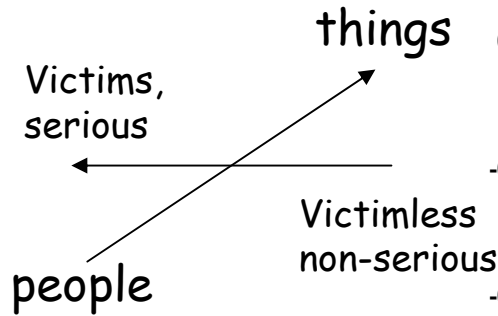
MDS of similarities in respondents' sorts



Emotion Terms



Crimes



Holidays

- Demo of Visual Anthropac pre-release version



Network analysis

- Crimes dataset
- Animals
- Holidays

