Results of Tritone Paradox Experiment

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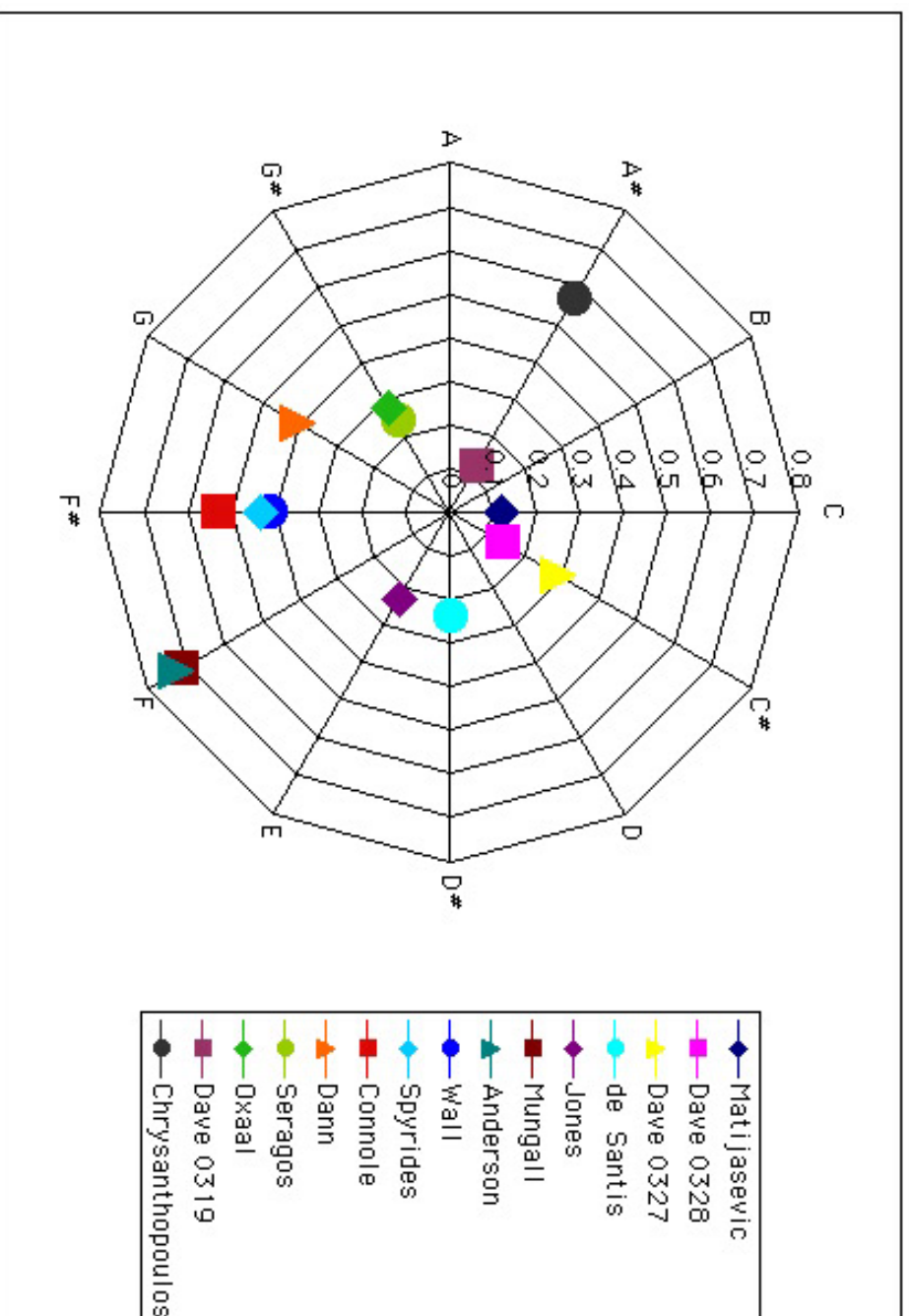*City University, London.*

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MSc/Postgraduate Diploma in Music Information Technology Lecture

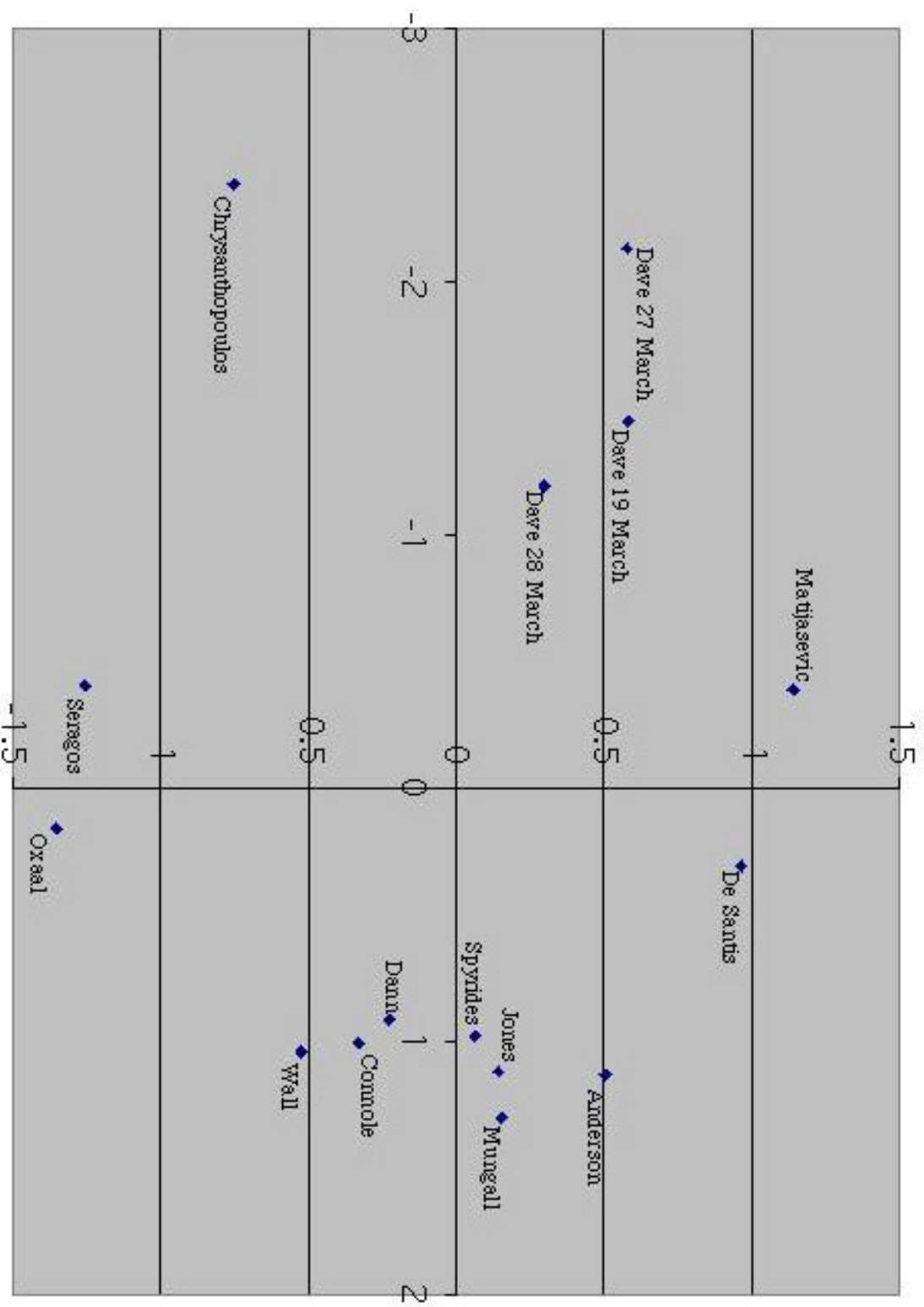Department of Music, City University, London

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1. Pitch class circle orientation for each subject

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1. This radar graph shows for each subject the orientation of the pitch class circle that best matches his or her results and the strength of that orientation.

2. So people nearer the middle of the graph do not have a very strong orientation but those nearer the outside have a very strong particular orientation.

3. It seems that those people who got the same orientation also got that orientation with similar strength (except for me and Nikos).

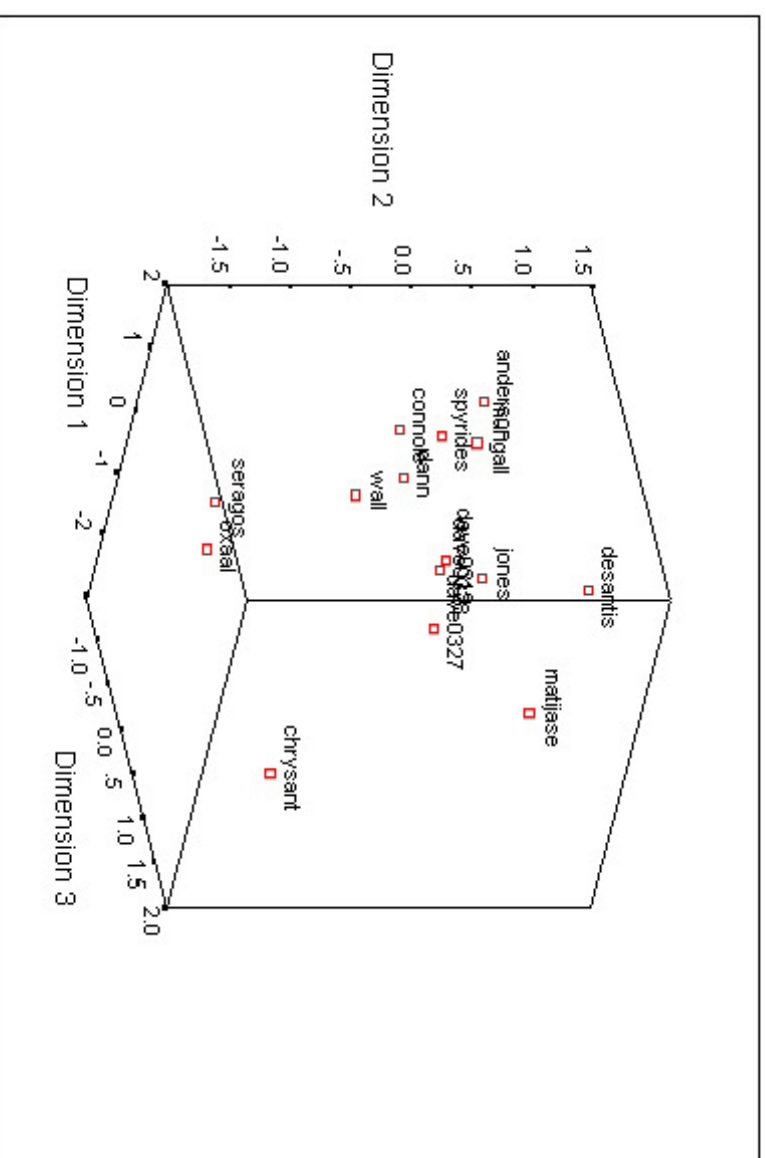## 2. 2-dimensional scaling of differences between responses

Points plotted (reading from the figure):
- Matijasevic
- Dave 27 March
- Dave 19 March
- Dave 28 March
- Chrysanthopoulos
- De Santis
- Spyrides
- Jones
- Danne
- Mungall
- Anderson
- Connole
- Wall
- Seragos
- Oxaal

1. I also counted the number of differences between each set of results and every other set of results to give a measure of the dissimilarity between any given pair of results.

2. Then I got a 2-dimensional scaling solution in which the distances between the points approximately represents the dissimilarity between subjects' responses.

3. This is the solution I got.

4. As you can see, there is a cluster of results here on the right.

5. Note the similarities and differences between this representation and the one on the radar graph.

6. This is actually not a particularly good multidimensional scaling solution, however.

7. The three dimensional solution is rather better.

Derived Stimulus Configuration

Euclidean distance model

Dimension 2

Dimension 1

Dimension 3

3. 3-dimensional scaling of differences between responses

1. This is the three-dimensional solution.

2. Note how the clustering in the 2-dimensional solution is now nothing like as obvious.

3. Unfortunately, I haven't had a chance to do a clustering analysis on this data.

4. Relationship between pitch-class circle orientation and nationality
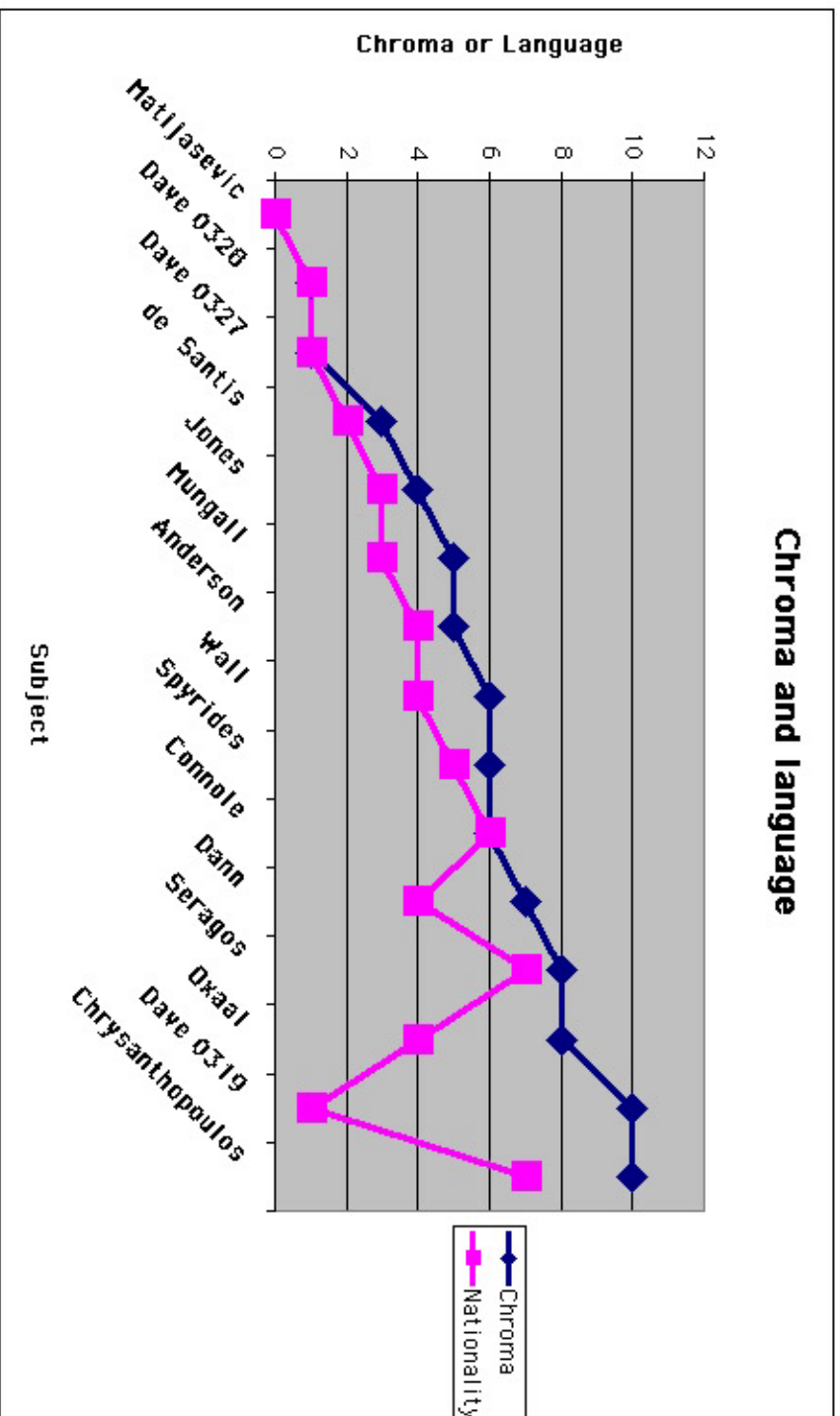
correlation= .665, $p < .01$

4. Relationship between pitch-class circle orientation and nationality

1. This graph shows language against pitch-class circle orientation.

2. I encoded the languages by increasing the number by one each time I meet a new language as you move around the circle.

3. As you can see, correlation between this representation of the language and the orientation was .665 which is significant at the .01 probability level.

4. In other words, the results seem to be consistent with the hypothesis that chroma circle orientation is correlated with language or nationality.