

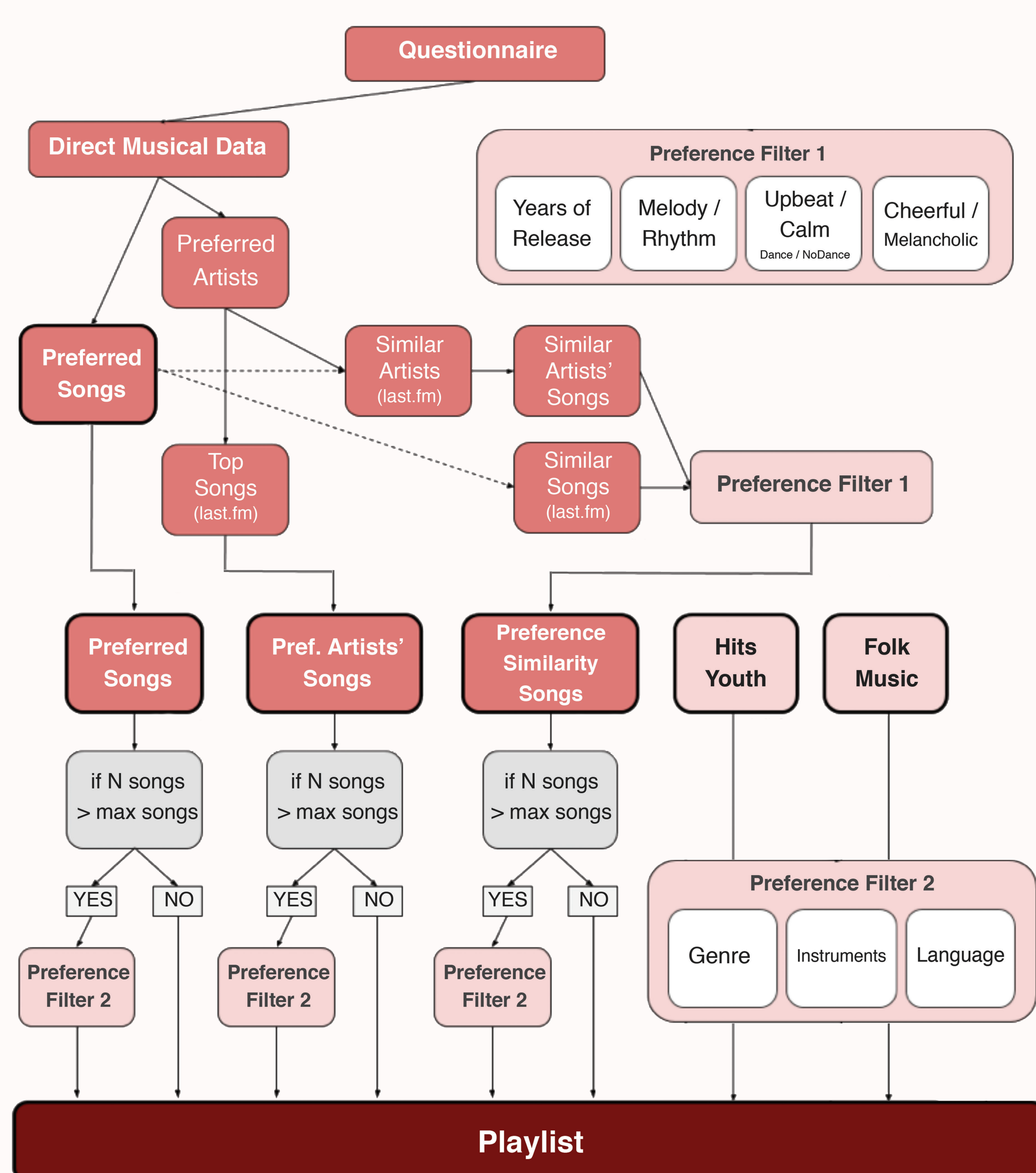
There are places I remember: Personalized automatic creation of music playlists for Alzheimer's patients

Felipe L. Navarro, Perfecto Herrera, Emilia Gómez
Music Technology Group, Universitat Pompeu Fabra, Barcelona, Spain

felipel.navarro01@estudiant.upf.edu
{perfecto.herrera,emilia.gomez}@upf.edu

We present here the basic algorithm and initial evaluation of a system that creates personalized playlists for specific patients. First, a musical anamnesis form is used to elicit relevant information about the musical personal living contexts, musical education, and musical preferences of the patient. These data, combined with music analysis and similarity computation algorithms, makes possible to expand an initial explicit list of tracks with additional potentially relevant ones. Healthy senior users provided positive evaluations that pave the way to a system useful for Alzheimer's patients.

Diagram



Results

Figure a. Percent of songs considered to be part of the subjects' life soundtrack per list type.

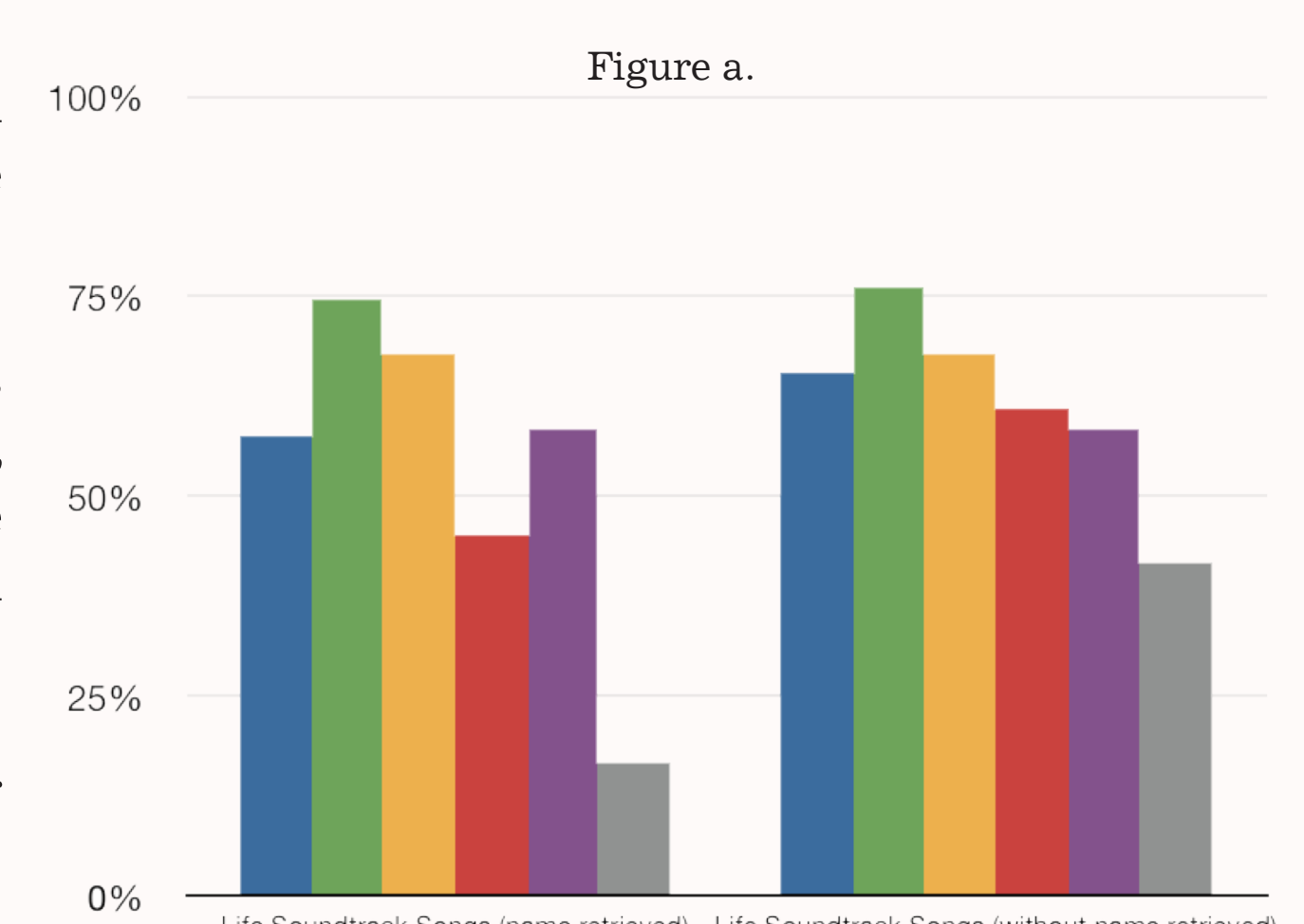


Figure b. Percent of songs rated as liked, songs which brought memories, future listening intentions for the song, familiarity with the song and name of the song retrieved.

Table a. Percent of songs rated per category and list type.

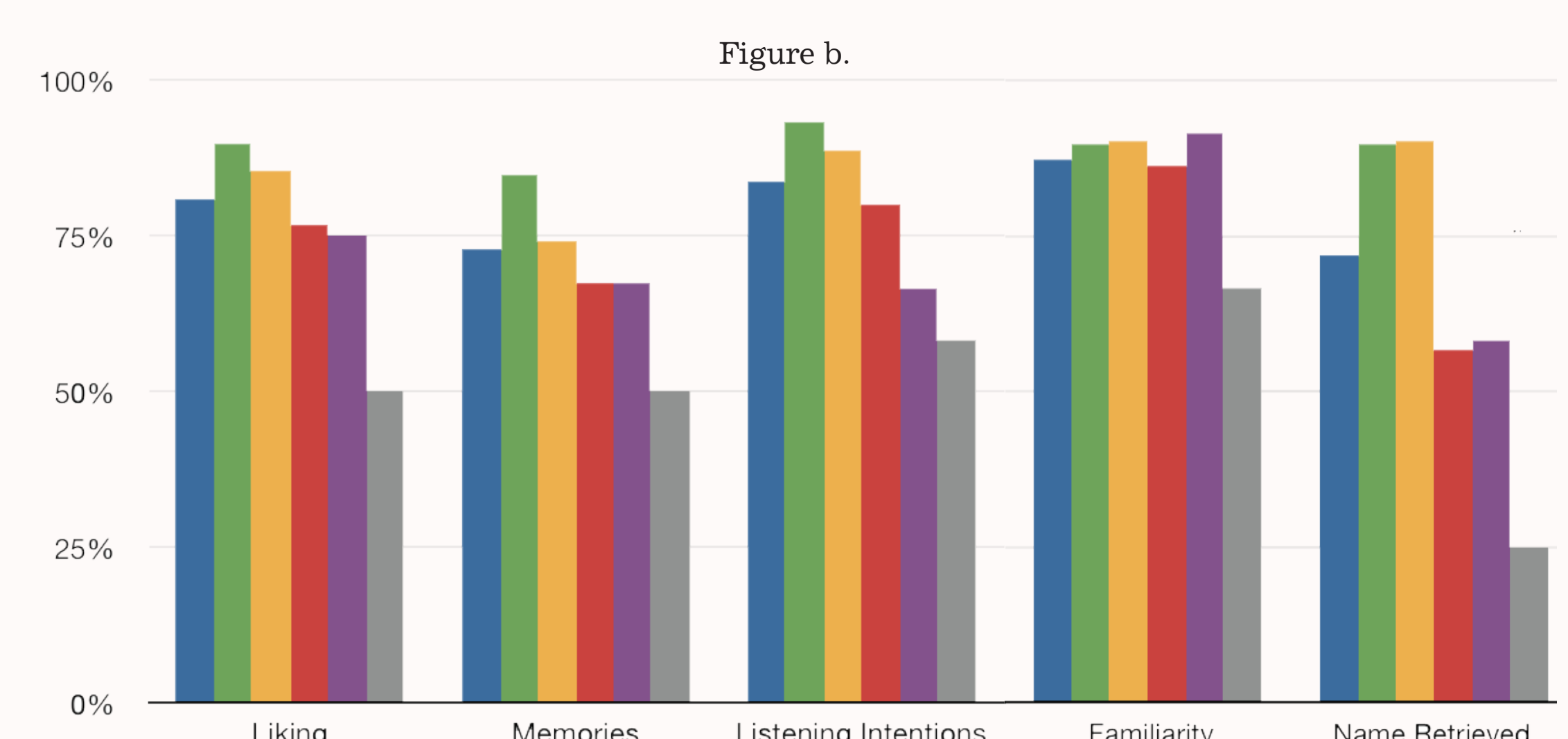


Table a.

| List Type | Number of Songs | Familiarity | Name Retrieved | Liking | Memories | Listening Intentions |
|-----------|-----------------|-------------|----------------|--------|----------|----------------------|
| All | 240 | 87.500 | 72.083 | 80.833 | 72.917 | 83.750 |
| A | 59 | 89.831 | 89.831 | 89.831 | 84.746 | 93.220 |
| B | 62 | 90.323 | 90.323 | 85.484 | 74.194 | 88.710 |
| C | 95 | 86.316 | 56.842 | 76.842 | 67.368 | 80.000 |
| D | 12 | 91.667 | 58.333 | 75.000 | 67.368 | 66.667 |
| E | 12 | 66.667 | 25.000 | 50.000 | 50.000 | 58.333 |

■ All Lists
■ List of Preferred Songs
■ List of Preferred Artists' Songs
■ List of Preference Similarity Songs
■ List of 'Youth Hits' Songs
■ List of 'Folk' Songs

