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Abstract

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Keywords— one, two, three, four

1 Introduction

2 Theoretical Framework

3 3 Research Design

3.1 3.1 Data and variables

The data for our study came from a Spanish survey on habits and cultural practices for 2006-2007 (see Ministry of Culture (2007) for technical details). Surveyed were 14 822 Spanish and non-Spanish individuals of both sexes, aged 15 years and older, and resident in Spain at the time of interview. The survey was conducted in four waves (1 per quarter) between March 2006 and February 2007; each quarterly survey was based on a representative random sample of about 25% of the sampled individuals (all four quarterly surveys were used for our analysis), stratified by autonomous communities and municipalities according to size. Stratification by autonomous community was necessary to produce a representative sample with a 95% confidence level, not only at an aggregate level (age and gender) but also at the autonomous community level (Ministry of Culture, 2007:11). In the interest of brevity, background data referring to the research described below are provided in supplementary form in Tables A1-A6.

3.1.1 3.1.1 Cultural space: musical listening indicators

Individuals interviewed were asked about the kind of music he/she normally listen to. Individuls were given a list of musical genres and they just had to choose the ones they usually listen to. The following multiple answers (21 in total) were possible: songs for children (chl), songwriters (swr), ballads (bls), flamenco (flk), new flamenco (nfl), other spanish folk songs (flk), international pop rock (ipp), Spanihs poprock (spp), latino poprock (lpp), blues (bls), jazz (jzz), world music (wrl), reggea (rgg), rap (rap), electronic music and techno (tcn), hardrock (hrk), house (hus), classical music (cls), Lyrical music (lyr), opera (opr), operetta (opt). Desciptors are provided in Table~1.

3.1.2 3.1.2. Social space: indicators of individual position

According to Bourdieu???s theoretical framework, the properties of individuals are indicators of their social position, such that variations in individual properties ??? level and structure of capital, age, gender, etc. ??? are variations in the individual???s social position that are visible in a social map. The Ministry of Culture survey on which we based our research elicited information on education as an indicator of cultural capital, and on occupational status as an indicator of economic capital, but provided no occupational breakdown, and collected no information on incomes. As a proxy for economic capital in our study, therefore, we used occupational status, namely, the following five categories: employed persons; entrepreneurs and self-employed workers (freelancers); unemployed persons; people receiving old-age or disability pensions and individuals performing unpaid domestic tasks (homemakers); and students. Educational attainment was recorded in three categories, as follows: third-level post-graduate

education, third-level graduate education, and upper secondary education or below. Age, interpreted here as an indicator of an individual???s life stage, was assigned to five categories. In order to complete the description of the social space, four additional variables were included, as follows: personal situation (five categories); number of individuals aged 15 and over in the household (three categories); habitat where the household was located (five categories); and sex (Table~2).

3.2 3.2 Analysis

3.2.1 3.2.1 Uncovering the music schemes

3.2.1.1 3.2.1.1 Correlation Classification Analysis To uncover and measure shared music schemas in survey data we used Correlation Classification Analysis (CCA) developed by Andrei Boutyline (2014) ???. CCA is based on Relational Class Analysis (RCA), a novel methodology with the aim of measuring shared cultural schemas developed by Goldberg (2011) **?**. At the core (Goldberg 2011) of RCA approach is a novel similarity measure termed *relationality* which in CCA approach is changed into a Pearson correlation measurement termed *correlation class*. Boutyline contends that correlationality (i.e. the level of pairwise correlations) can quantify the extent to which two respondents organize their attitudes according to such a shared cultural schema more accurately and technically faster than RCA.

CCA calculates the Pearson correlation scores for each pair of respondents and uses the result matrix to construct and value the links of a network in which nodes are individual survey respondents. Then the method drops waker ties, partitions the network via Newman's (2006) eigenvector-based modularity maximization algorithm to assign individuals to groups the way that correlation scores are high within groups, and lower between groups.

3.2.1.2 3.2.1.1 Multiple Correspondence Analysis To test our theoretical framework, we needed an instrument capable of analyzing two related spaces: that of individuals and that of Internet use. Like Bourdieu in La Distinction (1984), we used the multiple correspondence analysis (MCA) technique (Greenacre, 1993; Greenacre & Blasius, 1994; Lebart, Morineau, & Warwick, 1984); in particular, we used the implementation of MCA by Ven- ables and Ripley (2002, pp. 329–330). The MCA enabled us to build up the Internet use and indi- vidual spaces from a set of uses large enough to allow a full multidimensional display of individuals (Rouanet, Ackermann, & Le Roux, 2004). How individuals were related to their Internet use patterns revealed their linkages with other individuals. A geometric representation of the Internet use space is as simple as diagonalizing an n-by-l matrix G of n individuals (rows) observed for p Internet use (dummy variables) with l (1/4 p Â 2) total cate- gory levels (columns). A simple geometric display consists of a two-dimensional space where Inter- net use and use level are plotted according to their association with each of these dimensions. The result is an asymmetric row plot of the matrix of individuals according to Internet use. To interpret the social space constructed in this way, we used the inertias (total variance) of the principal axes and the contributions of the Internet use categories to the axes (see Ambrogi, Biganzoli, & Boracchi, 2005). MCA enables active variables to be distinguished from supplementary properties, with the latter term used to define variables that have no impact on the geometric orienta- tion of the dimensions but which may help with interpretation (Greenacre, 1993). In our research, we used MCA both as an exploratory and explanatory tool; for the latter, we used the "predict" method for the "MCA" class implemented in the Modern Applied Statistics with S (MASS) package (Venables & Ripley, 2002), using the R language and environment for statistical analysis, version 2.9.0 (R Development Core Team, 2009).

3.2.2 3.2.2 Interpreting the music schemes

4 Findings

5 Discussions

6 Conclusions

7 References

8 Tables

	Genre Name	Description	Abb.	Percentage of Yes
1	Children	Children's songs	chl	3.4%
2	Songwriter	Songwriter	swr	28.2%
3	Ballad	Melodic songs	bld	32.8%
4	Flamenco	Flamenco	flm	18.4%
5	NewFlamenco	NewFlamenco	nfl	13.1%
6	Folk	Other Spanish folk music	flk	13.3%
7	SpanishPopRock	SpanishPopRock	spp	48.8%
8	LatinPopRock	LatinPopRock	lpp	30.8%
9	InternationalPopRock	InternationalPopRock	ipp	28.9%
10	Blues	Blues	bls	8.6%
11	Jazz	Jazz	jzz	7.8%
12	World	World Music	wrl	6%
13	Reggae	Reggae	rgg	7.3%
14	Rap	Rap	rap	8%
15	Tecno	Electronic, tecno	tcn	6.7%
16	Hardrock	Hardrock	hrk	5%
17	House	House	hus	8.1%
18	Classic	Classic	cls	19.2%
19	Lyrical	Lyrical music	lyr	3.3%
20	Opera	Opera	opr	4.6%
21	Operetta	Operetta	opt	5.1%

Table 1: Descriptive statistics of music genres

Clusters	Abb.	Sample
Gender	gnd	
Female	gnd:f	52 %
Male	gnd:m	48 %
Age	age	
<25	age:<25	14 %
25-34	age:25-34	17 %
35-44	age:35-44	19 %
45-54	age:45-54	16 %
>54	age:>54	34 %
Occupational status	ocp	
Self-employed	ocp:slf	9 %
Employed	ocp:emp	41 %
Unemployed	ocp:ump	6 %
Retired	ocp:rtr	19 %
Students	ocp:std	9 %
Homemaker, with disability (Others)	ocp:otr	16 %
Education	edu	
Upper secondary or below	edu:edu1	85 %
Graduate	edu:edu2	7 %
Post graduate	edu:edu3	8 %
Habitat	hbt	
Provincial capital	hbt:cpt	43 %
>100K	hbt:>100	8 %
50K-100K	hbt:50-100	7 %
10K-50K	hbt:10-50	23 %
<10K	hbt:<10	19 %
Household size (persons >15 years)	fml	
2 members or fewer	fml:<=2	34 %
3-4 members	fml:3-4	53 %
>4 members	fml:>4	14 %

Table 2: Descriptive statistics of social position indicators

Figures

Goldberg, Amir. 2011. "Mapping Shared Understandings Using Relational Class Analysis: The Case of the Cultural Omnivore Reexamined1." *American Journal of Sociology* 116 (5). JSTOR: 1397–1436.