

Leisure Example

The *Leisure example* has been devised as a compromise between a mere illustration and a real case study; it should give a fair idea of how a large questionnaire can be analyzed by MCA and by usingSPAD software.

Data

The data set has been constructed from 2008 survey on the cultural practices of French people. The survey was carried out by the Department of Studies and Prospective of French Ministry of Culture and Communication¹. In the survey, a sample of 5004 individuals aged 15 or more, representative of the French population, answered a very comprehensive questionnaire (90 questions). The sample was constructed by using the quota method (gender, age, PCS, number of persons in the household, woman activity), after stratification by program regions and agglomeration categories. The data collection was made at the person's home by using the CAPI system.

For the purpose of illustrating MCA², we selected a set of $Q = 7$ questions pertaining to *leisure activities*, and we confined the study to the set I of 4450 individuals aged 18 or more who answered fully the seven questions. The questions are relevant relevant to leisure (one question), going out and sociability (two questions), cultural practices, namely, newspaper reading, books and comic strips reading (two questions) and watching TV (two questions). Then, from these questions we constructed a space of cultural practices and sociability.

Elementary statistics

(q1). As a general rule, would you say that during your *Free time*

q1 <i>More time</i>	Freq.	%
r1 you don't lack time	1552	34.9
r2 to <i>rest</i> , not to do anything in particular	229	45.1
r3 to <i>take courses</i> to improve your work situation	194	4.4
r4 to discover or practice more <i>physical activities</i>	786	17.7
r5 to discover or practice more <i>artistic activities</i>	435	9.8
r6 to develop your <i>general knowledge</i>	372	8.4
r7 to <i>take care</i> of your <i>family</i> more	447	10.0
r8 to do some <i>home DIY</i> (gardening, etc.)	435	9.8
Total	4450	100.0

¹O. Donnat (2009), *Les pratiques culturelles des français à l'ère numérique*. Paris: La découverte.

²For a detailed analysis of the data set, see Le Roux B. (2014), *Analyse géométrique des données multidimensionnelles*, Paris: Dunod.

(q2). When you *Go out* in the evening, do you usually go

<i>q2</i> <i>Going out</i>	freq.	%
<i>r1</i> <i>alone</i>	342	7.7
<i>r2</i> <i>with your partner</i>	1451	32.6
<i>r3</i> <i>with family, children, parents, etc. ...</i>	981	22.0
<i>r4</i> <i>with friends</i>	726	16.3
<i>r5a</i> <i>with friends that differ according to outings</i>	190	4.3
<i>r5b</i> <i>with a group (workers' council, club, etc.)...</i>	50	1.1
<i>r6</i> <i>you don't go out in the evening.</i>	710	16.0
Total	4450	100.0

(q3). Usually, how frequently do you read a national or regional newspaper bought by yourself or not?

<i>q3</i> <i>Newspaper</i>	freq.	%
<i>r1</i> <i>almost every day</i>	1355	30.4
<i>r2</i> <i>several times a week</i>	489	11.0
<i>r3</i> <i>about once a week</i>	682	15.3
<i>r4</i> <i>less than once a week</i>	612	13.8
<i>r5</i> <i>never</i>	1312	29.5
Total	4450	100.0

(q4). As a general rule, do you prefer watch TV

<i>q4</i> <i>TV with</i>	freq	%
<i>r1</i> <i>alone</i>	1639	36.8
<i>r2</i> <i>with somebody</i>	1998	44.9
<i>r3</i> <i>it depends on program</i>	322	7.2
<i>r4</i> <i>it depends on time of day</i>	491	11.0
Total	4450	100.0

The three following questions are constructed from several questions.

(q5). It concerns TV and results of a coding from two questions:

“Which channel do you watch the most?”

“Which channel do you watch in second place?”

<i>q5</i> <i>Channel</i>	freq.	%	<i>q5</i> <i>Channel</i>	freq.	%
<i>r1</i> TF1	1456	32.7	<i>r5</i> France5	198	4.4
<i>r2</i> France2	624	14.0	<i>r6</i> Arte	266	6.0
<i>r3</i> France3	425	9.6	<i>r7</i> M6	571	12.8
<i>r4</i> Canal+	270	6.1	<i>r8</i> zappe	640	14.4
Total	4450	100.0	Total	4450	100.0

(q6). Question *q6* was built from questions about the time of watching *TV* during the week and the week-end, yielding the following five categories (hours per week).

<i>q6</i> <i>TV</i>	freq.	%
<i>r1</i> <i>less than 5h</i>	240	5.4
<i>r2</i> <i>5 to less than 10h</i>	607	13.6
<i>r3</i> <i>10 to less than 20h</i>	1694	38.1
<i>r4</i> <i>20 to less than 35h</i>	1273	28.6
<i>r5</i> <i>35h and more</i>	636	14.3
Total	4450	100.0

(q7). This categorical variable is constructed from questions about the number of books and comic strips read during the last twelve months.

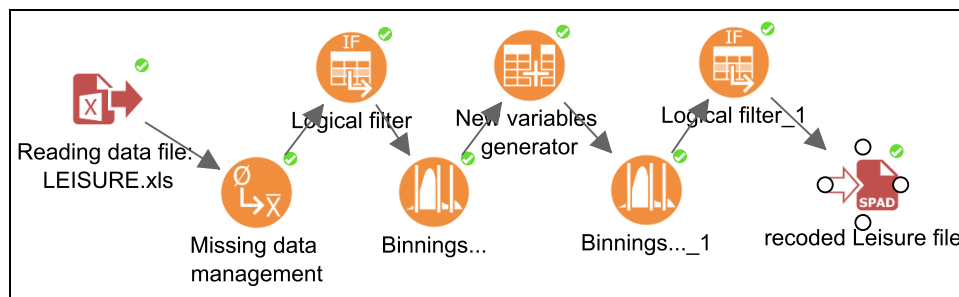
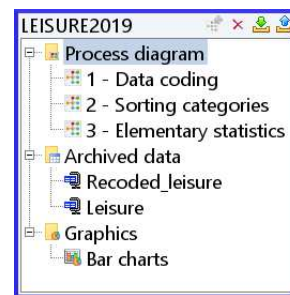
<i>q7 Books</i>	Eff.	%
<i>r1 none</i>	1209	22.2
<i>r2 1-4</i>	1004	22.6
<i>r3 5-12</i>	1037	23.3
<i>r4 13-40</i>	822	18.5
<i>r5 41 and more</i>	378	8.5
Total	4450	100.0

Sociodemographic variables

Age; Gender; Income; Level of education and PCS

Process diagram in SPAD

The SPAD project is described as follows.
 The process includes three steps (data coding, sorting categories and elementary statistics).
 Two data files was archived in the project.
 One graphics was registered in the project.



Process diagram in SPAD