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Cadoret M., Fournier O., Fournier G., Le Poder F., Bouche J., Lê S.

Agrocampus Ouest

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EnQuireR: Multivariate Exploratory Analysis of Questionnaires

Multivariate exploration of the questionnaire

How is my dataset "structured"?

How does my dataset look like?

How can the main axes of variability be interpreted?

Typology of the individuals

How many groups are there in my dataset?

How can the groups be displayed?

How different are the groups?

How can the groups be described?



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How is my dataset "structured"?

Percentages of variance explained by the first five axes

Axis	Eigenvalue	Percentage of variance
1	0.16075	5.35%
2	0.14677	4.88%
3	0.12412	4.13%
4	0.11187	3.72%
5	0.11055	3.68%

Table: Eigenvalues associated with the first five axes

How does my dataset look like?

Representation of the individuals

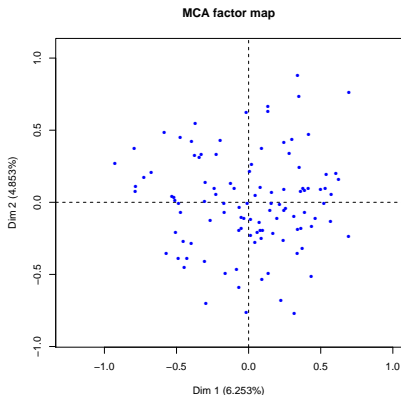


Figure: Raw representation of the individuals on axes 1 and 2



How does my dataset look like?

Representation of the categories

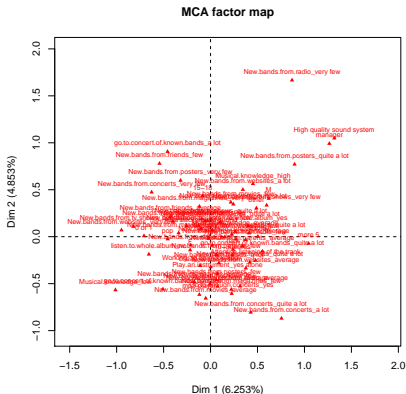


Figure: Raw representation of the categories on axes 1 and 2



How can the main axes of variability be interpreted?

Description of the first axis: positive side (1 / 2)

The following categories are meaningful for the first axis (positive side):

- Musical.knowledge_high
- listen.to.whole.album_yes
- New.bands.from.friends_quite a lot
- Musical.knowledge_average
- New.bands.from.tv.shows_very few
- more 5
- High quality sound system
- go.to.concert.of.known.bands_quite a lot
- Play.an.instrument_yes in a band
- M



How can the main axes of variability be interpreted?

Description of the first axis: positive side (2 / 2)

The following categories are meaningful for the first axis (positive side):

- `New.bands.from.posters_a` lot
- `New.bands.from.websites_quite` a lot
- 36 and more
- `New.bands.from.friends_a` lot
- NA
- `Kind.of.music_hard` rock
- `New.bands.from.movies_quite` a lot

Description of the first axis: negative side (1 / 2)

The following categories are meaningful for the first axis (negative side):

- `New.bands.from.websites_very few`
- 0 or 1
- `New.bands.from.concerts_very few`
- `listen.to.whole.album_no`
- `Musical.knowledge_very low`
- `New.bands.from.posters_very few`
- `Kind.of.music_pop`
- `New.bands.from.friends_very few`
- 0-10 euros
- `go.to.concert.of.known.bands_very few`



How can the main axes of variability be interpreted?

Description of the first axis: negative side (2 / 2)

The following categories are meaningful for the first axis (negative side):

- F
- `Play.an.instrument_no`
- `computer`
- `New.bands.from.radio_quite` a lot
- `New.bands.from.posters_few`
- `New.bands.from.tv.shows_a` lot
- `New.bands.from.parents_very` few
- `New.bands.from.radio_a` lot

Description of the second axis: positive side (1 / 2)

The following categories are meaningful for the second axis (positive side):

- `New.bands.from.tv.shows_a` lot
- `New.bands.from.radio_very` few
- `go.to.concert.of.known.bands_very` few
- `Why_other`
- `M`
- `New.bands.from.parents_very` few
- `Musical.knowledge_very` low
- `Play.an.instrument_yes` in a band
- `New.bands.from.magazines_very` few
- `New.bands.from.friends_very` few

Description of the second axis: positive side (2 / 2)

The following categories are meaningful for the second axis (positive side):

- `Kind.of.music_hard rock`
- `New.bands.from.posters_quite a lot`
- `High quality sound system`
- `New.bands.from.parents_average`
- `New.bands.from.websites_average`
- `New.bands.from.concerts_very few`
- `listen.to.whole.album_yes`



Description of the second axis: negative side (1 / 3)

The following categories are meaningful for the second axis (negative side):

- `New.bands.from.radio_average`
- `Musical.knowledge_low`
- `New.bands.from.tv.shows_average`
- `New.bands.from.tv.shows_few`
- `F`
- `go.to.concert.of.known.bands_average`
- `New.bands.from.posters_average`
- `Kind.of.music_blues`
- `New.bands.from.tv.shows_quite a lot`
- `Why_to relax`



Description of the second axis: negative side (2 / 3)

The following categories are meaningful for the second axis (negative side):

- Why_As a background sound
- Play.an.instrument_yes alone
- New.bands.from.radio_quite a lot
- mp3 player
- New.bands.from.radio_a lot
- New.bands.from.friends_quite a lot
- New.bands.from.parents_a lot
- New.bands.from.friends_average
- New.bands.from.posters_few
- Why_Attentive listening of the track



How can the main axes of variability be interpreted?

Description of the second axis: negative side (3 / 3)

The following categories are meaningful for the second axis (negative side):

- `Kind.of.music_pop`
- `listen.to.whole.album_no`



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How many groups are there in my dataset?

Number of clusters chosen by the analyst

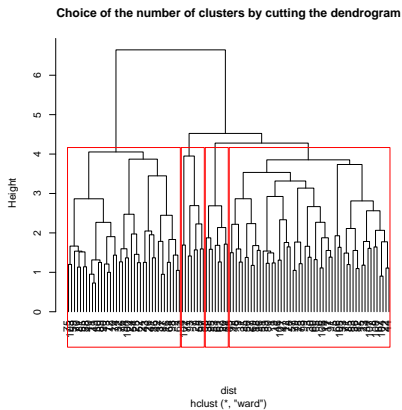


Figure: A number of clusters is chosen



How can the groups be displayed?

Representation of the individuals according to the group they belong to

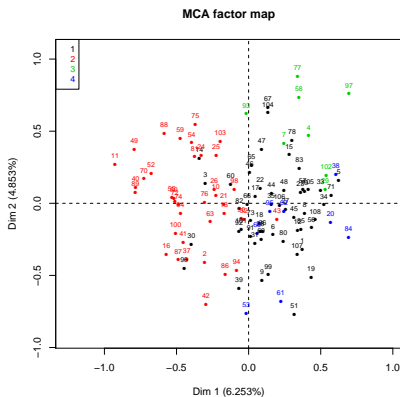


Figure: Correspondence map displaying clusters

How can the groups be displayed?

Simplified representation of the individuals according to the group they belong to

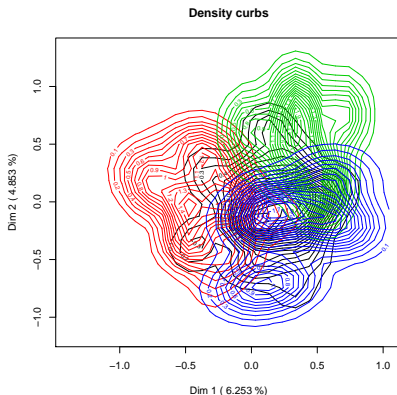


Figure: Levelling curves around each cluster

How can the groups be displayed?

Representation of the barycenter of each group enhanced with confidence ellipses

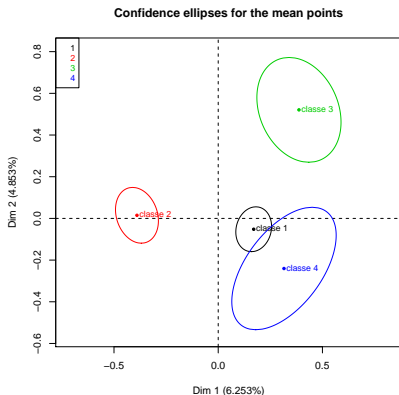


Figure: Confidence ellipses around each cluster



How different are the groups?

Number of individuals per cluster

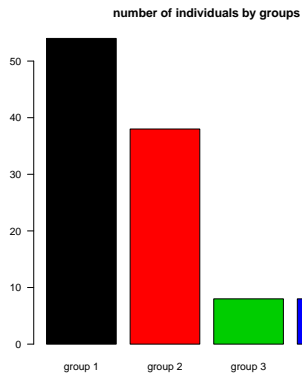
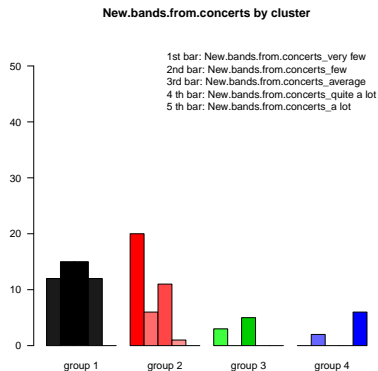


Figure: Number of individuals by cluster

How different are the groups?

Distribution of the individuals per cluster for the variable `New.bands.from.concerts`

Figure: Variable `New.bands.from.concerts`

How different are the groups?

Distribution of the individuals per cluster for the variable Kind.of.material

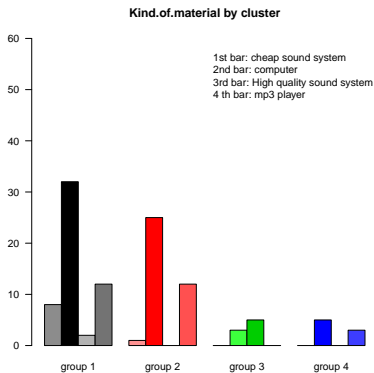


Figure: Variable Kind.of.material

How different are the groups?

Distribution of the individuals per cluster for the variable New.bands.from.websites

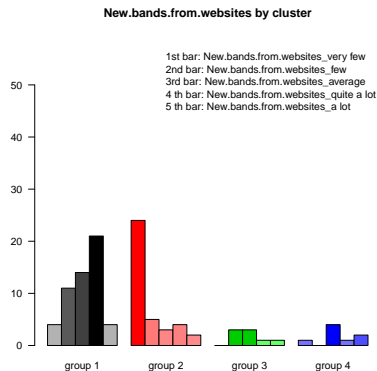


Figure: Variable New bands from websites

How different are the groups?

Distribution of the individuals per cluster for the variable New.bands.from.radio

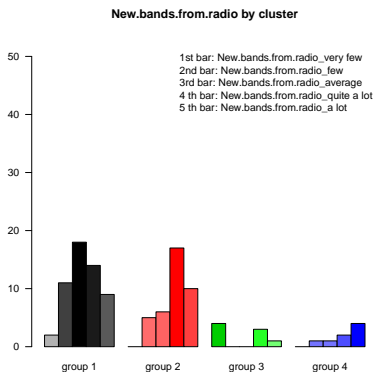


Figure: Variable New.bands.from.radio

How different are the groups?

Distribution of the individuals per cluster for the variable SPC

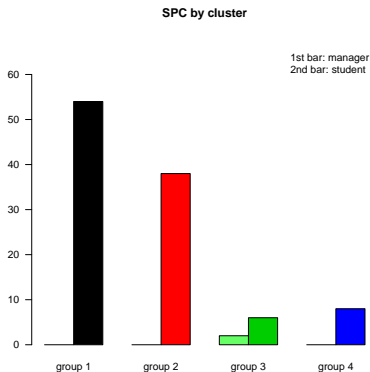


Figure: Variable SPC



How different are the groups?

Distribution of the individuals per cluster for the variable How.many.new.bands.by.month

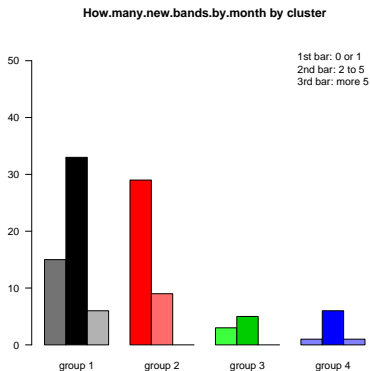


Figure: Variable How many new bands by month

How different are the groups?

Distribution of the individuals per cluster for the variable listen.to.whole.album

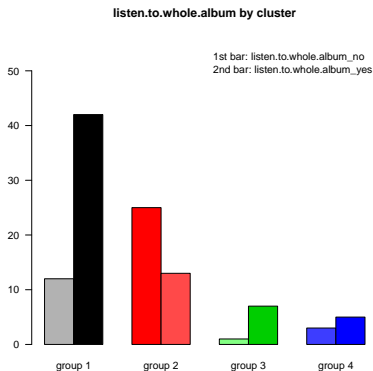


Figure: Variable listen to whole album



How different are the groups?

Distribution of the individuals per cluster for the variable New.bands.from.posters

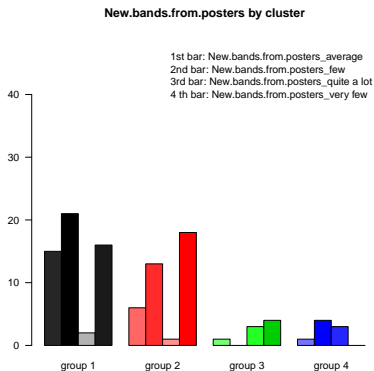


Figure: Variable New bands from posters



How different are the groups?

Distribution of the individuals per cluster for the variable `New.bands.from.tv.shows`

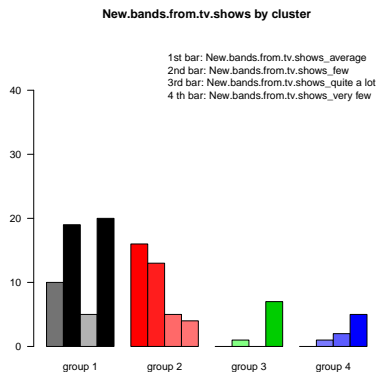


Figure: Variable `New.bands.from.tv.shows`



How different are the groups?

Distribution of the individuals per cluster for the variable Go.to.enough.concerts

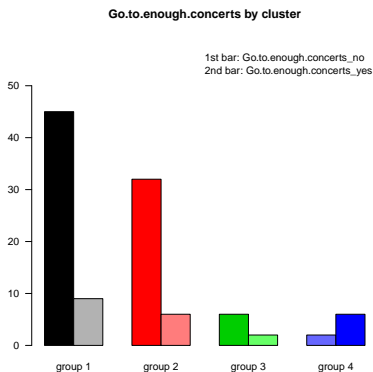


Figure: Variable Go to enough concerts



How can the groups be described?

Description of cluster 1 (1 / 2)

The following modalities are meaningful for cluster 1 :

- **listen.to.whole.album=listen.to.whole.album_yes**

62.04 % of the individuals possess this category in the global population versus 77.78% of the individuals within cluster 1;

62.69 % individuals possessing this category belong to cluster 1

- **New.bands.from.websites=New.bands.from.websites_quite a lot**

25 % of the individuals possess this category in the global population versus 38.89% of the individuals within cluster 1;

77.78 % individuals possessing this category belong to cluster 1

- **New.bands.from.concerts=New.bands.from.concerts_quite a lot**

12.04 % of the individuals possess this category in the global population versus 22.22% of the individuals within cluster 1;

92.31 % individuals possessing this category belong to cluster 1

- **New.bands.from.friends=New.bands.from.friends_quite a lot**

37.04 % of the individuals possess this category in the global population versus 51.85% of the individuals within cluster 1;

70 % individuals possessing this category belong to cluster 1

-

go.to.concert.of.known.bands=go.to.concert.of.known.bands_quite a lot

45.37 % of the individuals possess this category in the global population versus 59.26% of the individuals within cluster 1;

65.31 % individuals possessing this category belong to cluster 1



Description of cluster 1 (2 / 2)

The following modalities are meaningful for cluster 1 :

- **Musical.knowledge=Musical.knowledge_average**
 59.26 % of the individuals possess this category in the global population versus 72.22% of the individuals within cluster 1;
 60.94 % individuals possessing this category belong to cluster 1
- **How.many.new.bands.by.month=2 to 5**
 49.07 % of the individuals possess this category in the global population versus 61.11% of the individuals within cluster 1;
 62.26 % individuals possessing this category belong to cluster 1
- **New.bands.from.radio=New.bands.from.radio_average**
 23.15 % of the individuals possess this category in the global population versus 33.33% of the individuals within cluster 1;
 72 % individuals possessing this category belong to cluster 1
- **Kind.of.material=cheap sound system**
 8.33 % of the individuals possess this category in the global population versus 14.81% of the individuals within cluster 1;
 88.89 % individuals possessing this category belong to cluster 1



Description of cluster 2 (1 / 2)

The following modalities are meaningful for cluster 2 :

- New.bands.from.websites=New.bands.from.websites_very few**
 26.85 % of the individuals possess this category in the global population versus 63.16% of the individuals within cluster 2;
 82.76 % individuals possessing this category belong to cluster 2
- How.many.new.bands.by.month=0 or 1**
 44.44 % of the individuals possess this category in the global population versus 76.32% of the individuals within cluster 2;
 60.42 % individuals possessing this category belong to cluster 2
- listen.to.whole.album=listen.to.whole.album_no**
 37.96 % of the individuals possess this category in the global population versus 65.79% of the individuals within cluster 2;
 60.98 % individuals possessing this category belong to cluster 2
- Musical.knowledge=Musical.knowledge_low**
 23.15 % of the individuals possess this category in the global population versus 47.37% of the individuals within cluster 2;
 72 % individuals possessing this category belong to cluster 2
- New.bands.from.concerts=New.bands.from.concerts_very few**
 32.41 % of the individuals possess this category in the global population versus 52.63% of the individuals within cluster 2;
 57.14 % individuals possessing this category belong to cluster 2



Description of cluster 2 (2 / 2)

The following modalities are meaningful for cluster 2 :

- `New.bands.from.tv.shows=New.bands.from.tv.shows_average`**
 24.07 % of the individuals possess this category in the global population versus 42.11% of the individuals within cluster 2;
 61.54 % individuals possessing this category belong to cluster 2
- `Kind.of.music=pop`**
 41.67 % of the individuals possess this category in the global population versus 60.53% of the individuals within cluster 2;
 51.11 % individuals possessing this category belong to cluster 2
- `go.to.concert.of.known.bands=go.to.concert.of.known.bands_a lot`**
 25.93 % of the individuals possess this category in the global population versus 42.11% of the individuals within cluster 2;
 57.14 % individuals possessing this category belong to cluster 2
- `New.bands.from.magazines=New.bands.from.magazines_average`**
 5.56 % of the individuals possess this category in the global population versus 13.16% of the individuals within cluster 2;
 83.33 % individuals possessing this category belong to cluster 2



Description of cluster 3 (1 / 1)

The following modalities are meaningful for cluster 3 :

- **Kind.of.material=High quality sound system**
 6.48 % of the individuals possess this category in the global population versus 62.5% of the individuals within cluster 3;
 71.43 % individuals possessing this category belong to cluster 3
- **New.bands.from.radio=New.bands.from.radio_very few**
 5.56 % of the individuals possess this category in the global population versus 50% of the individuals within cluster 3;
 66.67 % individuals possessing this category belong to cluster 3
- **New.bands.from.tv.shows=New.bands.from.tv.shows_very few**
 33.33 % of the individuals possess this category in the global population versus 87.5% of the individuals within cluster 3;
 19.44 % individuals possessing this category belong to cluster 3
- **SPC=manager**
 1.85 % of the individuals possess this category in the global population versus 25% of the individuals within cluster 3;
 100 % individuals possessing this category belong to cluster 3
- **New.bands.from.posters=New.bands.from.posters_quite a lot**
 8.33 % of the individuals possess this category in the global population versus 37.5% of the individuals within cluster 3;
 33.33 % individuals possessing this category belong to cluster 3

Description of cluster 4

The following modalities are meaningful for cluster 4 :

- **New.bands.from.concerts=New.bands.from.concerts_a lot**
 5.56 % of the individuals possess this category in the global population versus 75% of the individuals within cluster 4;
 100 % individuals possessing this category belong to cluster 4
- **Go.to.enough.concerts=Go.to.enough.concerts_yes**
 21.3 % of the individuals possess this category in the global population versus 75% of the individuals within cluster 4;
 26.09 % individuals possessing this category belong to cluster 4
- **go.to.concert.of.known.bands=go.to.concert.of.known.bands_quite a lot**
 45.37 % of the individuals possess this category in the global population versus 87.5% of the individuals within cluster 4;
 14.29 % individuals possessing this category belong to cluster 4
- **New.bands.from.posters=New.bands.from.posters_quite a lot**
 8.33 % of the individuals possess this category in the global population versus 37.5% of the individuals within cluster 4;
 33.33 % individuals possessing this category belong to cluster 4