























## **Overview**

Clusters are influenced by response coding and clustering algorithm.

So you have to choose what you want.

*Our goal:* Cluster consumers who differentiate delightful products in the same manner.

Conventional approaches fail to achieve this goal.

We propose a new approach for finding consumer clusters that achieves this goal...

## **Consumer** hedonic data

Data collection described in Meyners, M., Castura, J.C., & Carr, B.T. (2013). Existing and new approaches for the analysis of CATA data. Food Quality and Preference, 30, 309-319. Data available in Castura, J.C. (2022). cata: Analysis of Check-All-that-Apply (CATA) data. R Package Version 0.0.10.4. https://CRAN.Rproject.org/package=cata 161 consumers6 whole-grain breads

Williams design

Sequential monadic

**Central location** 

9-point hedonic scale













	Product							
	P1	P2	Р3	P4	Р5	P6		
C1	1	5	9	1	5	5		
C2	1	9	5	1	5	5		
C3	5	1	9	5	1	5		



Product Data centered within **P1** P2 **P3** P4 P5 P6 consumer **C1** -3.33 0.67 0.67 4.67 -3.33 0.67 **C2** -3.33 4.67 0.67 -3.33 0.67 0.67 С3 -3.33 4.67 0.67 -3.33 0.67 0.67 Ward's method Clustering Median linkage around latent **UPGMA** variables (CLV) Complete linkage WPGMA **Centroid linkage** Gaussian mixture models k-means Fuzzy c-means

C1	<b>P1</b> -1.11	<b>P2</b> 0.22	Pro P3 1.55	educt P4 -1.11	<b>P5</b> 0.22	<b>P6</b> 0.22	Data centered and standardized within		
C2 C3	-1.11 0.22	1.55 -1.11	0.22 1.55	-1.11 0.22	0.22	0.22	consumer		
UPGMA Median linkage WPGMA around latent Centroid linkage WPGMA ward's method Clustering Centroid linkage WPGMA variables (CLV) k-means complete linkage mixture models Fuzzy c-means									



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## **Takeaways**

Clusters are influenced by response coding and clustering algorithm.

So you have to choose what you want.

*Our goal:* Cluster consumers who differentiate delightful products in the same manner.

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Our approach finds consumer clusters that achieves this goal.



