

# ***Principal Components: BiPlots***

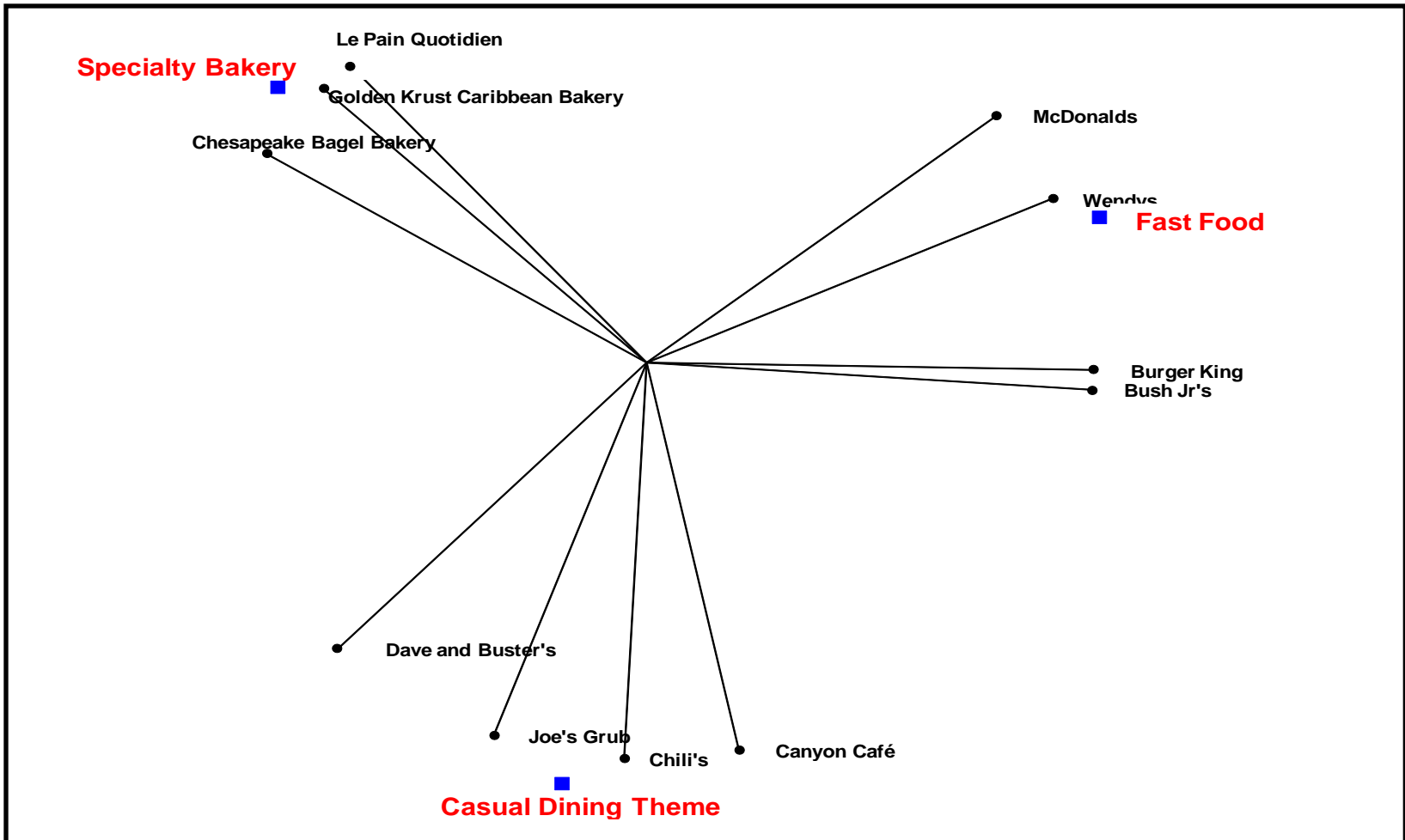
***Multivariate Solutions***

# ***Principal Components: BiPlots***

- Biplots are statistical graphics that represent in the same plane both the variables and the cases. Usually variables are represented by arrows, while points represent cases.
- Practically speaking, a BiPlot is a *visual factor analysis*.
  - Points that are close together correspond to observations that have similar scores on the components displayed in the plot.
- In the following example, restaurants that are close together are ones that have similar profiles of preference:
  - Most respondents have the same kind of preference ratings for Wendy's and McDonald's. Whether or not they like them we don't know, its just that is a respondent likes one s/he tends to like the other, and if a respondent dislikes one, then the other is likely to be disliked.
  - The same is true for Joe's Grub and Chili's, although the judgments about Joe's Grub and Chili's are likely to be rather different then those about Wendy's and McDonald's, since the two pairs of points are relatively far apart.

# BiPlots

*Please Rate Your Preference for Each Restaurant*

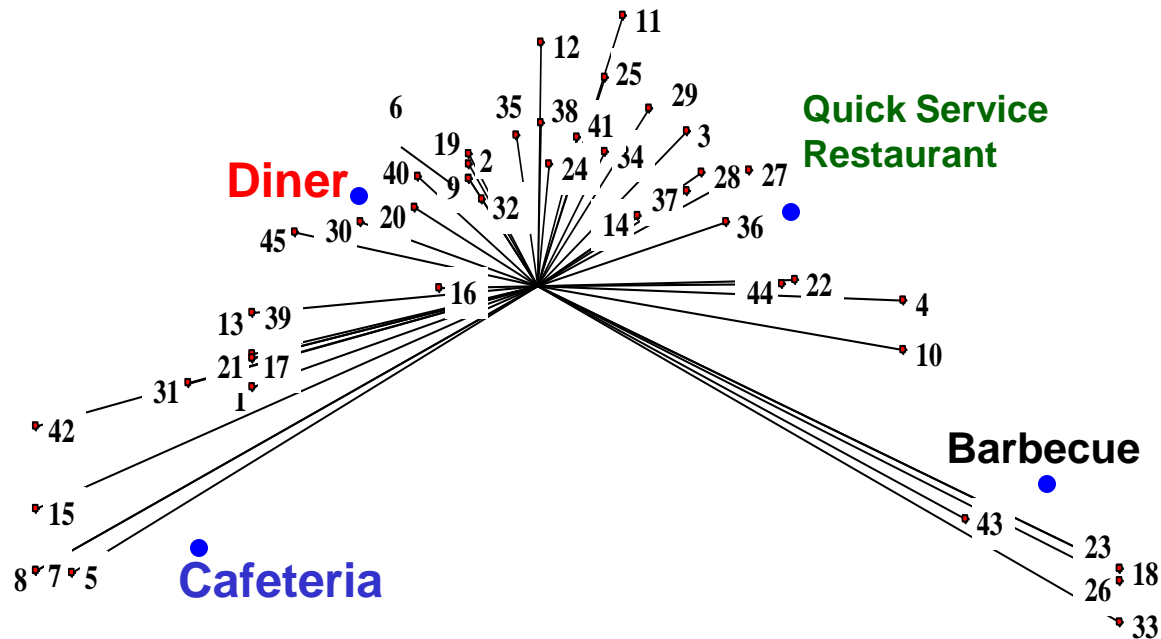


# BiPlots

*Please Rate Your Preference for Each Restaurant*

## Restaurants

- 1 Delivery
- 2 Drive Thru
- 3 Eat at Home
- 4 Mall Restaurant
- 5 Sit Down
- 6 Take Out
- 7 Atmosphere
- 8 Clean
- 9 Cozy
- 10 Old
- 11 Fun
- 12 Comfortable
- 13 Uncomfortable
- 14 Unclean
- 15 Sterile
- 16 Convenient
- 17 On the Road
- 18 After Work
- 19 Dinner
- 20 Lunch
- 21 Lunch Day Off
- 22 Snack
- 23 Morning



## Restaurants

- 24 Big Chains
- 25 Fast Fuel
- 26 Fast
- 27 Quick
- 28 Cheap
- 29 Limited Menu
- 30 Healthier
- 31 Better Quality
- 32 Fresh
- 33 Fried
- 34 Great Taste
- 35 Higher End
- 36 Warm Food
- 37 Local
- 38 Unique
- 39 Substantial
- 40 Variety
- 41 Grocery
- 42 One at a Time
- 43 For Family
- 44 My Favorite
- 45 For Kids