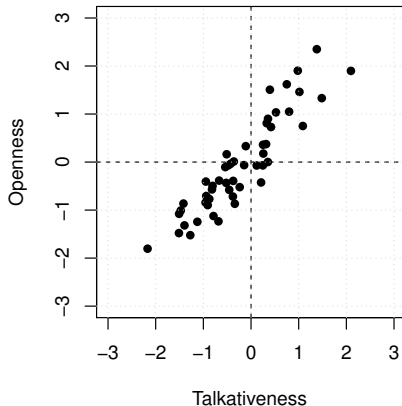# Test Dimension
and Factor Analysis

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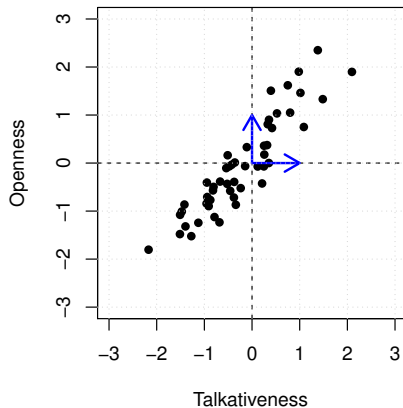
Intuition

- Hypothetical test contains items related to openness and talkativeness.
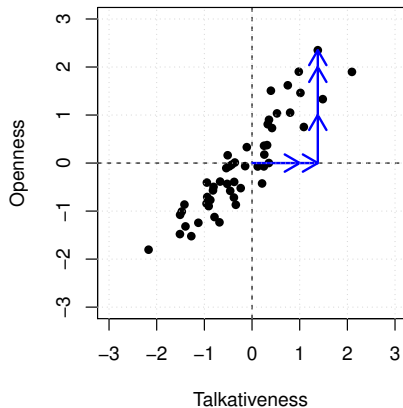- Notice the high correlation between variables.

Intuition

▶ Score is measured in units of openness and talkativeness (called basis vectors)
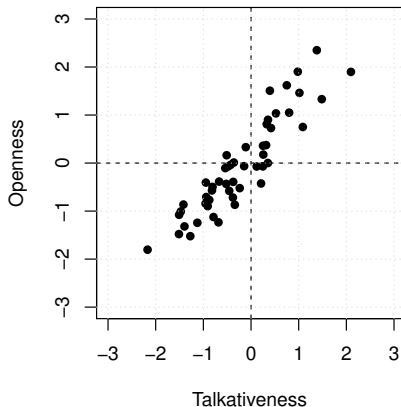
Intuition

- Score is measured in units of openness and talkativeness (called basis vectors)

Intuition

- Since variables are highly correlated, could create new axes along the dimension of maximum variance.
- Creates new variables which are *composites* of the old ones.

Intuition

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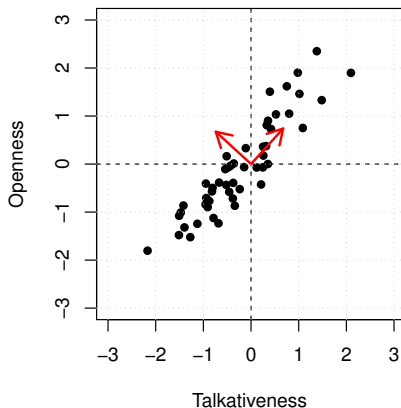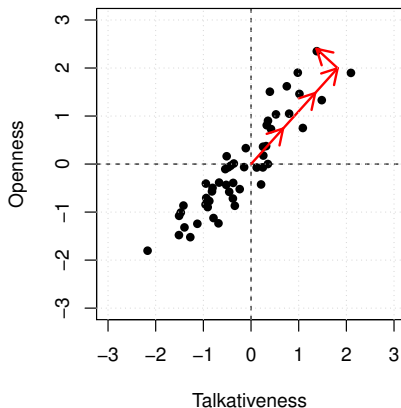- Creates new variables which are *composites* of the old ones.

Intuition

- ▶ Since variables are highly correlated, could create new axes along the dimension of maximum variance.

- ▶ Creates new variables which are *composites* of the old ones.

Intuition

▶ Replotting with the new axes reveals that most of the variability in the data lies along *one-dimension*.