View of Public Figures:
Presidential Candidates/Celebrities

From *Focus Groups* to the *Online Kellian Mind Explorer*

Results from a Three-Mode Component Analysis

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Online Focus Group

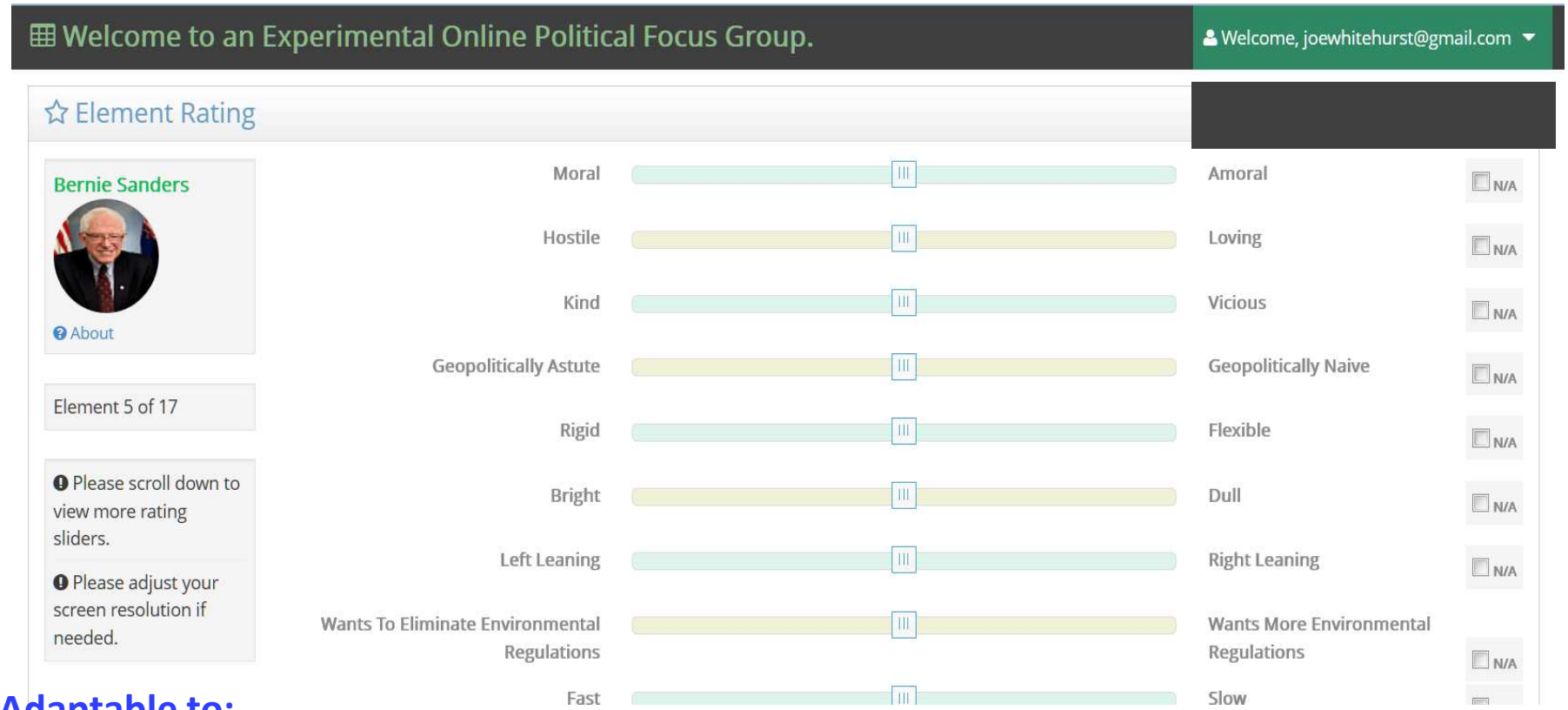
- **This presentation is focused on the data analysis of an online focus group application:**
  The Kellian Mind Explorer (see next slide)
- **Its structure and especially its data analysis**
- Application example: How do people see the present US **Presidential candidates**
- Data (toy example collected november 2015):
  Subjects judge *candidates* on a set of *scales.*
- "Two-mode rating scale data" from one judge
  "Three-mode rating scale data" from many judges
- A very general design to measure people's opinions. Related to Kelly's *Repertory Grids*

George Kelly (1905 – 1967)

Personal Construct Theory

- **George Kelly, *Psychology of Personal Constructs*** (1955)
- ***Clinical Psychology and Personality: Selected papers of George Kelly***, edited by Brendan Maher (1969)

The Online Kellian Mind Exporer



Adaptable to:

Stimulus-Response data
Semantic differential research
Evaluation of situations by rating scales
Two-way rating data in general

For all questions please contact:
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Data Structure from One Judge

Scales are of the type:

Bipolar: **Bad** versus **Good**;

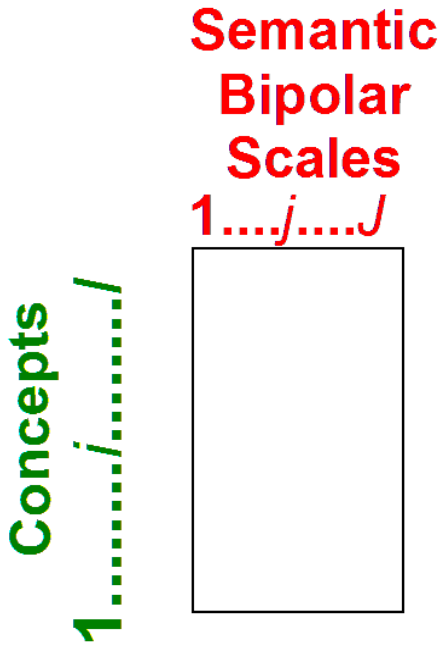
Semantic: **Characterised in words**

Example:

My Life

Bad -------|------- Good

-10 0 +10

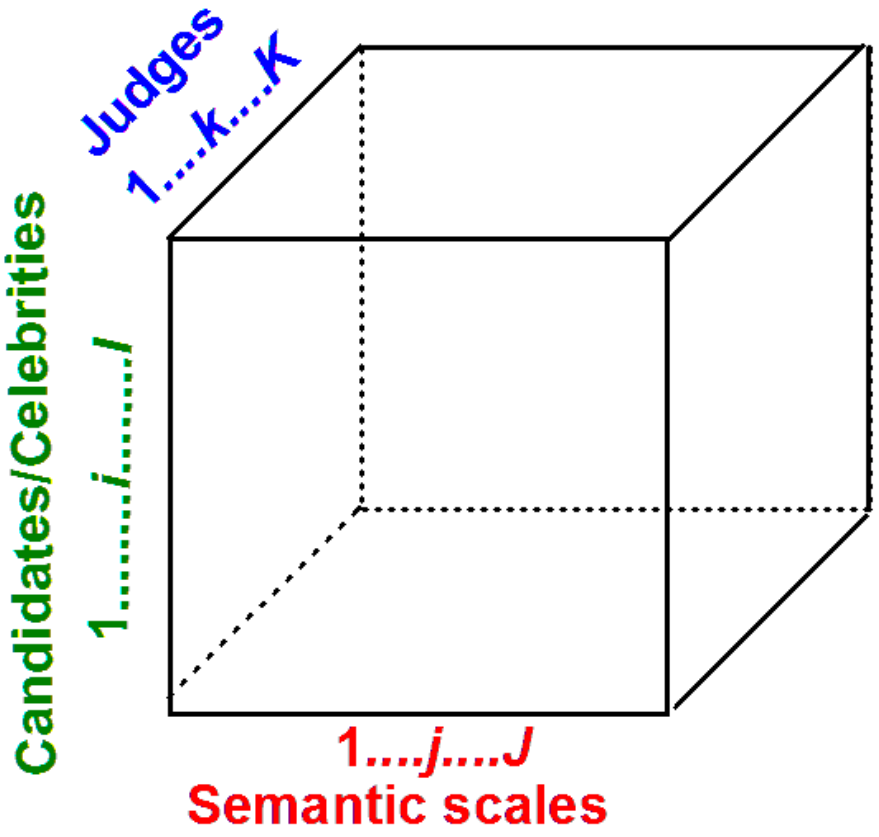


The Test Data

8 Presidential Candidates +
9 “Celebrities” (as comparisons)

22 Semantic bipolar scales

10 Judges
(x 5 i.e. error added to the data)



Presidential Candidates/"Celebrities"

Presidential Candidates	Abbre-viation	Gen-der	Par-ty	"Celebrities"	Abbre-viation	Gen-der
Donald Trump	Trump	M	R	Beelzebub	Devil	M
Jeb Bush	JBush	M	R	Jesus Christ	Christ	M
Ben Carson	Carson	M	R	Adolf Hitler	Hitler	M
Marco Rubio	Rubio	M	R	Abraham Lincoln	Lincln	M
Ted Cruz	Cruz	M	R	Golda Meir	Meir	F
Carly Fiorina	Fiorna	F	R	Eleanor Roosevelt	Rsvelt	F
				Margaret Thatcher	Thatch	F
Bernie Sanders	Sandrs	M	D	Susan Anthony	Anthny	F
Hillary Clinton	Clintn	F	D	Rosa Parks	Parks	F

M=male; F=Female; R=Republican; D=Democrat

Data collection: November 2015

Less Known “Celebrities”

- **Susan Anthony:** an American social reformer and feminist; played a pivotal role in the women's suffrage movement. Collected anti-slavery petitions at the age of 17.
- **Rosa Parks**: an American civil rights activist, "the first lady of civil rights" and "the mother of the freedom movement". Played a leading role in the Montgomery bus boycott
- **Golda Meir:** an Israeli teacher, kibbutznik, stateswoman and politician and Prime Minister of Israel
- **Margaret Thatcher:** a British stateswoman and politician; Prime Minister of the United Kingdom from 1979 to 1990. The Iron Lady.
- **Eleanor Roosevelt:** American politician, diplomat, and activist. Longest-serving First Lady of the US.

Note: Source - Wikipedia

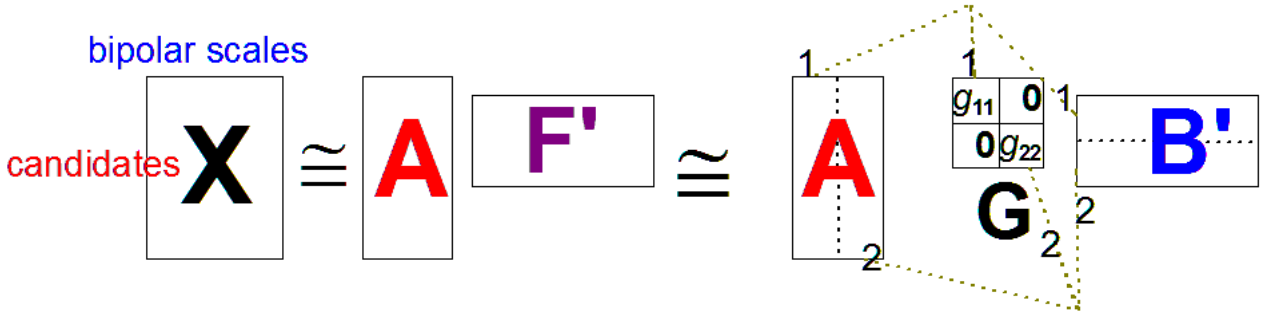
Bipolar Semantic Scales - 1

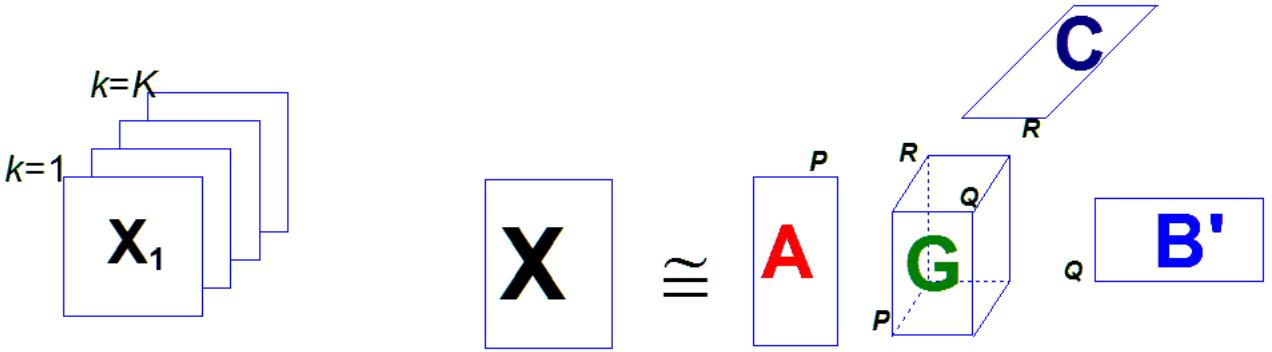
Negative scale anchor		Positive scale anchor	Abbr.
-130 to -1	0	1 to 130	
Moral		Amoral	Amoral
Hostile		Loving	Loving
Kind		Vicious	Viciou
Geopolitically astute		Geopolitically naive	GeoNai
Rigid		Flexible	Flexbl
Bright		Dull	Dull
Left Leaning		Right Leaning	Right
Wants to eliminate environmental regulations		Wants more environmental regulations	Envrnm
Fast		Slow	Slow
Bold		Cowardly	Coward

Bipolar Semantic Scales - 2

Negative scale anchor		Positive scale anchor	Abbr.
-130 to -1	0	1 to 130	
For increased spending women's healthcare		For cutting spending women's healthcare	NoHealth
Advanced		Backward	Backwr
Sophisticated		Naive	Naive
Opportunist		Principled	Prncpl
Aggressive		Passive	Passiv
Financially literate		Financially ignorant	NoFina
Humans are causing climate change		Humans have no effect on climate change	NoClim
Evil		Good	Good
Peace loving		War mongering	ProWar
Condemning		Forgiving	Forgiv
Arrogant		Humble	Humble
Uniter		Divider	Dividr

Analysis: Three-Mode PCA





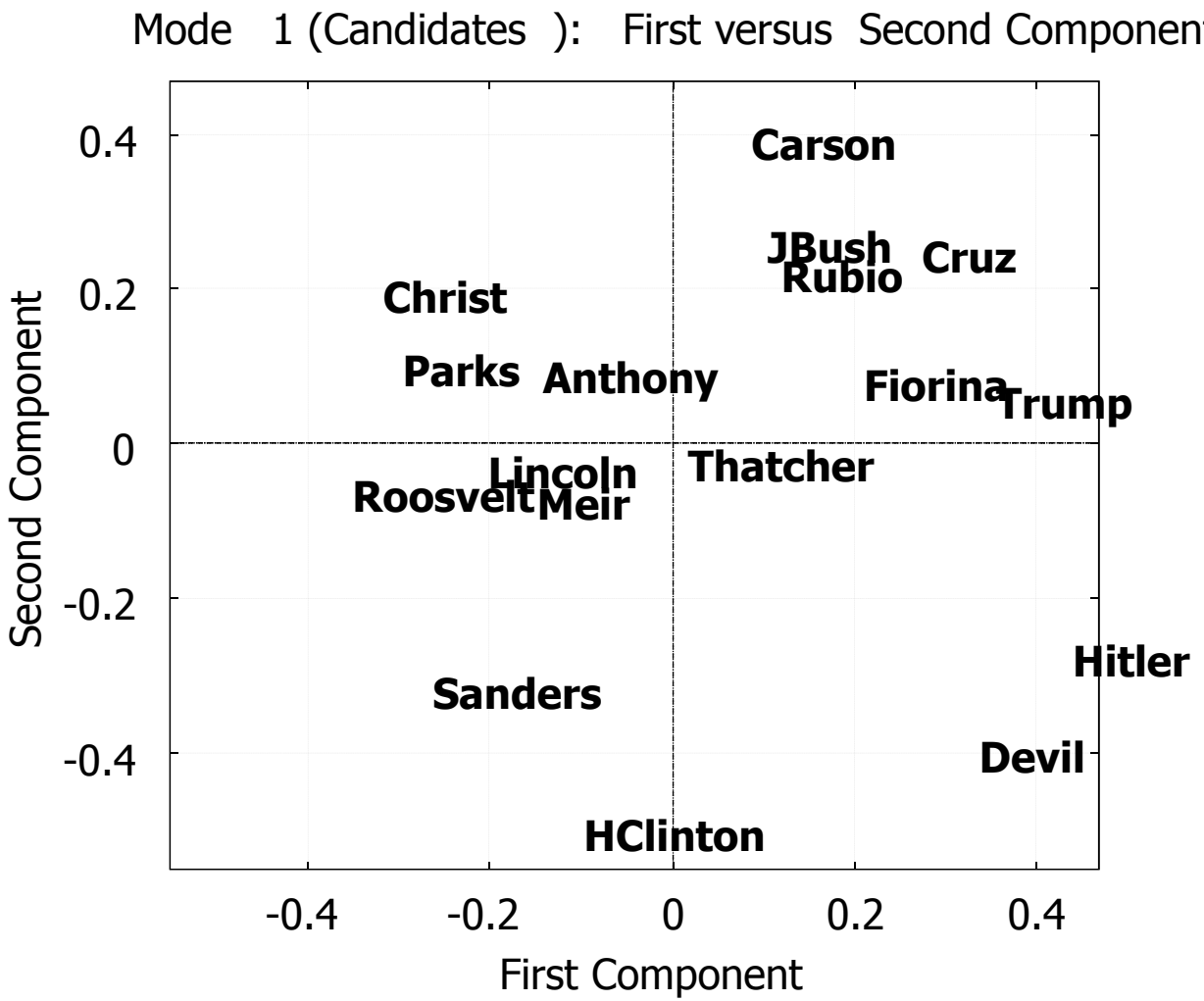
$$\mathbf{X}_k \cong \sum c_{kr}[\mathbf{A}\mathbf{G}_r\mathbf{B}'] = c_{k1}\,[\mathbf{A}\mathbf{G}_1\mathbf{B}'] + c_{k2}[\mathbf{A}\mathbf{G}_2\mathbf{B}']$$

Weight of Judge *k* on Judge component 1

Joint Biplot 1

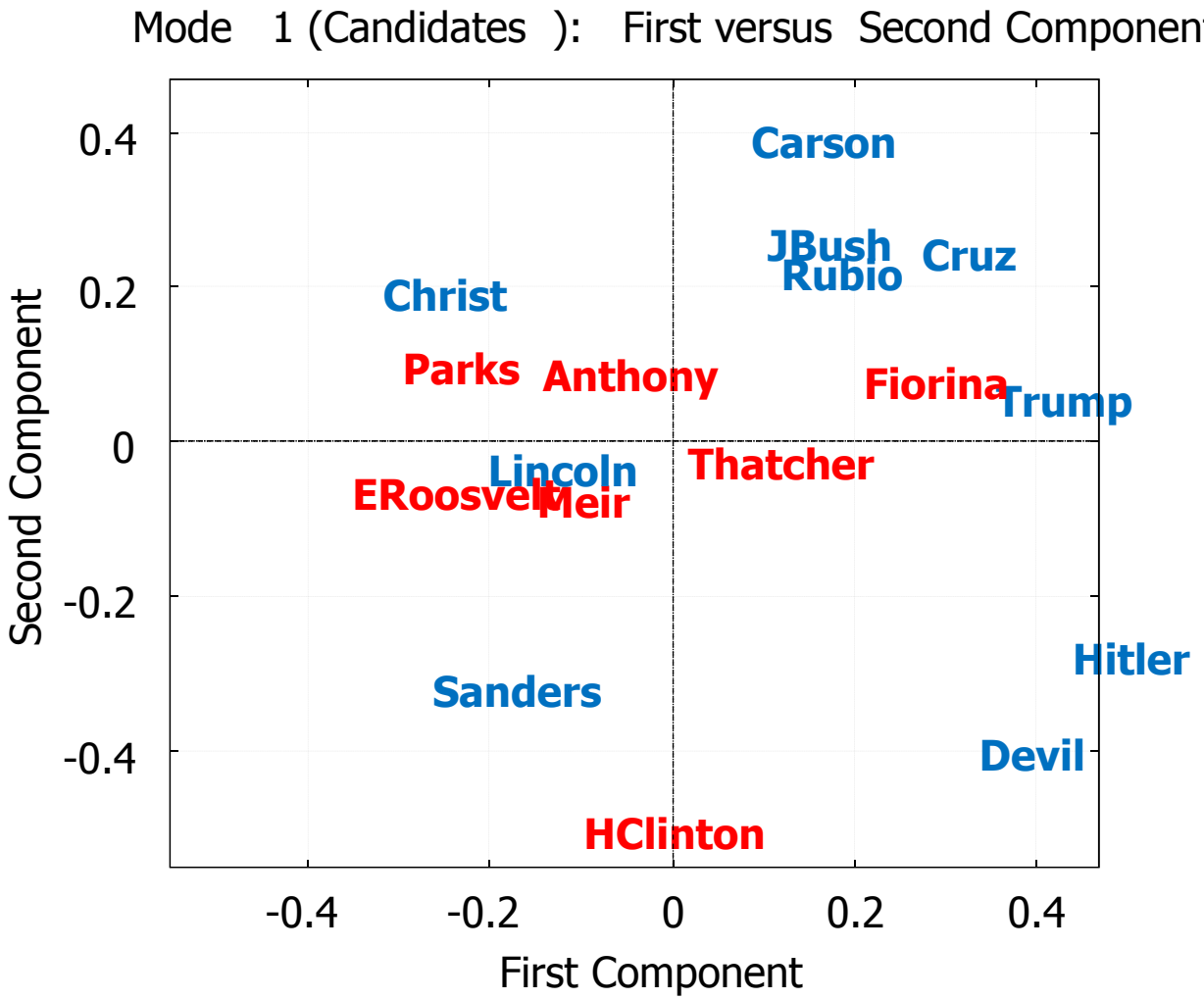
Joint Biplot 2

Presidential Candidates/Celebrities

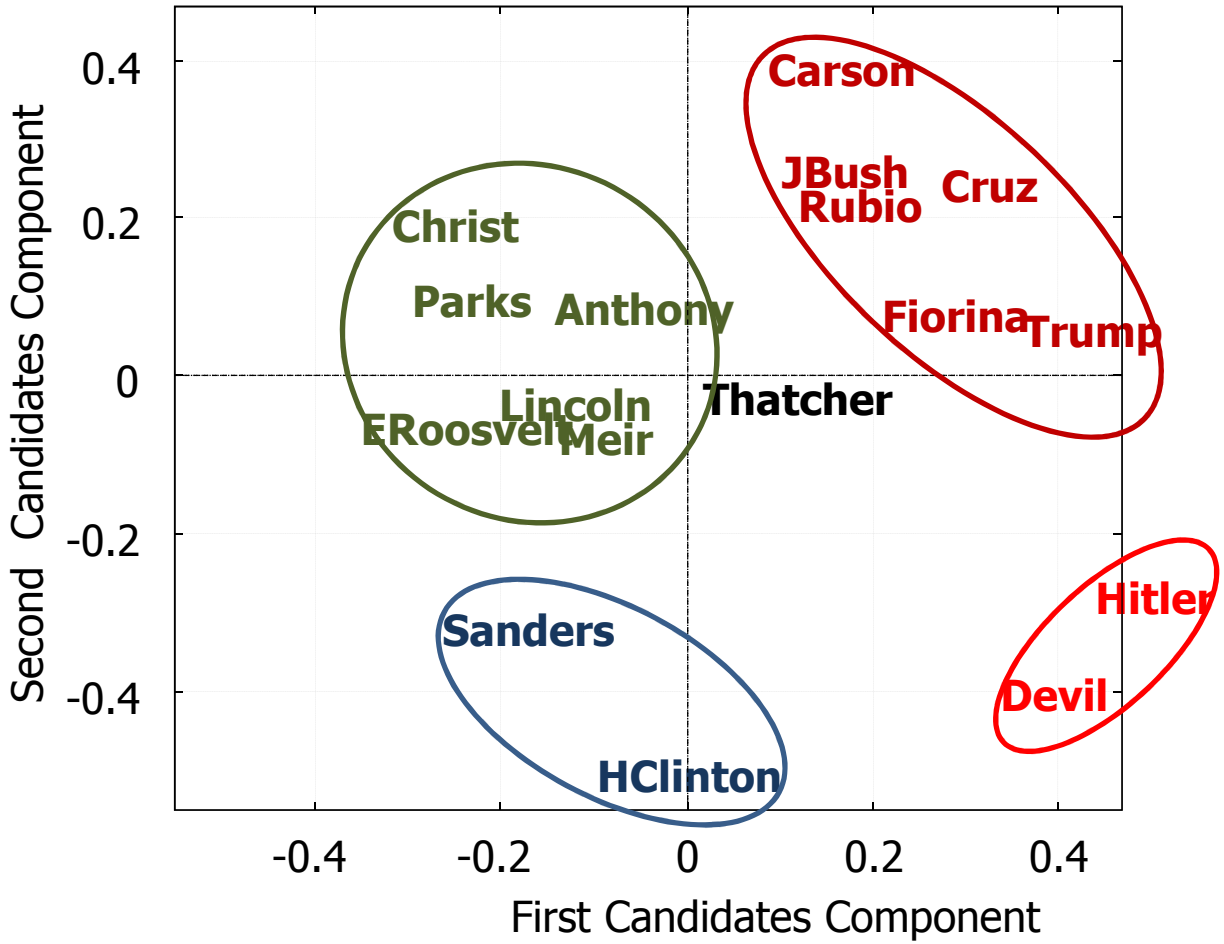


Presidential Candidates/ “Celebrities”

Male
Female

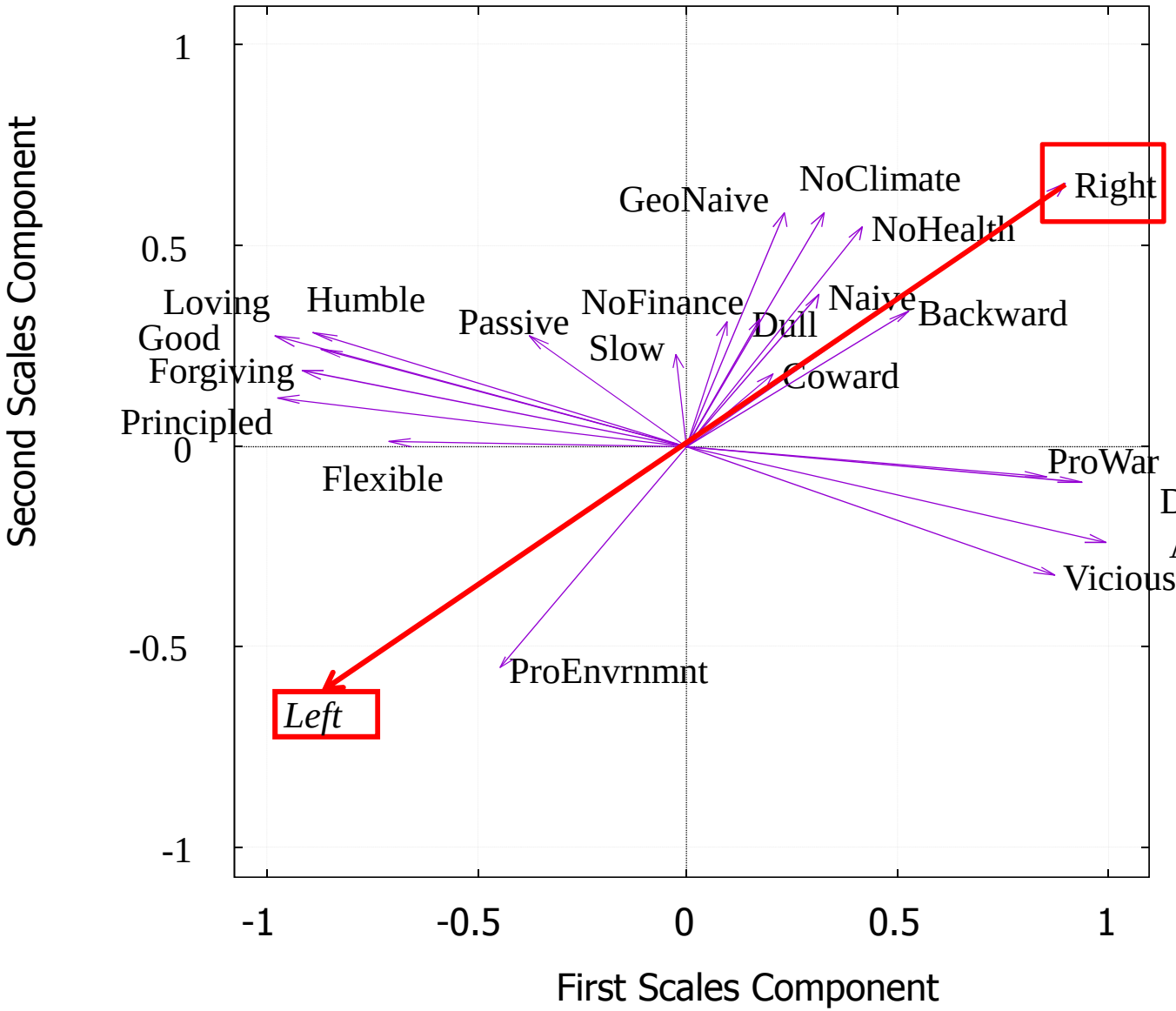


Presidential Candidates/ “Celebrities”



Good “Celebrity”
Bad “Celebrity”
Democrat
Republican
Unknown in US

Semantic Scales



NoClimate = Humans no effect on Climate change

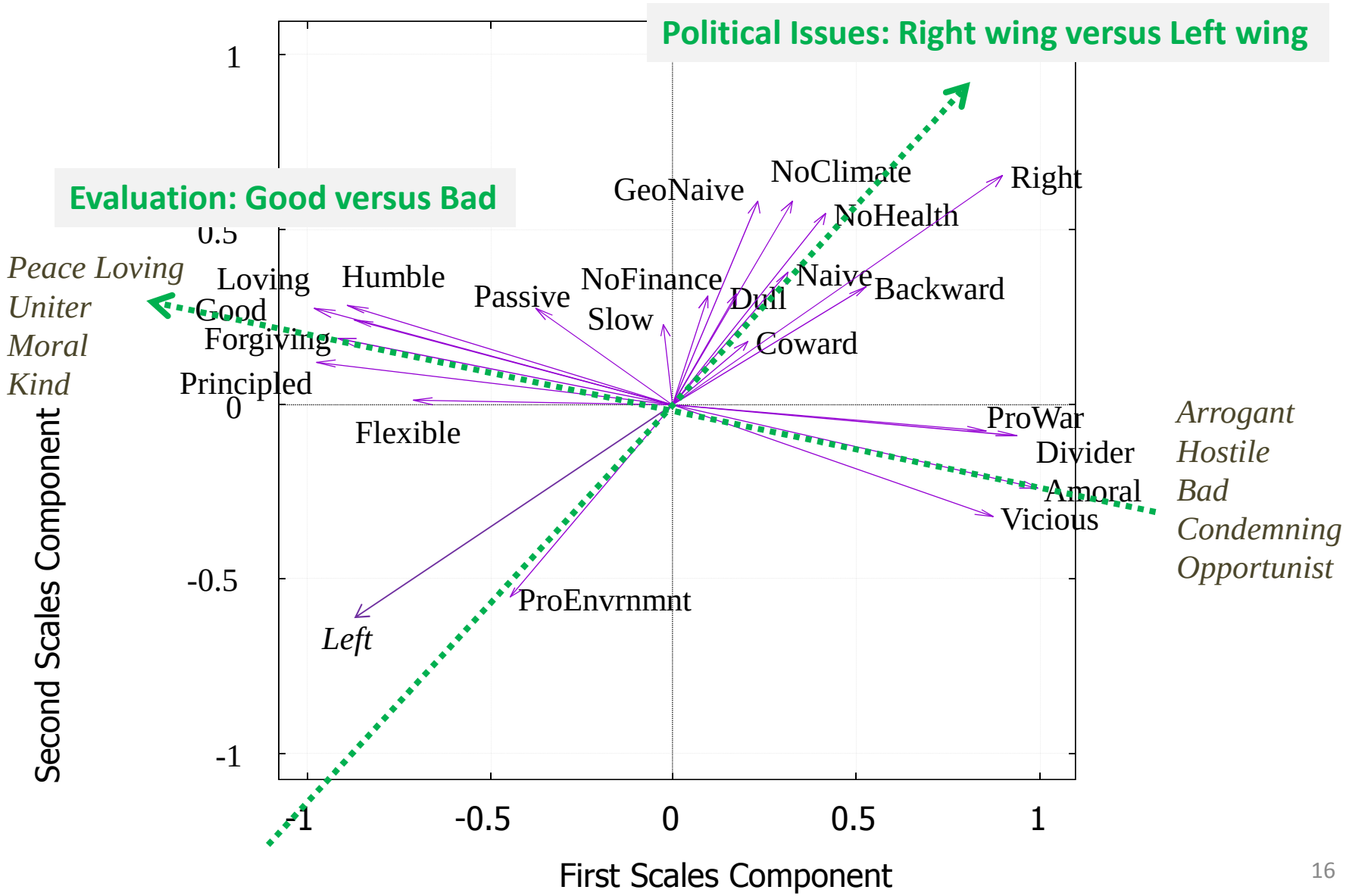
NoHealth = Less money for women's Health care

Bipolar Scales!

GeoNative = Geopolitically Naive

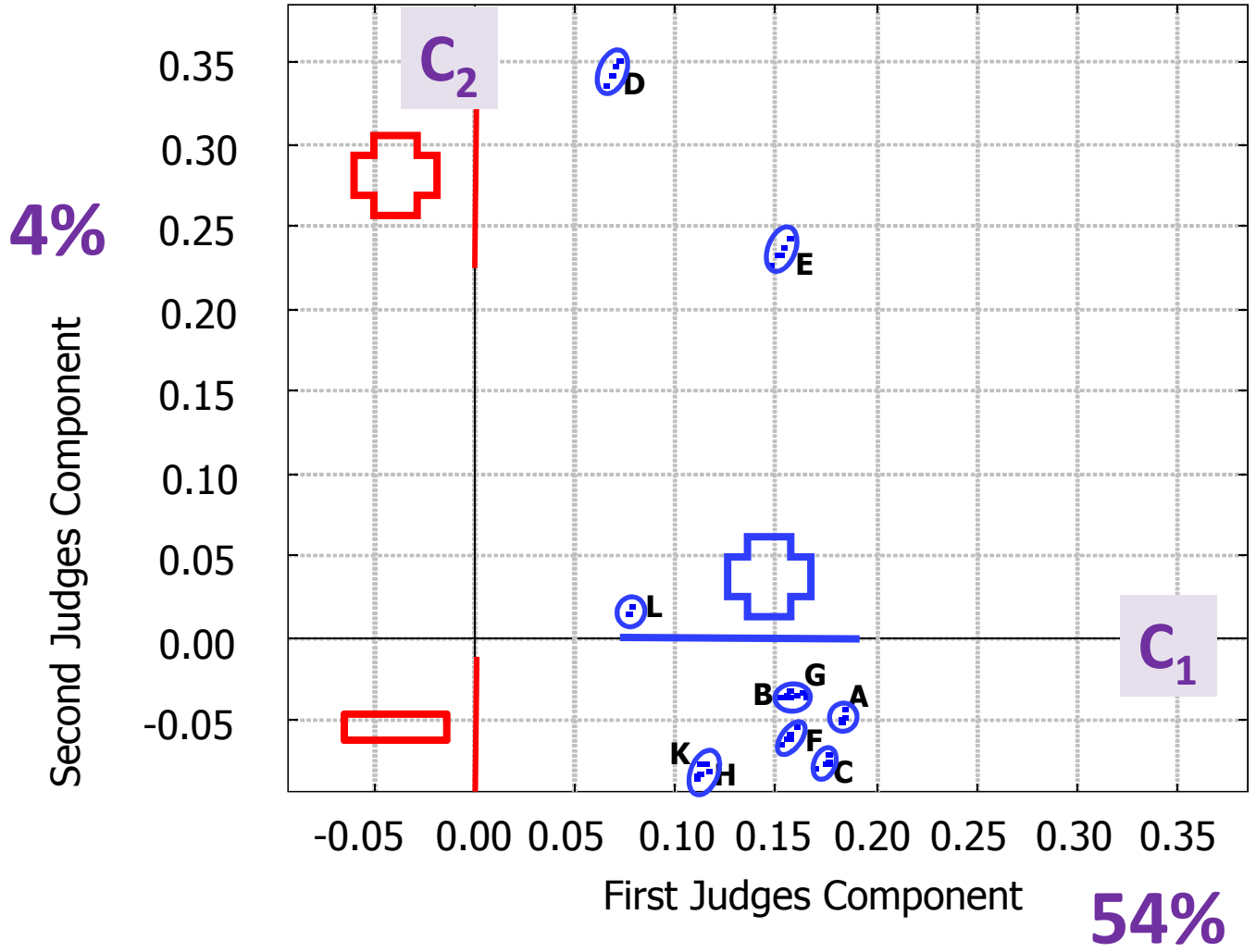
ProEnvrnmnt = More Environment regulations

Semantic Scales



Judges

$$\mathbf{X}_k \cong \sum c_{kr}[\mathbf{A}\mathbf{G}_r\mathbf{B}'] = c_{k1}\,[\mathbf{A}\mathbf{G}_1\mathbf{B}']+c_{k2}[\mathbf{A}\mathbf{G}_2\mathbf{B}']$$



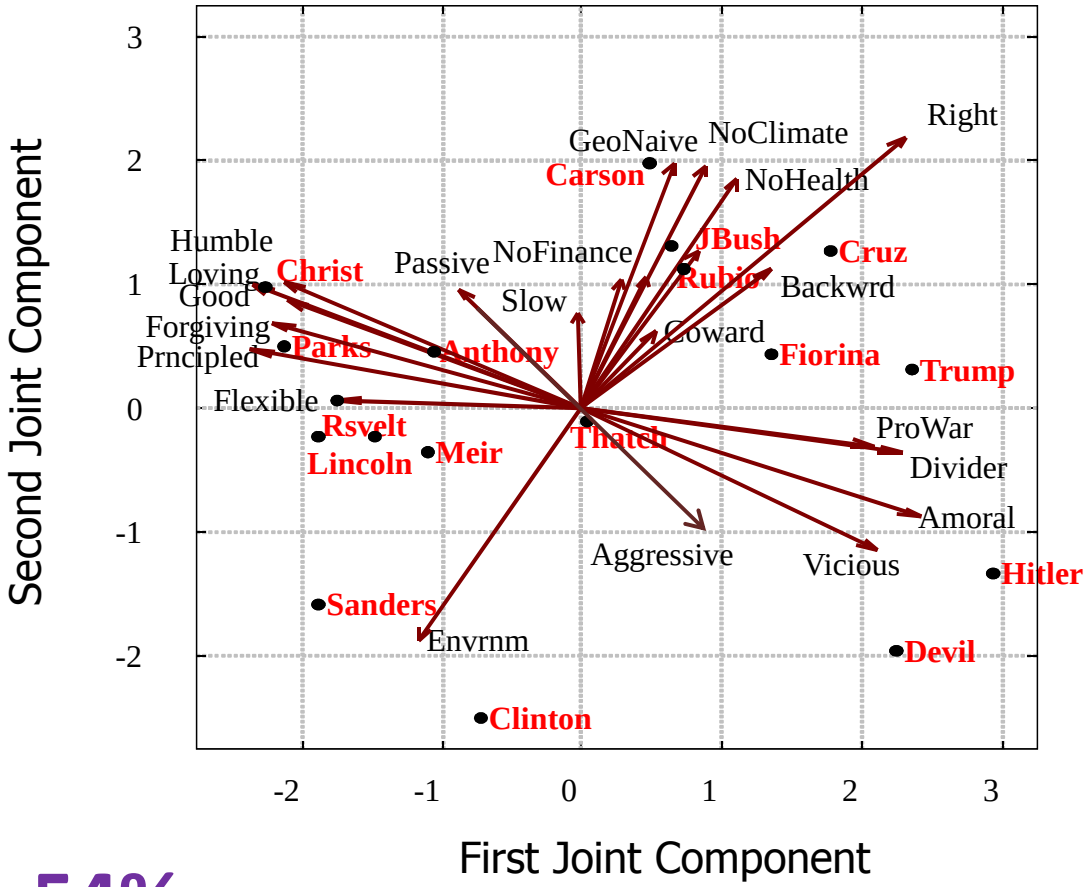
Positive score on 1st component

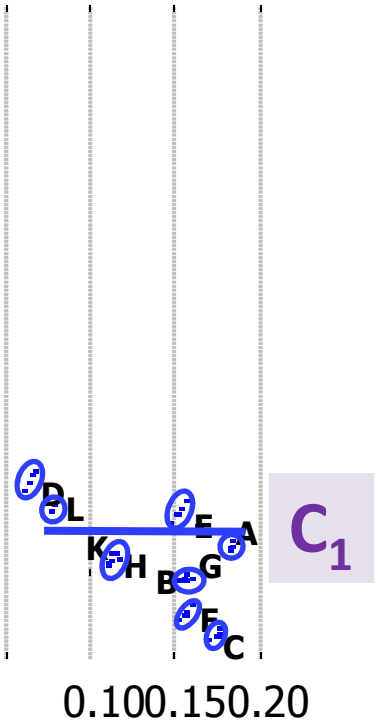
Positive score on 2nd component

Negative score on 2nd component

Consensus among Judges

Joint biplot for Candidates/Celebrities and Scales
for **First *Consensus* Component of Judges**





C_1

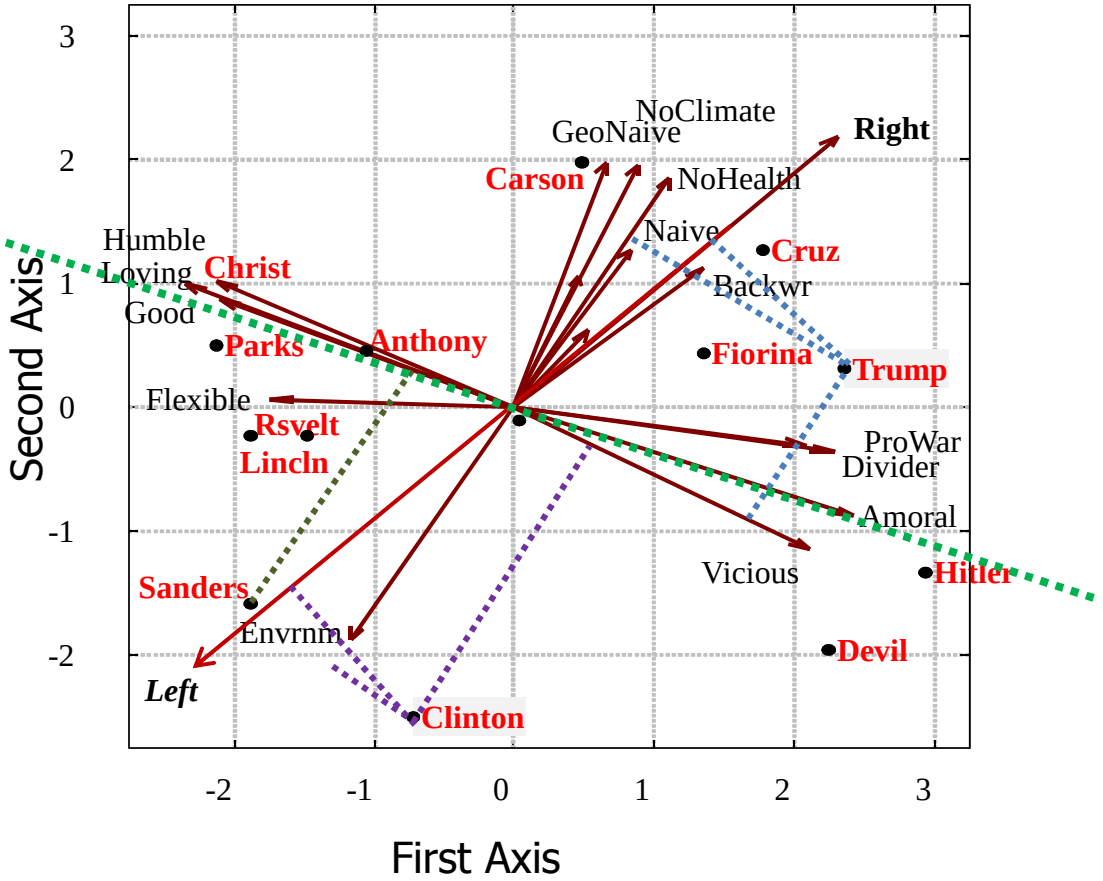
54%

$c_{k1}[\mathbf{A}\mathbf{G}_1\mathbf{B}']$

Consensus among Judges

Joint biplot for Candidates/Celebrities and Scales

Evaluation:
Good versus Bad



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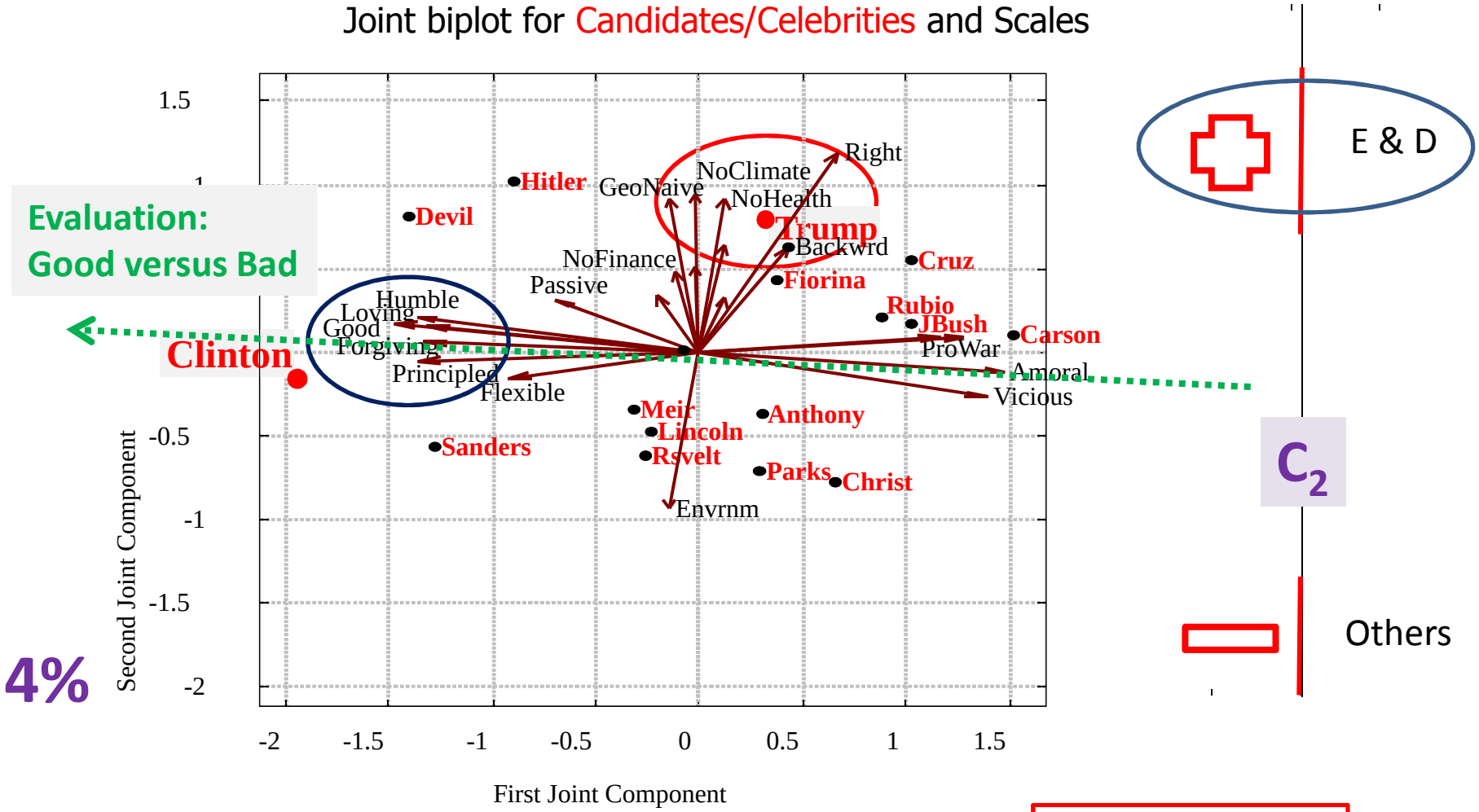
Individual differences between Judges



$$\mathbf{X}_k \cong \sum c_{kr}[\mathbf{A}\mathbf{G}_r\mathbf{B}'] = c_{k1}\,[\mathbf{A}\mathbf{G}_1\mathbf{B}'] + c_{k2}[\mathbf{A}\mathbf{G}_2\mathbf{B}']$$

Focus group or OnLine Kellian Mind Explorer?

- Which method gets the **best and most information** at the **lowest cost** in the **shortest time**?
  Focus groups costs around $6000

- Which method provides the **highest reliability, validity, and representativeness** of the scores?

- Which method will be **most acceptable** to the participants?

- How to make the **candidates/subsiders** and **participants** understand the results?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