

# Identifying factors contributing to disengaged and deconverted Christians

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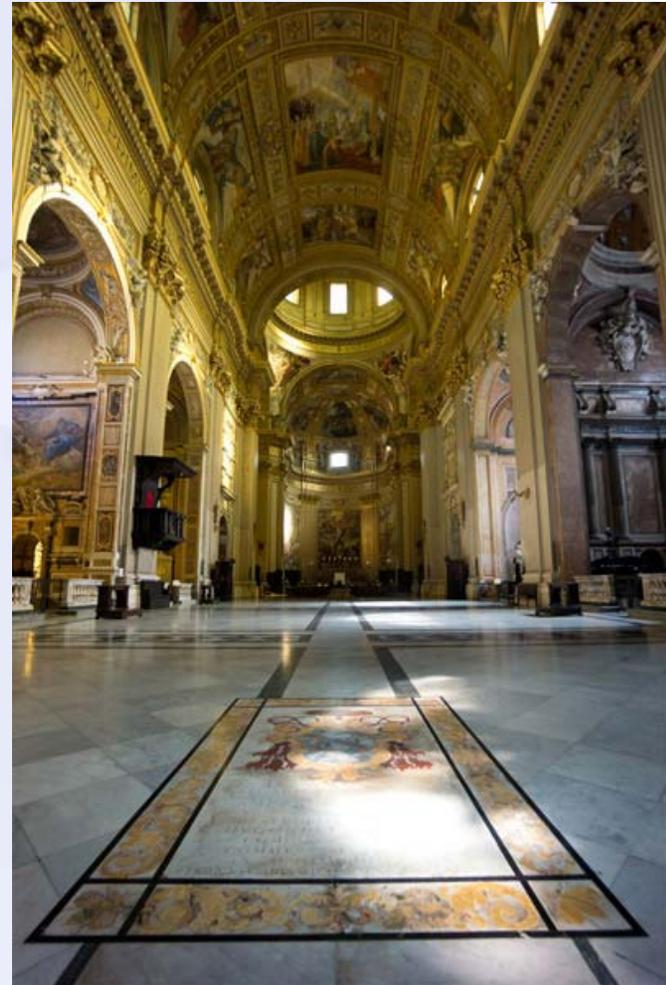
# Research questions

- Why do young people stop attending church or/and giving up their faith? What are the most crucial factors?



# Prior research

- Presser & Chaves (2007). Is religious service attendance declining?
- In the US weekly attendance at religious services declined between 1950 and 1990. But it has been stable since 1990.



# Prior research

- Chaves (2011): Religious trends in US
- The portion of Americans who never attend church has increased from 13% in 1990 to 22% in 2008.
- Fewer people grow up in a religious household (from 70% for those born before 1900 to about 45% born after 1970)
- Parental factor is crucial (Vaidyanthan, 2011)

# Prior research

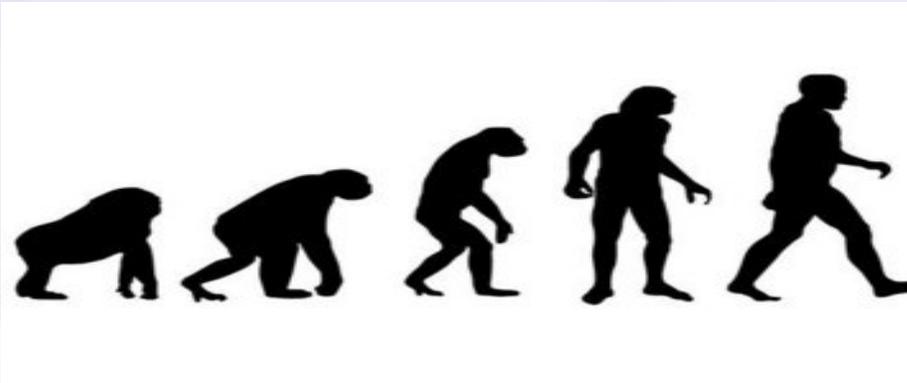
- Declining belief in inerrancy of the Bible
- Declining confidence in church leadership
- More disapproval of religious leaders' political involvement

# Prior research

- David Kinnaman (2011): “You lost me: Why young Christians are leaving church...and rethinking faith”
- Young Christians perceive that Christians are too confident that they know the answers of many important questions;
- Churches are out of step with the scientific world we live in;

# Prior research

- Christianity present complicated issues in a simplistic way;
- Christianity is anti-intellectual;
- Young Christians were turned off by the Creationism-evolution debate.



# Limitations of prior research

- Each study focuses some domains only.
- This study includes multiple dimensions:
  - Intellectual factors (e.g. New atheism, post-modernism)
  - Church experience
  - Personality traits (e.g. Schwartz's Value Survey)

# Sampling

- Students at Azusa Pacific University
- Must be Christians or ex-Christians; 18 years old or older.
- Convenience sampling
- Sample size = 87

# **Dependent variable: Faith categories**

- Committed Christians: I continue to attend church and have faith in Christ.
- Doubters: I still attend church but have serious doubts of my faith in Christ.
- Disengaged: I have not attended church for over one year but I maintain my faith in Christ.
- Deconverted: I am not attending church and have abandoned my faith in Christ.

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# Data analysis

- Bootstrap forest is superior to GLM or other conventional procedures:
- It can include many predictors without worrying about lacking degrees of freedom or too many parameters to estimate.
- It is immune against missing data and noise.
- It can yield a parsimonious model and high predictive accuracy.
- It can rank order the importance of variables.

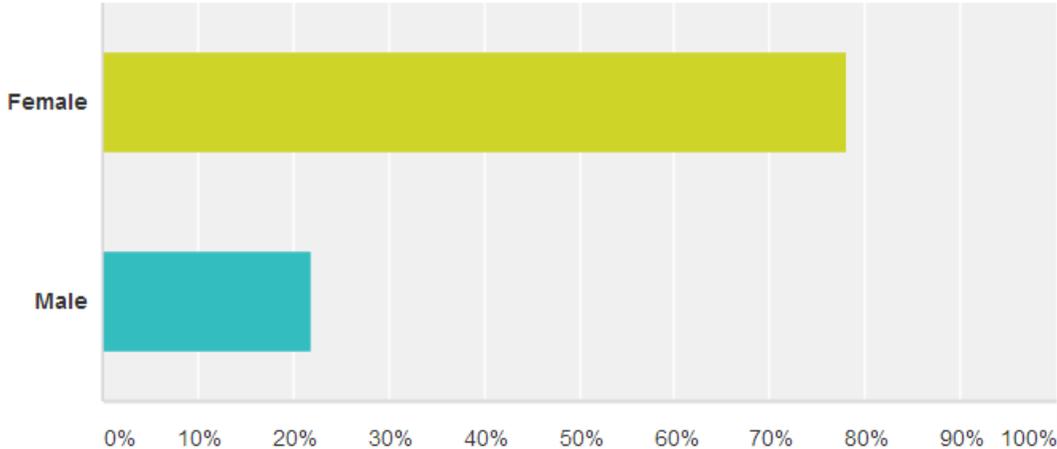
# Data analysis

- The open-ended responses are analyzed by both content analysis and text mining.
- Both procedures are aimed to unveil the common threads pertaining to disengagement and deconversion that are not detected with the quantitative methods.

# Results

## What is your gender?

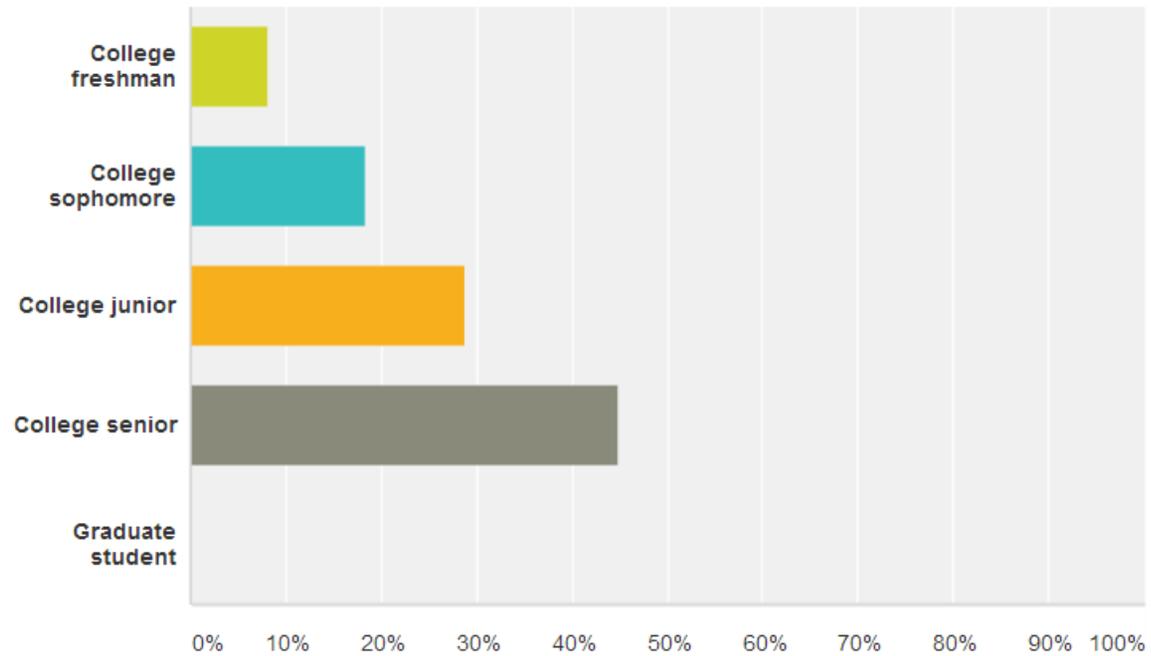
Answered: 87 Skipped: 4



Answer Choices	Responses
Female	78.16% 68
Male	21.84% 19
Total	87

## What is your education level?

Answered: 87 Skipped: 4



Answer Choices	Responses
College freshman	8.05% 7
College sophomore	18.39% 16
College junior	28.74% 25
College senior	44.83% 39
Graduate student	0.00% 0
Total	87

# Results

- Racial composition

Answer Choices	Responses	
White	60.92%	53
Black or African American	5.75%	5
Hispanic	18.39%	16
Native American, American Indian or Alaska Native	0.00%	0
Asian	8.05%	7
Native Hawaiian or Pacific Islander	3.45%	3
Other	3.45%	3
Total		87

# Results

- Church affiliation

Answer Choices	Responses
▼ Catholic	17.54% 10
▼ Eastern Orthodox	0.00% 0
▼ Mainline Protestant	29.82% 17
▼ Evangelical	45.61% 26
▼ Fundamentalist	0.00% 0
▼ Pentecostal	7.02% 4
Total	57

- In the past year did you attend church on a weekly basis (excluding mandatory attendance of chapels by the school)?

Answer Choices	Responses
Yes	51.14% 45
No, I experienced scheduling conflicts (e.g. work on Sunday)	22.73% 20
No, I doubt the validity of Christianity	1.14% 1
No, I do not like some members of the church	2.27% 2
No, I do not like the leadership (e.g. pastor, deacon) of the church	2.27% 2
No, for other reasons	23.86% 21
Total Respondents: 88	

- Which of the following responses best describes your church attendance and faith?

Answer Choices	Responses
▼ I continue to attend church and have faith in Christ	65.52% 57
▼ I still attend church but have serious doubts of my faith in Christ	8.05% 7
▼ I have not attended church for over one year but I maintain my faith in Christ	26.44% 23
▼ I am not attending church and have abandoned my faith in Christ	0.00% 0
Total	87

# New atheist authors

- In the last year, did you read any books or visit websites or attend seminars by the following authors/speakers? (Check all that apply)

Answer Choices	Responses	
Richard Dawkins	62.50%	5
Sam Harris	12.50%	1
Daniel Dennett	0.00%	0
Christopher Hitchens	50.00%	4
Michael Shermer	0.00%	0
Victor Stenger	0.00%	0
Lawrence Strauss	25.00%	2
Other New Atheist Authors:	<b>Responses</b>	0.00% 0
Total Respondents: 8		

# Post-modern authors

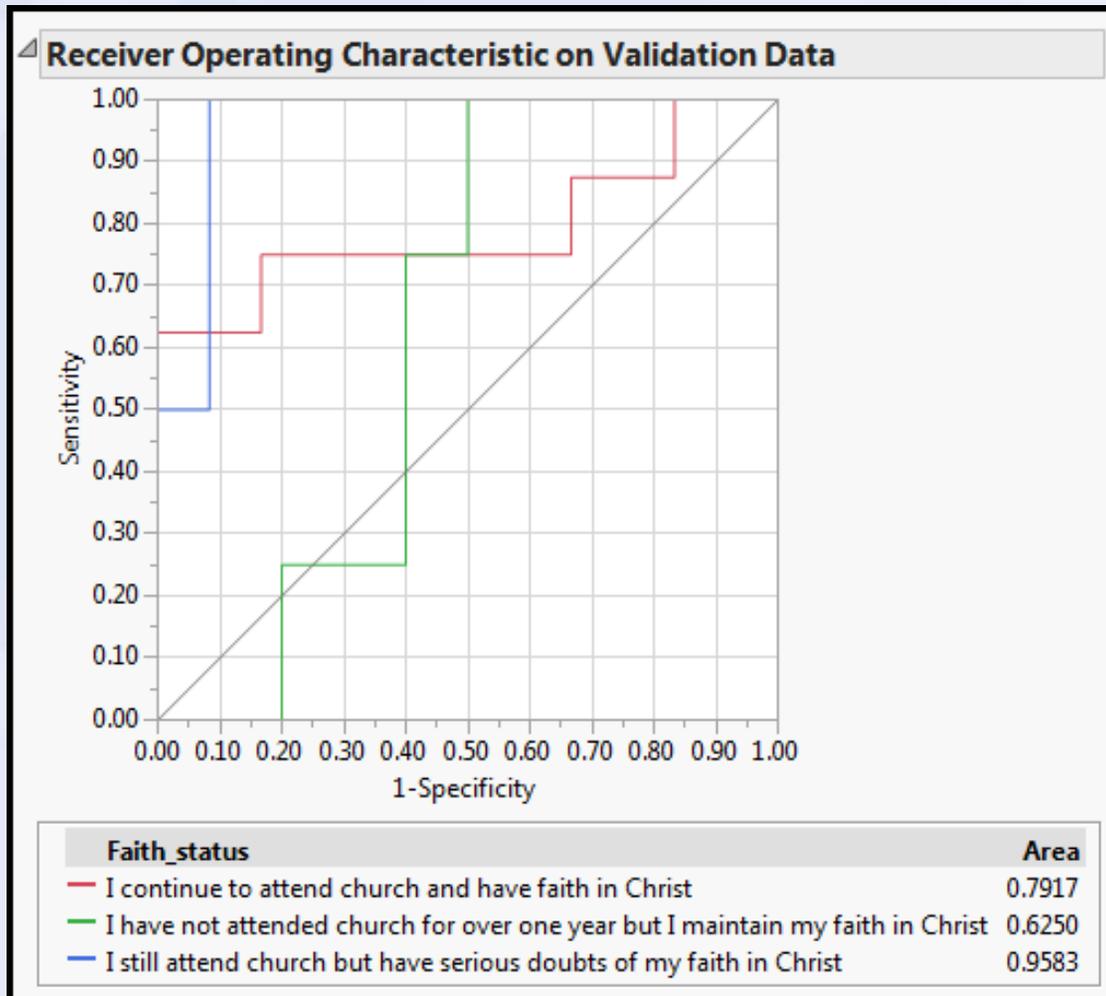
- In the last year, did you read any books or visit websites or attend seminars by the following authors/speakers? (Check all that apply)

Answer Choices	Responses
▼ Jean Baudrillard	0.00% 0
▼ Jean-François Lyotard	0.00% 0
▼ Jacques Derrida	20.00% 1
▼ Michel Foucault	40.00% 2
▼ Other postmodernism authors: <b>Responses</b>	80.00% 4
Total Respondents: 5	

# Bootstrap forest: Overall

▼ Bootstrap Forest for Faith_status			
▾ Specifications			
Target Column:	Faith_status	Training rows:	73
		Validation rows:	14
Number of trees in the forest:	14	Test rows:	0
Number of terms sampled per split:	11	Number of terms:	44
		Bootstrap samples:	73
		Minimum Splits Per Tree:	10
		Minimum Size Split:	5
▾ Overall Statistics			
Measure	Training	Validation	Definition
Entropy RSquare	0.4076	0.0384	$1 - \text{Loglike}(\text{model}) / \text{Loglike}(0)$
Generalized RSquare	0.6006	0.0830	$(1 - (L(0) / L(\text{model}))^{2/n}) / (1 - L(0)^{2/n})$
Mean -Log p	0.4748	0.9190	$\sum -\text{Log}(p[j]) / n$
RMSE	0.3937	0.5688	$\sqrt{\sum (y[j] - p[j])^2 / n}$
Mean Abs Dev	0.3332	0.4847	$\sum  y[j] - p[j]  / n$
Misclassification Rate	0.1644	0.4286	$\sum (p[j] \neq p\text{Max}) / n$
N	73	14	n

# Predictive accuracy



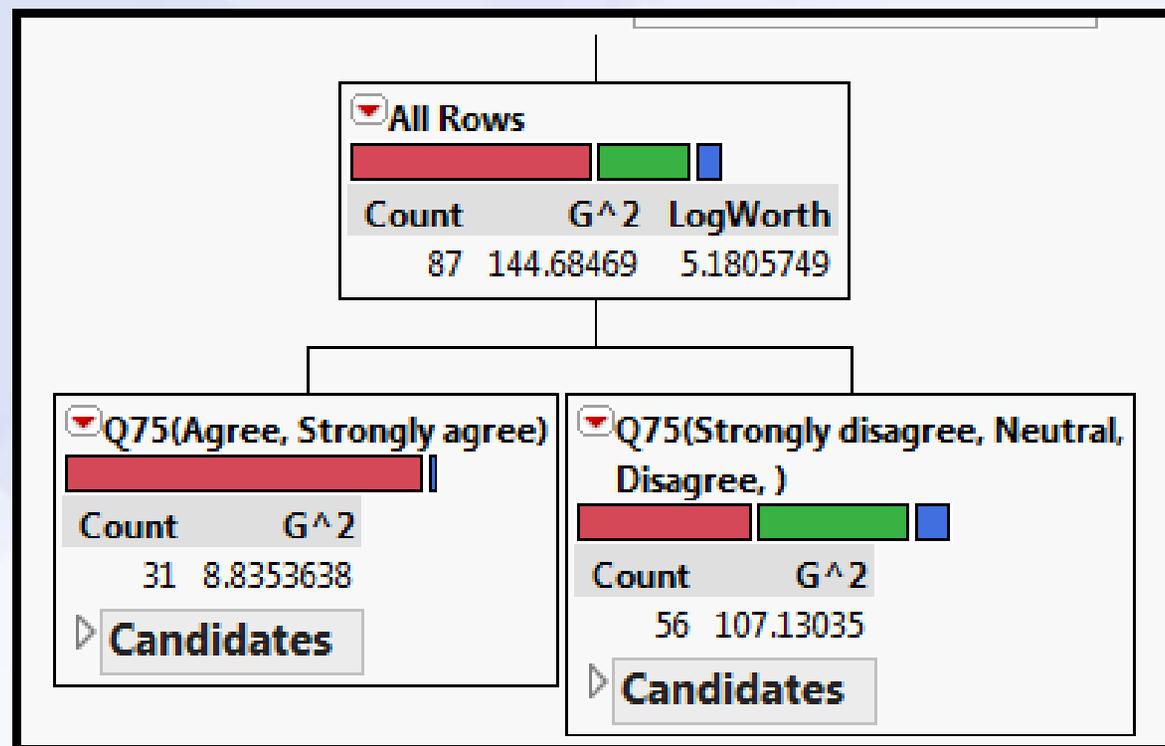
# Top 10 predictors

- Most are related to church experience
- Two are about psychological factors (stimulation and universalism)
- One is an intellectual issue (Creationism)

1	Variable	Number of Splits	G <sup>2</sup>	Portion
2	I always have channels to express my suggestions to the church.	5	54.40705	0.115517
3	The church is not what she is supposed to be.	7	44.82067	0.095163
4	My church is placing too much emphasis on dogmas and creeds.	3	34.68858	0.073651
5	Stimulation	3	31.04714	0.065919
6	The church spends donations in the right places.	3	28.6878	0.06091
7	I have an important role in the church family.	2	26.24398	0.055721
8	The church is out of touch with my life.	2	22.20294	0.047141
9	Universalism	4	21.44404	0.04553
10	Creationism is unscientific.	2	19.12164	0.040599
11	I have many good friends in church.	1	16.26989	0.034544

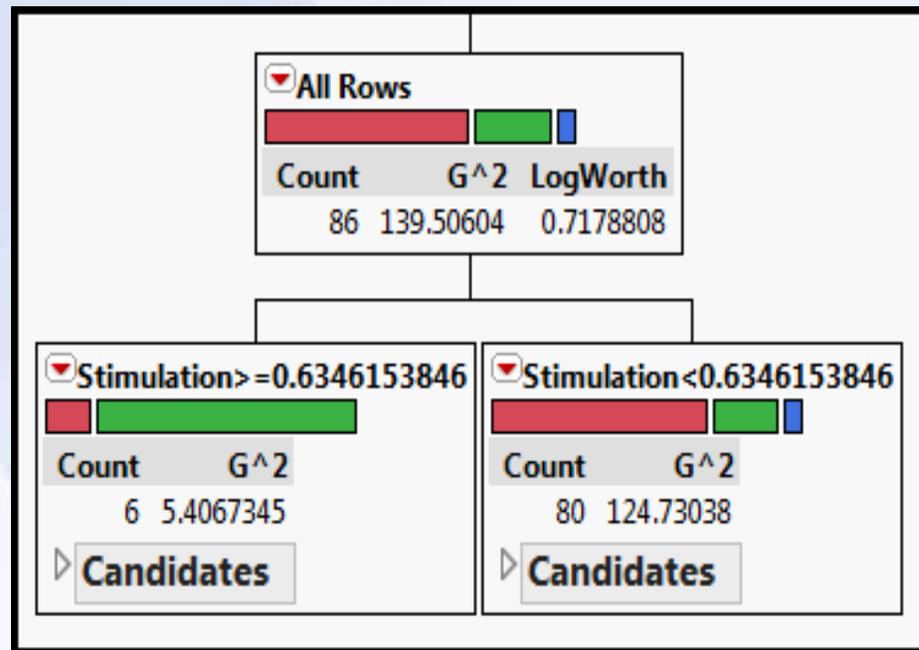
# I always have channels to express my suggestions to the church.

- If you agree or strongly agree → have faith and continue to attend church (Red).



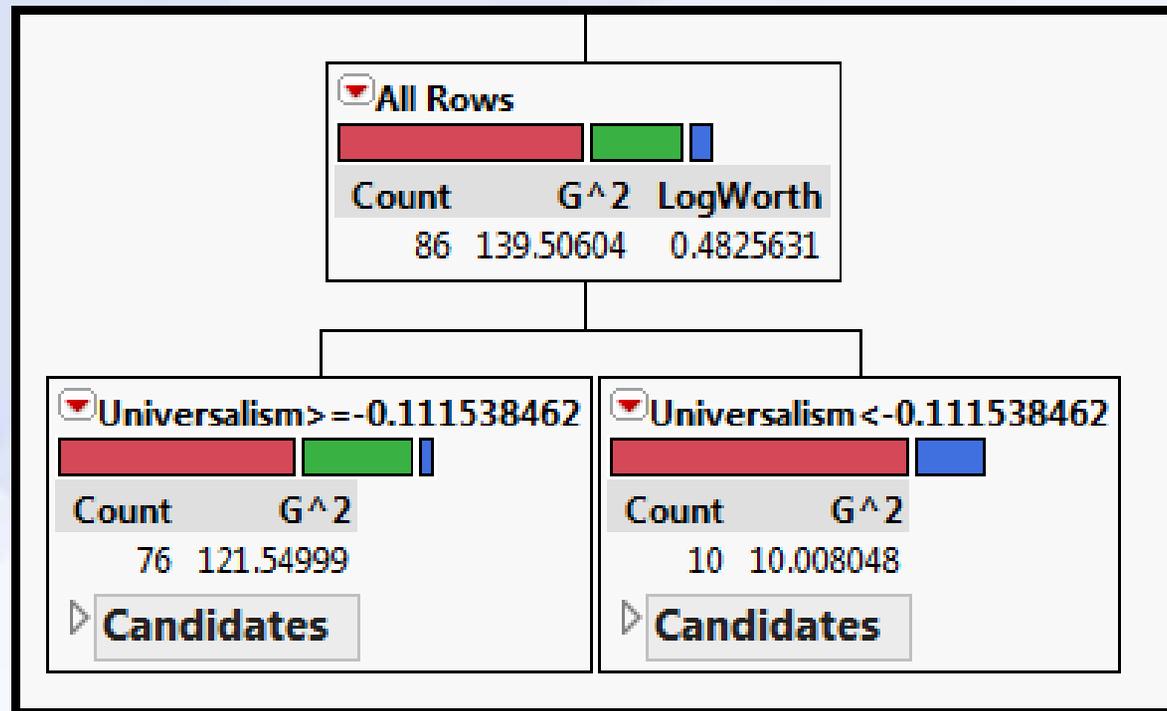
# Stimulation

- High stimulation → haven't attended church but keep the faith (Green)
- Low → attend church and strong faith (Red) or have serious doubt (Blue)



# Universalism

- If your universalism score  $\Rightarrow -0.11 \rightarrow$  haven't attended church but keep the faith (Green).



# Acknowledgment

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