Would you have a
nice catchy title for me?

Would you have a
nice catchy title for me?

Unhh, my catchy-title
skills need a lot of work

Would you have a nice catchy title for me?

Unhh, my catchy-title skills need a lot of work

How about something like . . .

How to Estimate Cross-Nationally and Longitudinally Comparable Measures of Public Opinion from the Mess of Survey Data You Found Online

Frederick Solt
University of Iowa
@fredericksolt
http://fsolt.org

Why would you *need*

Cross-Nationally and Longitudinally Comparable Measures

of

Public Opinion

from the

Mess of Survey Data You Found Online

?

Why would you *need*

Dynamic Comparative Public Opinion

?

Why would you *need*

DCPO

?

To study REPRESENTATION

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https://www.flickr.com/photos/reece-cheng/31249021860

To study POLICY FEEDBACK

@fredericksolt

https://www.flickr.com/photos/fibonacciblue/4526037142

To study DIVERSIONARY WAR

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How **DO** we study comparative public opinion?

	United Kingdom
1991	
1992	
1993	
1994	
1995	
1996	
1997	
1998	
1999	

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OPTION

B

	2014
Australia	
Austria	
Belgium	
Canada	
Denmark	
Finland	
France	
Germany	
Hungary	

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OPTION

C

	1991	1992	1993	1994
Australia				
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				

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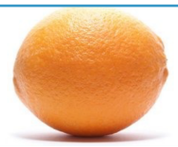
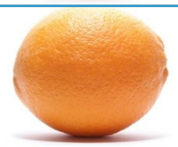
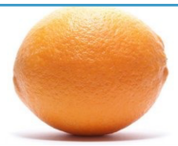
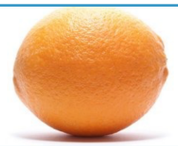
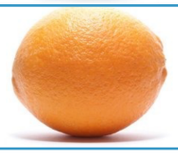
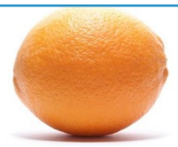
OPTION C

	1991	1992	1993	1994
Australia				
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				

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OPTION C

	1991	1992	1993	1994
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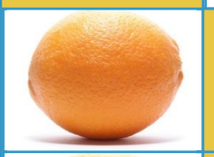
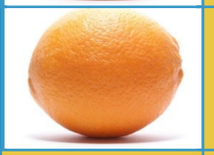
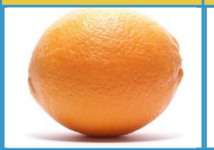
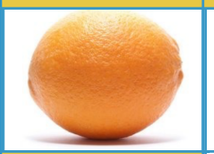
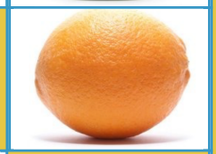
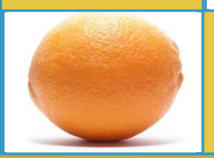
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				

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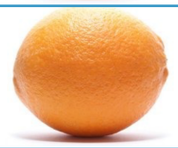
	1991	1992	1993	1994
Australia				
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				

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OPTION

DC PO

	1991	1992	1993	1994
Australia				
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				

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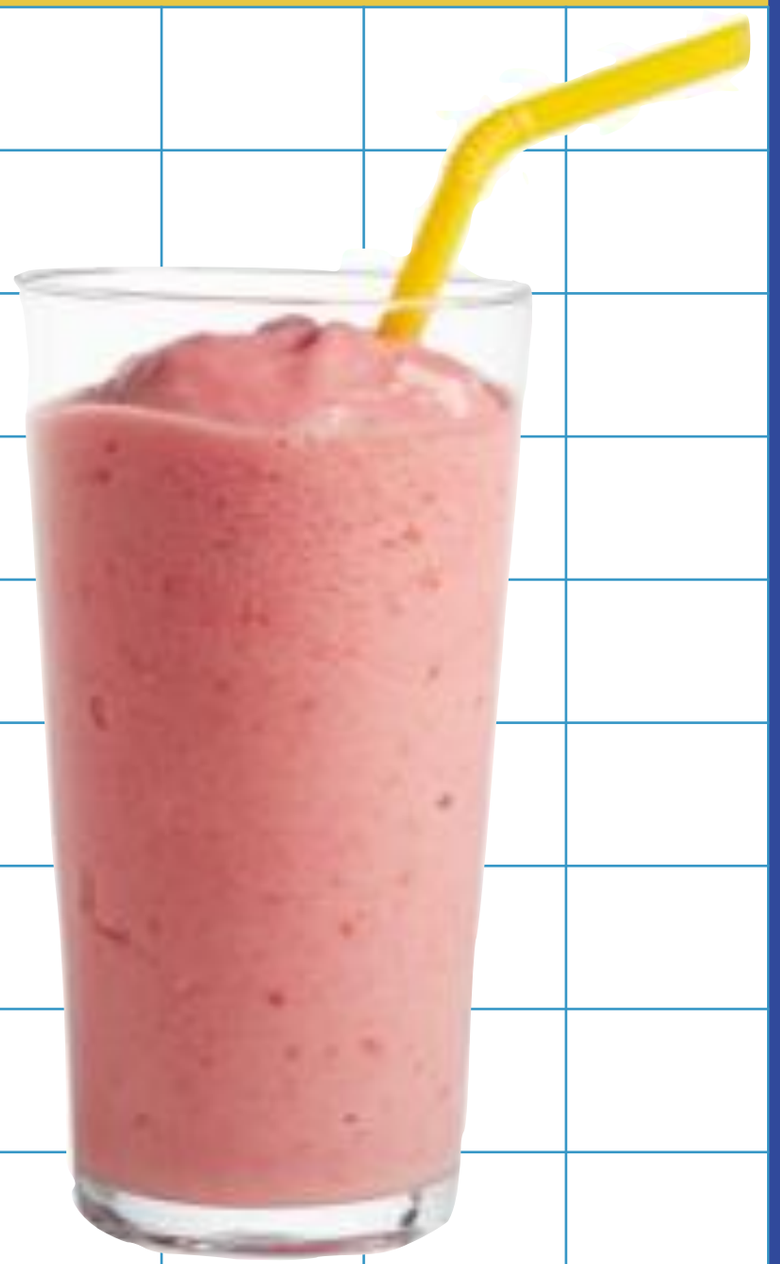
OPTION

DC PO

	1991	1992	1993	1994
Australia				
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				



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stan

DC
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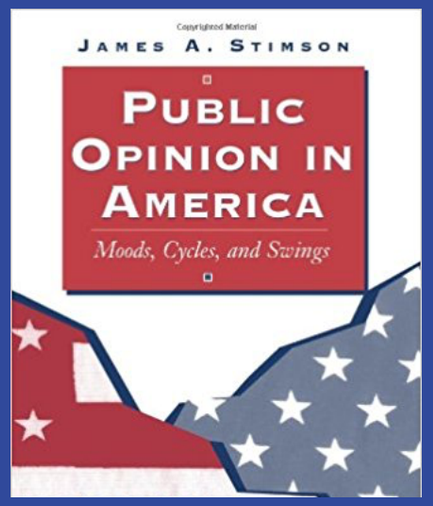

Stimson

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stan

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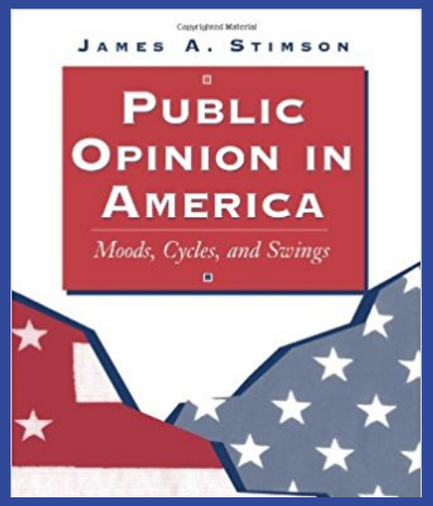

Stimson

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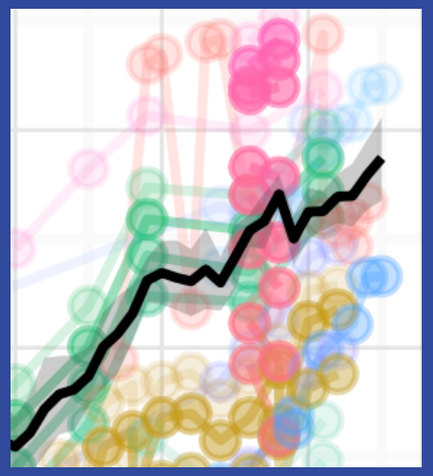

smoothed
trends

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stan

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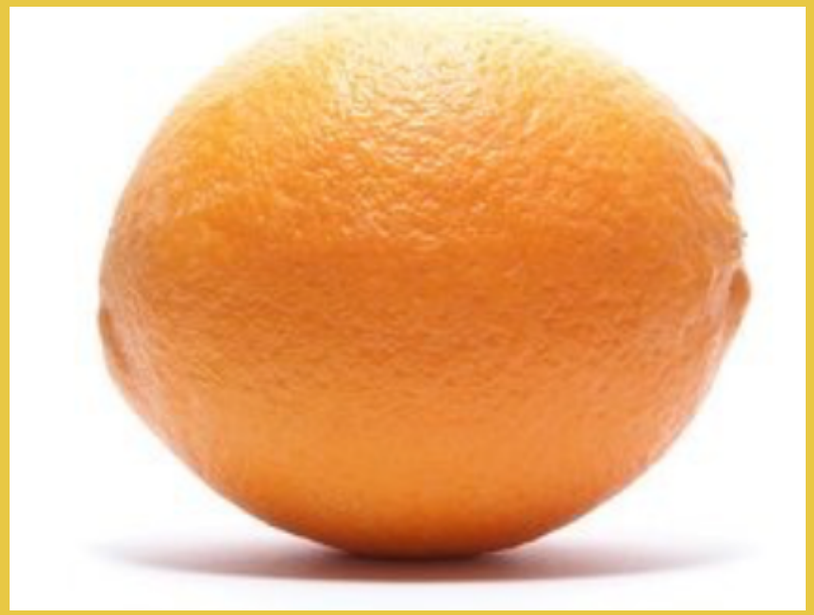
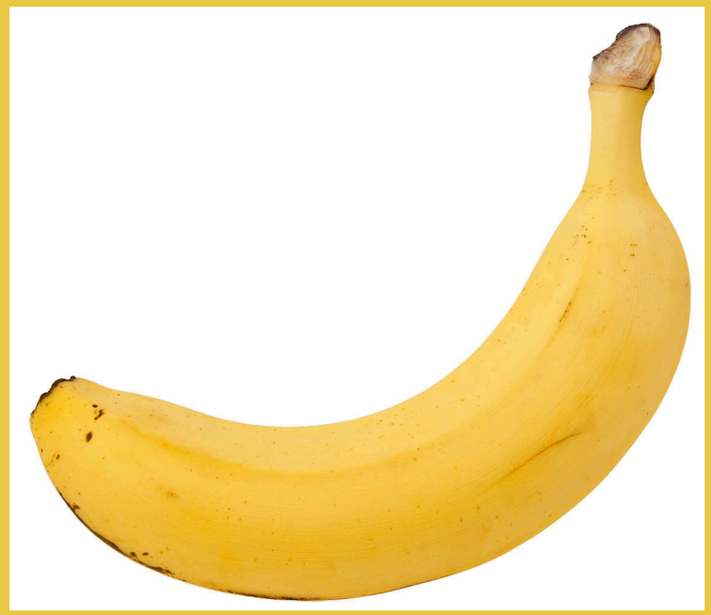
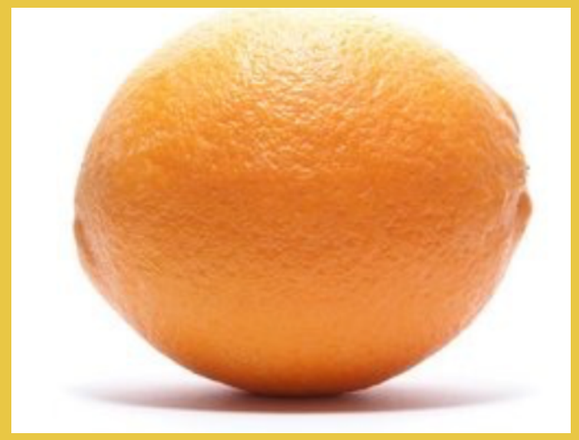
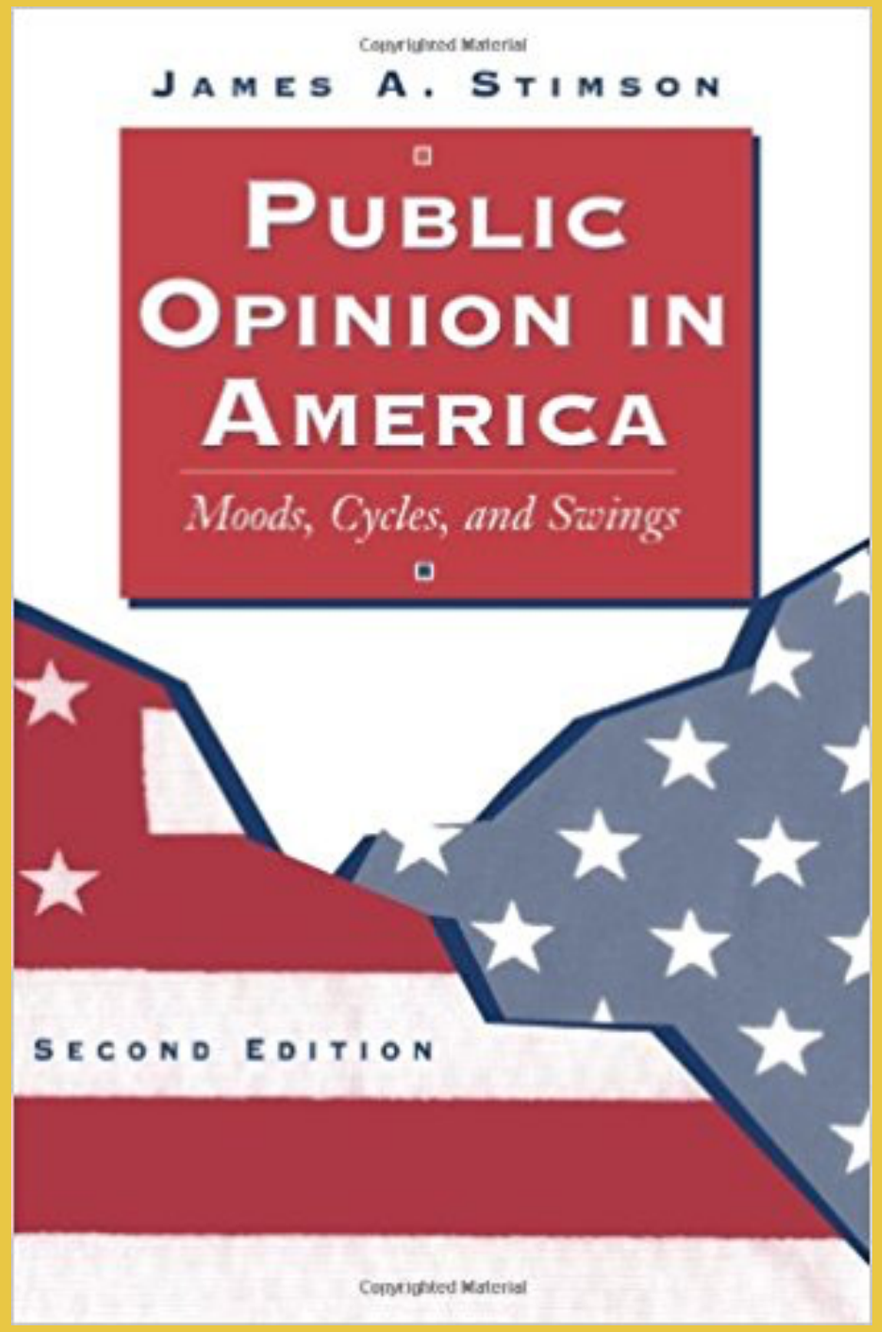
How to model **public opinion** over time?





Stimson:
Public Opinion is a Latent Variable





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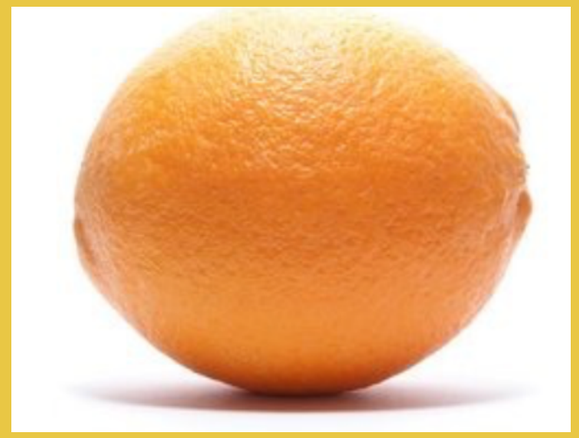
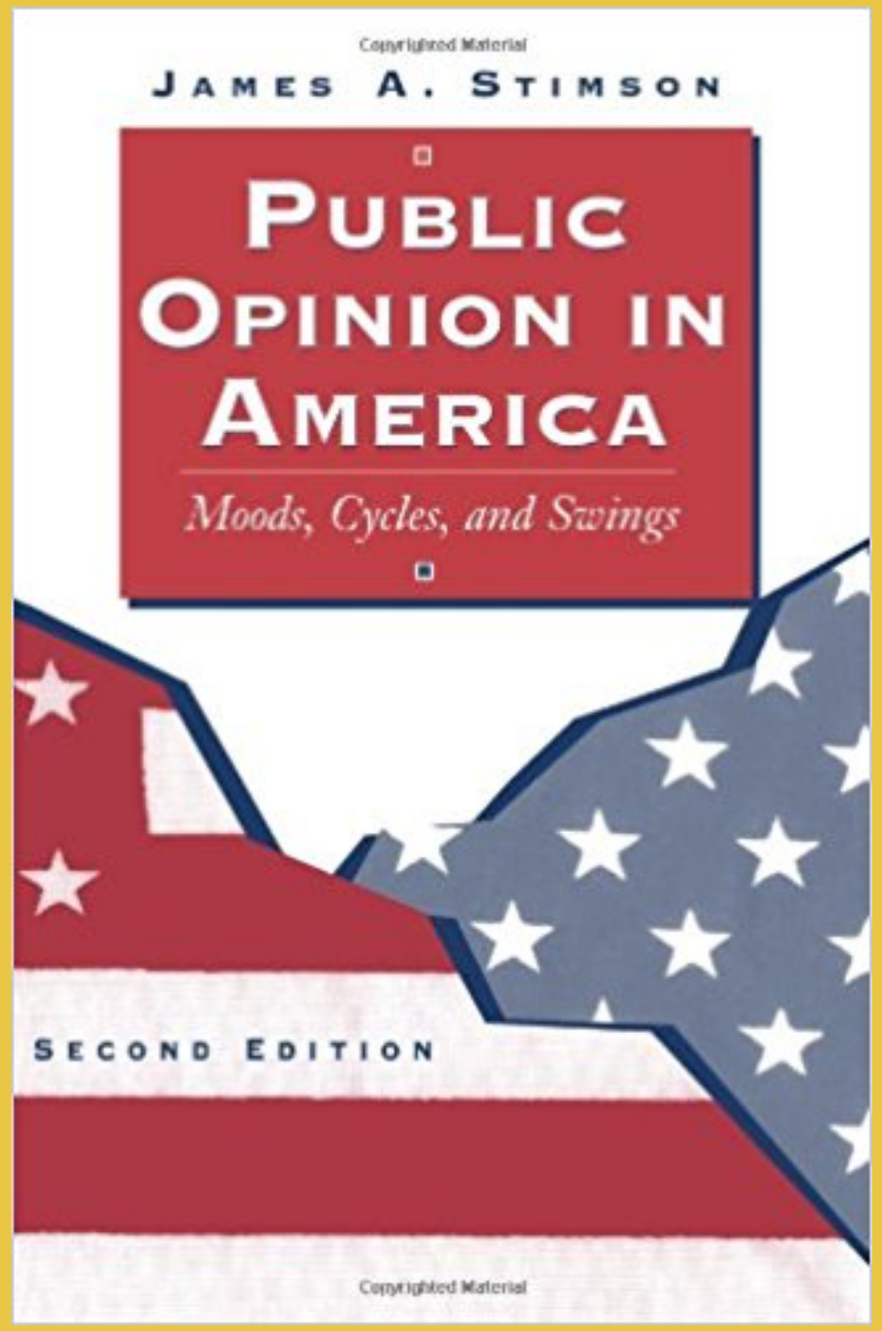
Stimson:
Public Opinion is a Latent Variable





McGann (2014)

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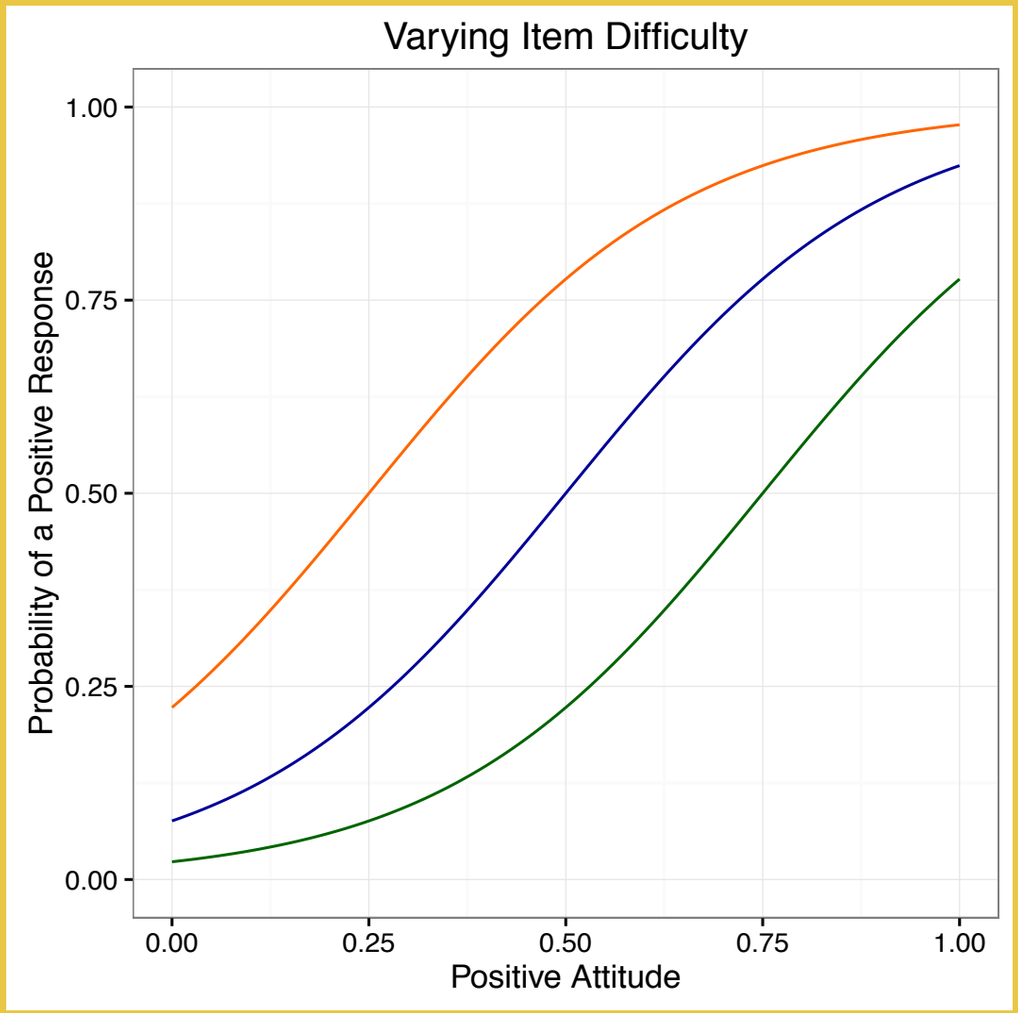
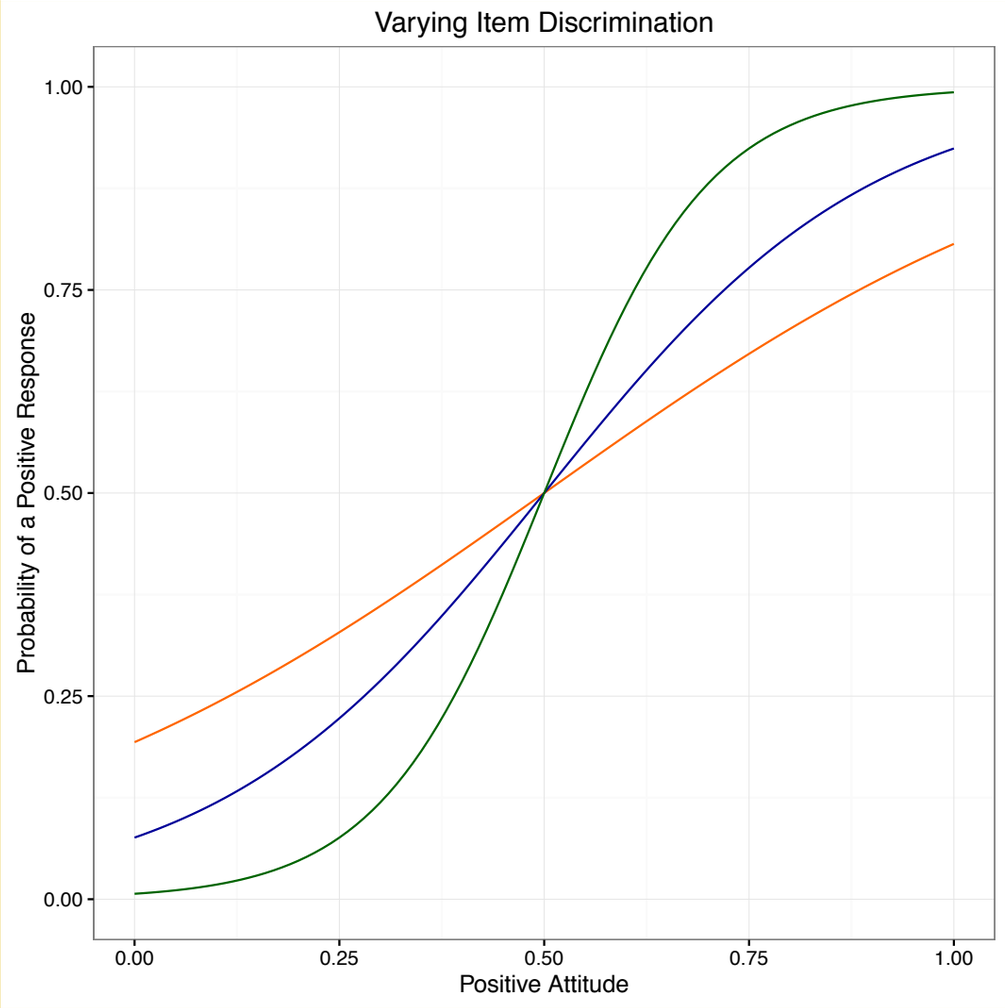
McGann (2014)

Two-Parameter Logistic Item ResponseTheory





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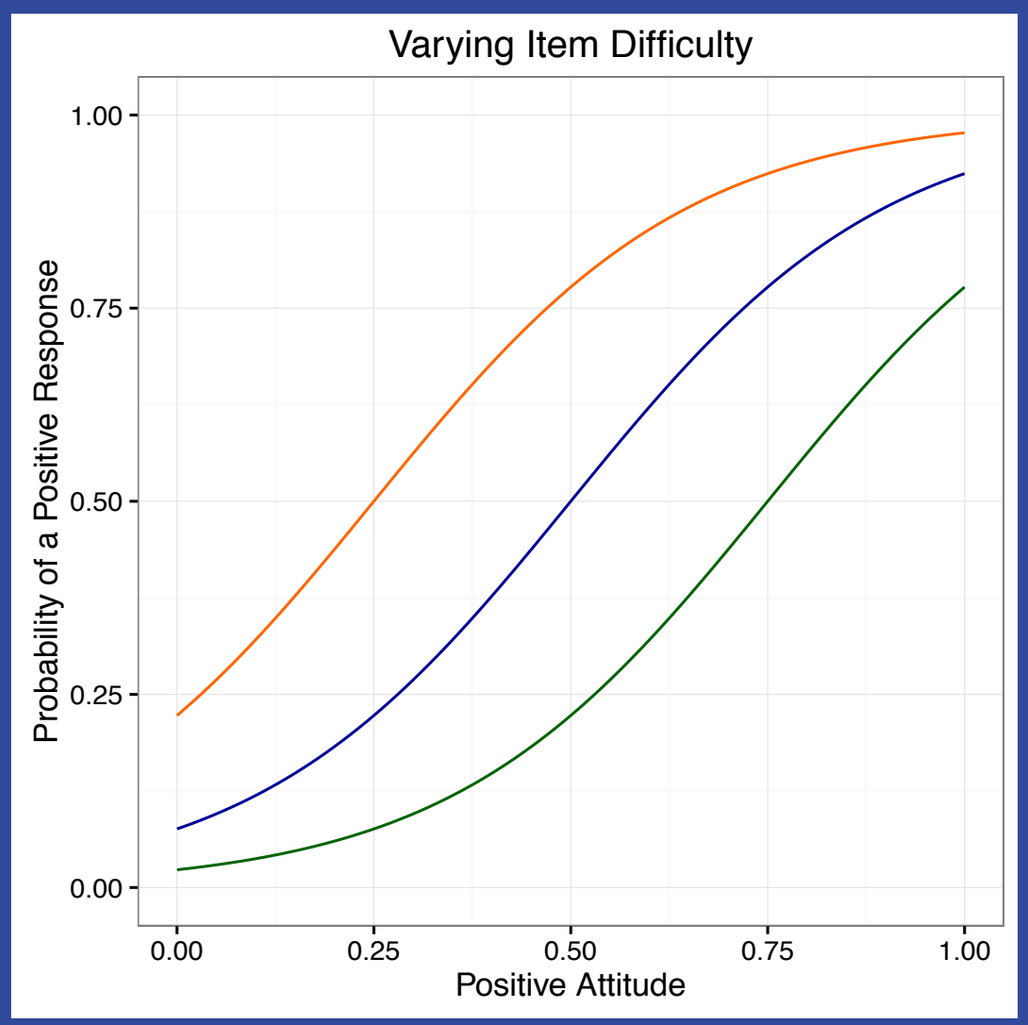
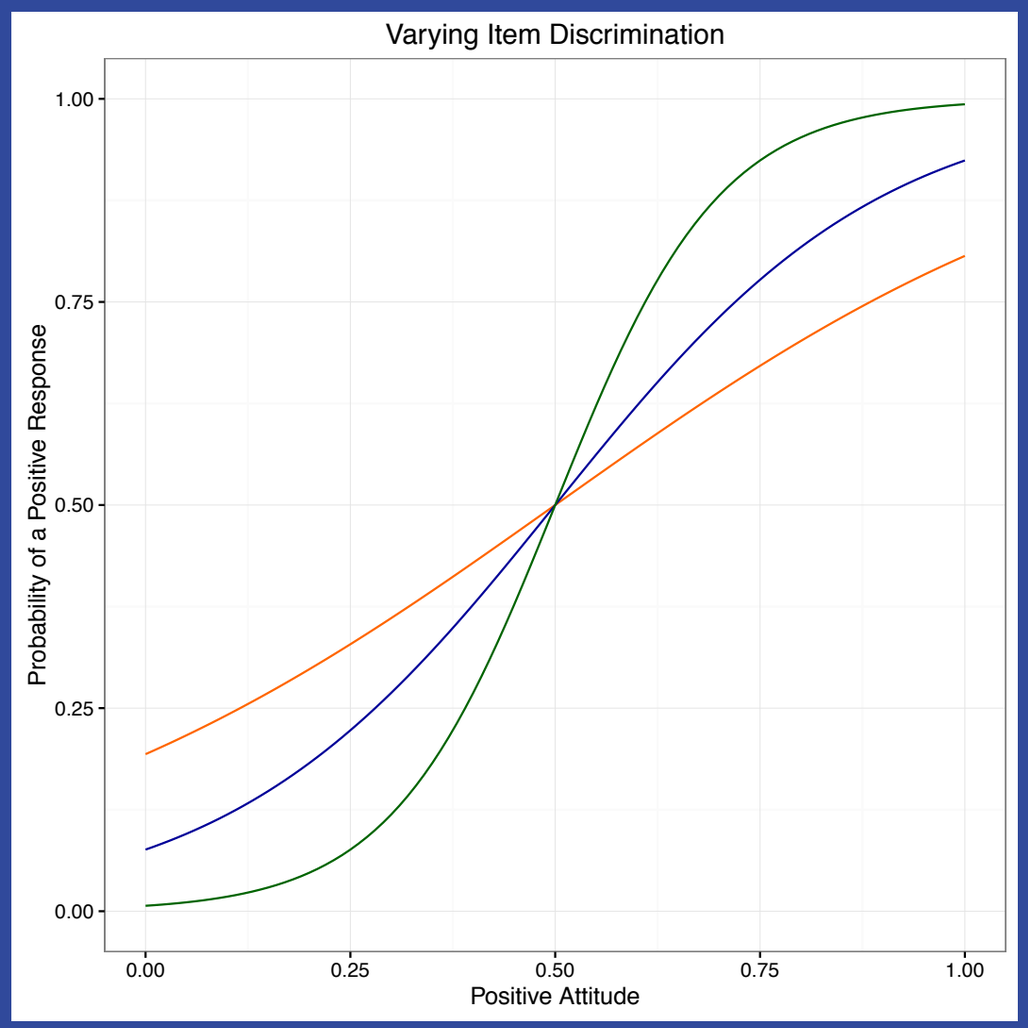
Two-Parameter ORDERED Logistic Item Response Theory





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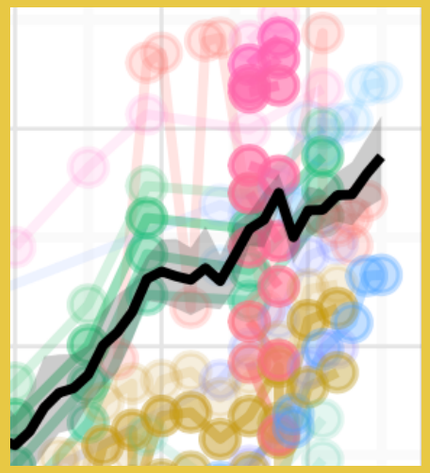
How to get **smooth trends**?



	1991	1992	1993	1994
Australia	🍏	🍌		🍏
Austria			🍊	
Belgium		🍏	🍊	
Canada	🍏			
Denmark			🍊	🍌
Finland		🍌		
France	🍌		🍊	🍏
Germany		🍏		🍊
Hungary	🍌		🍊	

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How to handle sparse, cross-national time series?

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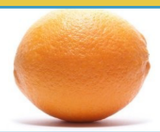
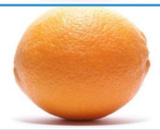
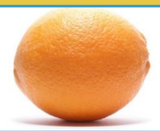
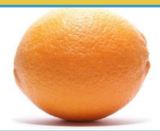
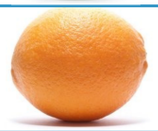
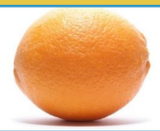
Austria				
Belgium				
Canada				
Denmark				
Finland				
France				
Germany				
Hungary				

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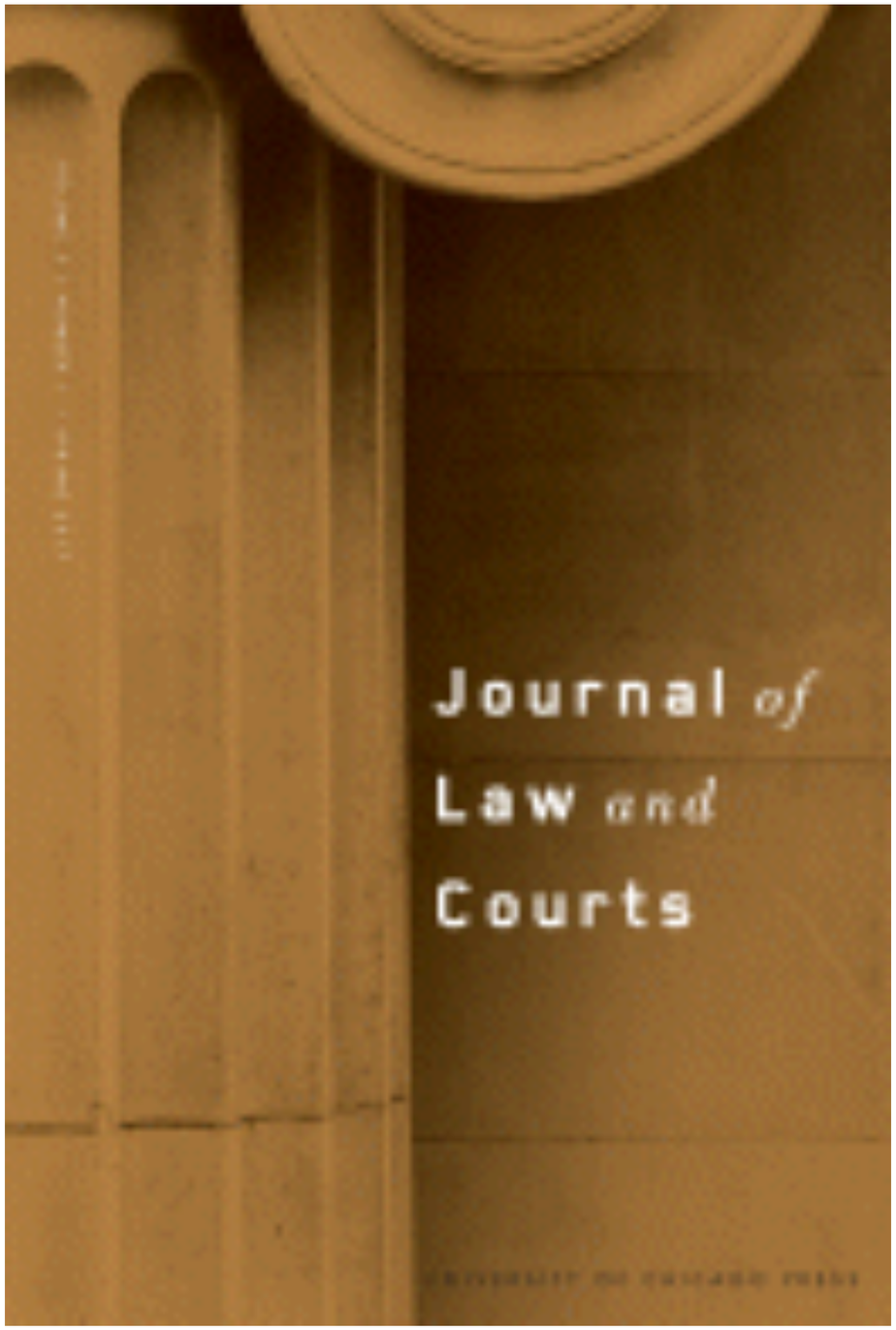
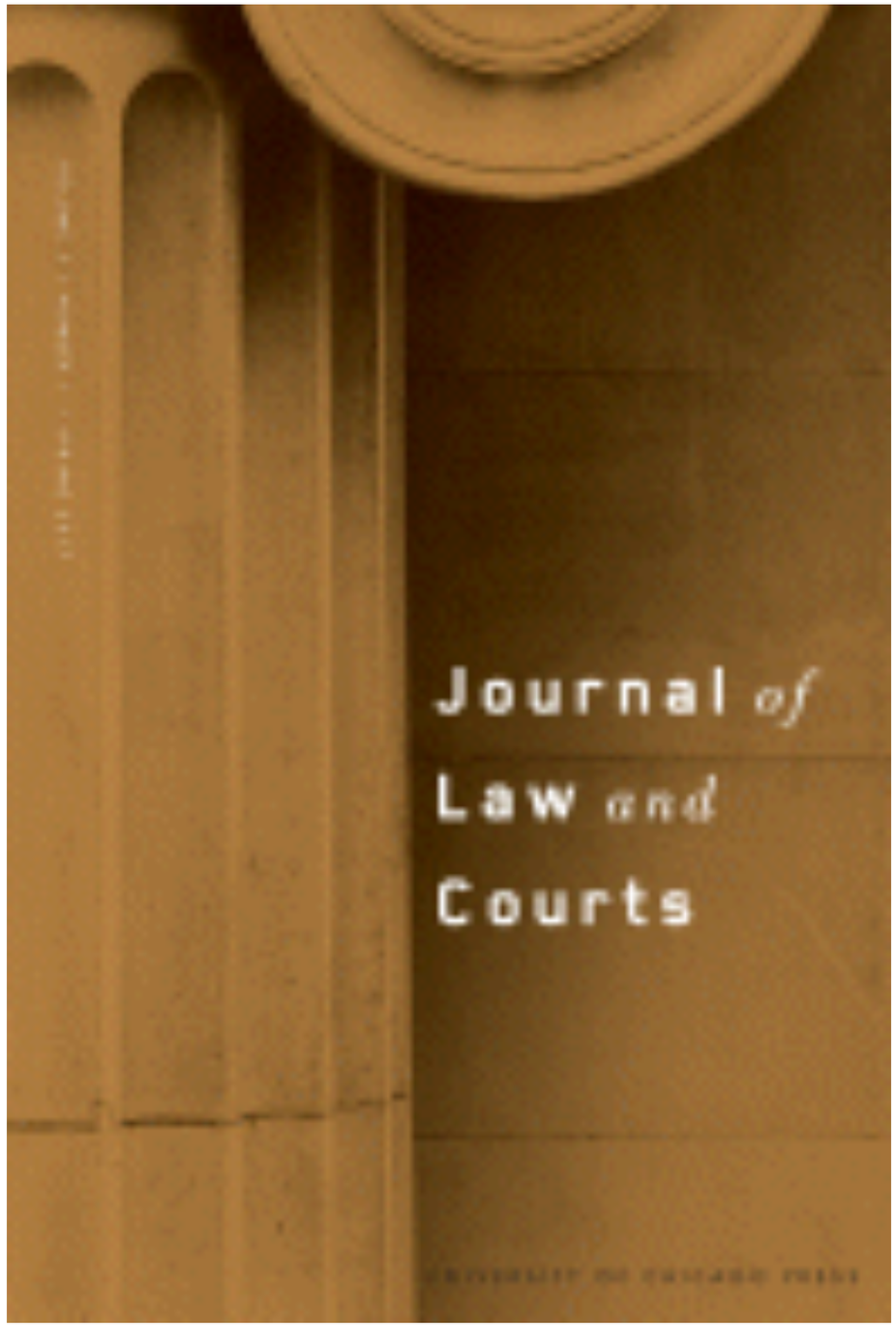
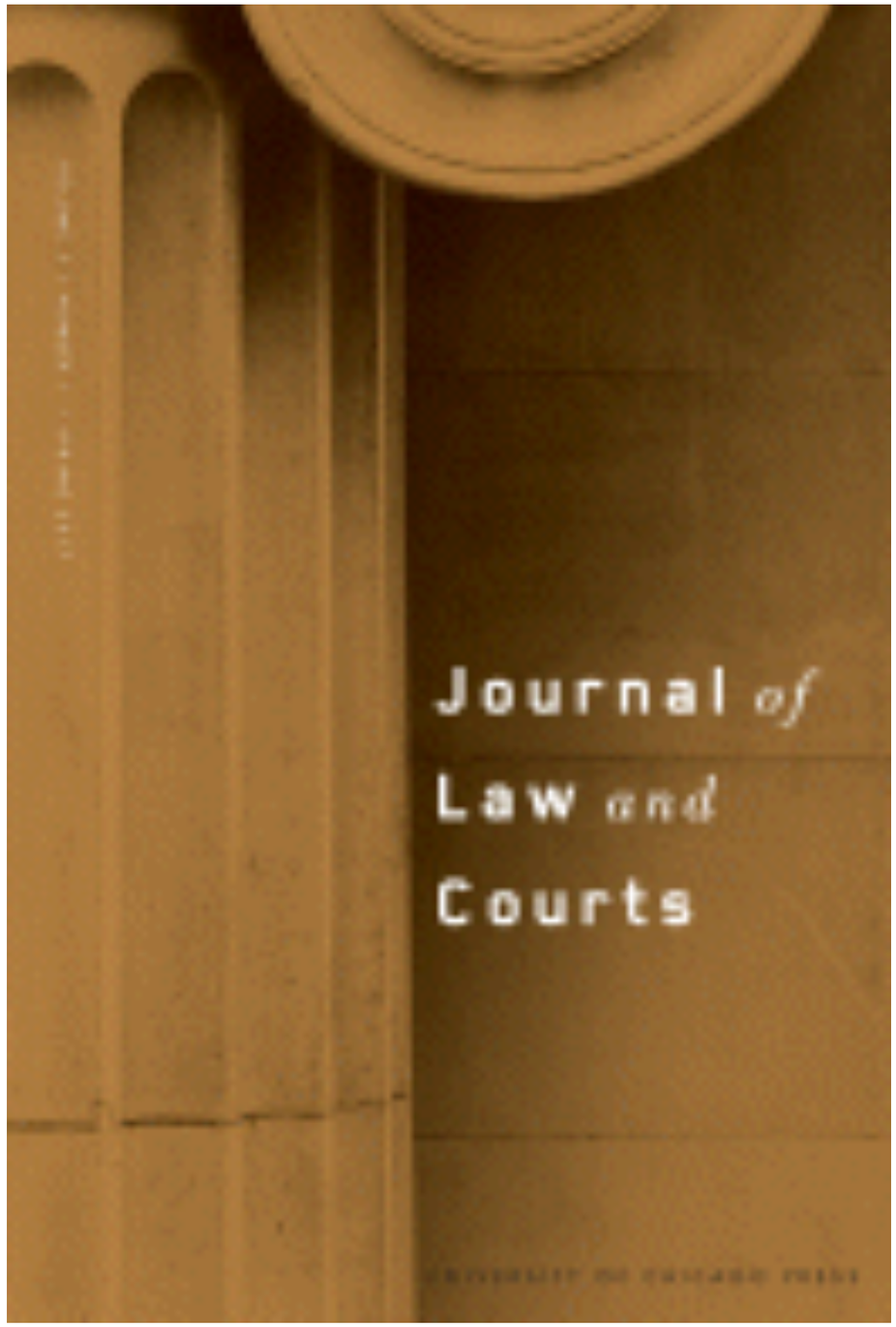


Linzer & Staton (2015)



Linzer & Staton (2015)

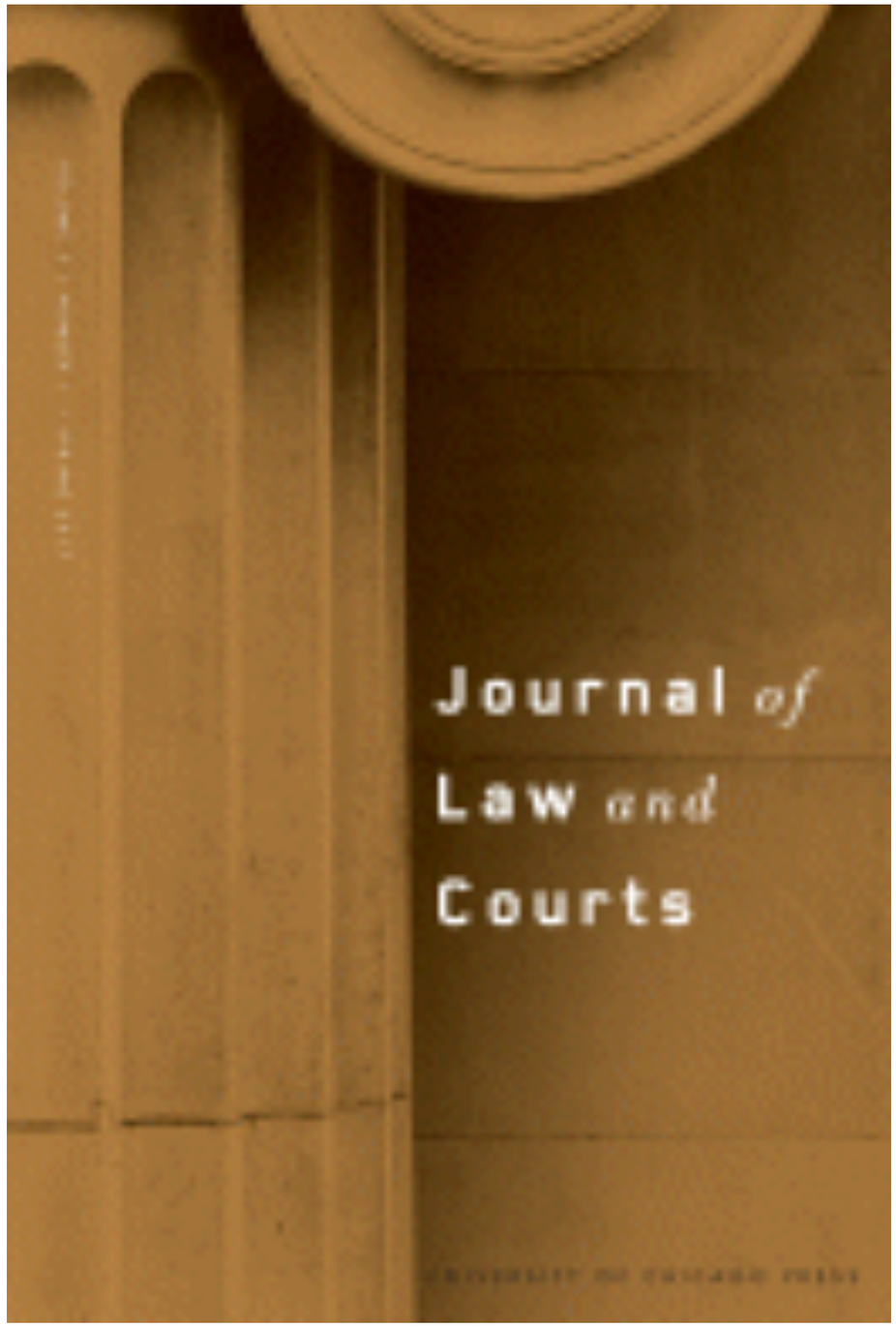
Random walk priors with **country-specific** errors



Linzer & Staton (2015)

Random walk priors with **country-specific errors**

$$\theta_{kt} = \mathcal{N}(\theta_{k(t-1)}, \boldsymbol{\sigma_k})$$



Linzer & Staton (2015)

Random walk priors with **country-specific** errors

$$\theta_{kt} = \mathcal{N}(\theta_{k(t-1)}, \boldsymbol{\sigma_k})$$

DC PO

Random walk priors with country-specific errors

$$\theta_{kt} = \mathcal{N}(\theta_{k(t-1)}, \sigma_k)$$

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DC
PO

stan

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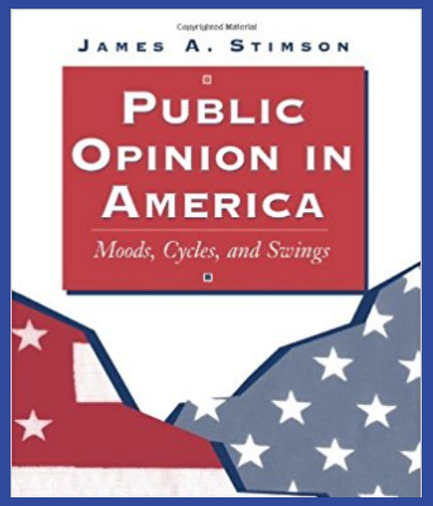

Stimson

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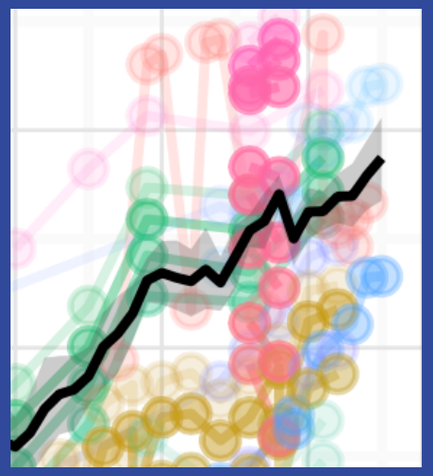

smoothed
trends

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Attitudes Toward Homosexuality

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Attitudes Toward Homosexuality

181 Datasets

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Attitudes Toward Homosexuality

181 Datasets

102 Countries

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Attitudes Toward Homosexuality

181 Datasets

102 Countries

998 Country-Years

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Attitudes Toward Homosexuality

181 Datasets

102 Countries

998 Country-Years

23 Survey Items

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Let’s study REPRESENTATION!

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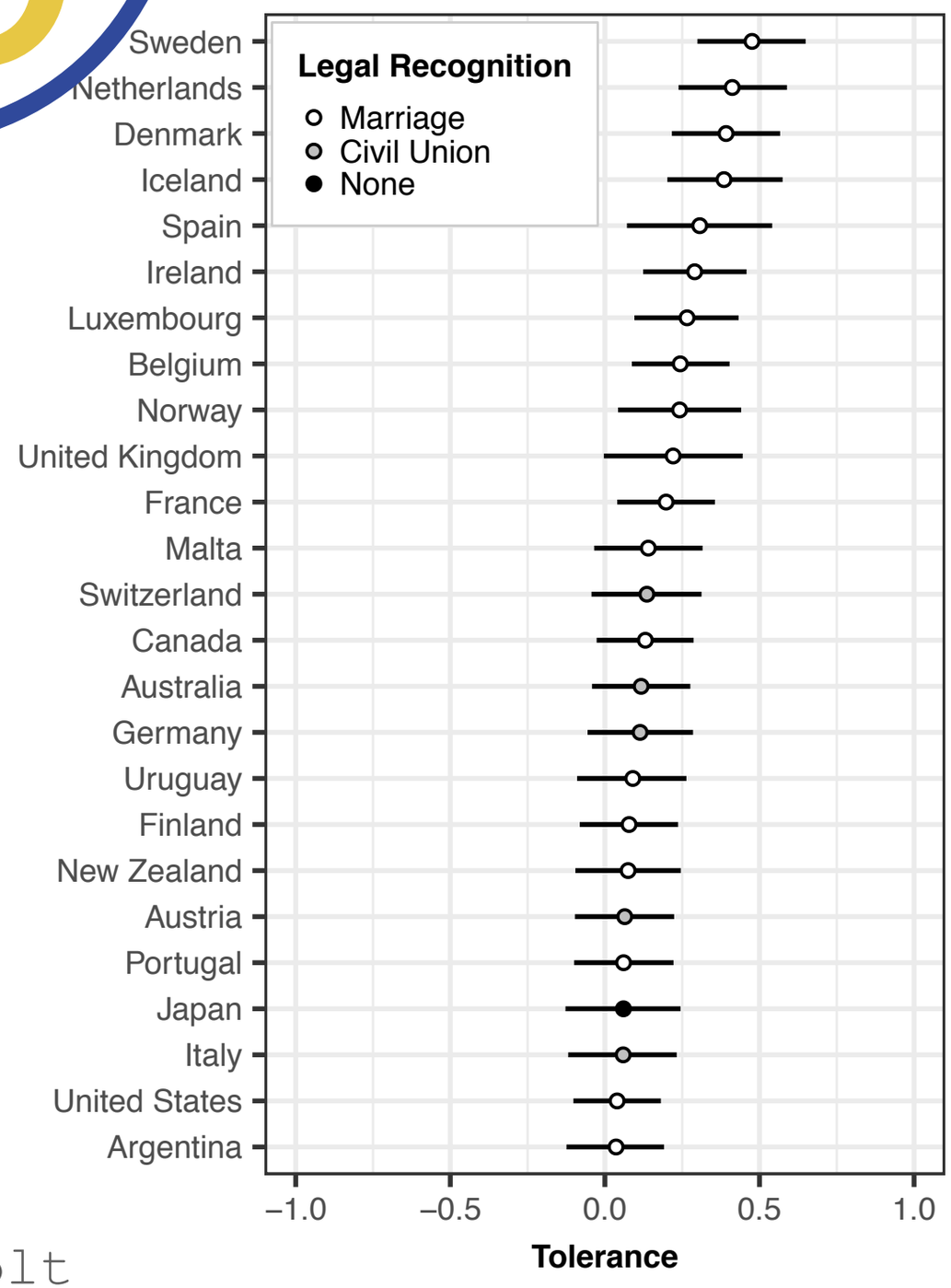
https://www.flickr.com/photos/reece-cheng/31249021860

Attitudes Toward Homosexuality



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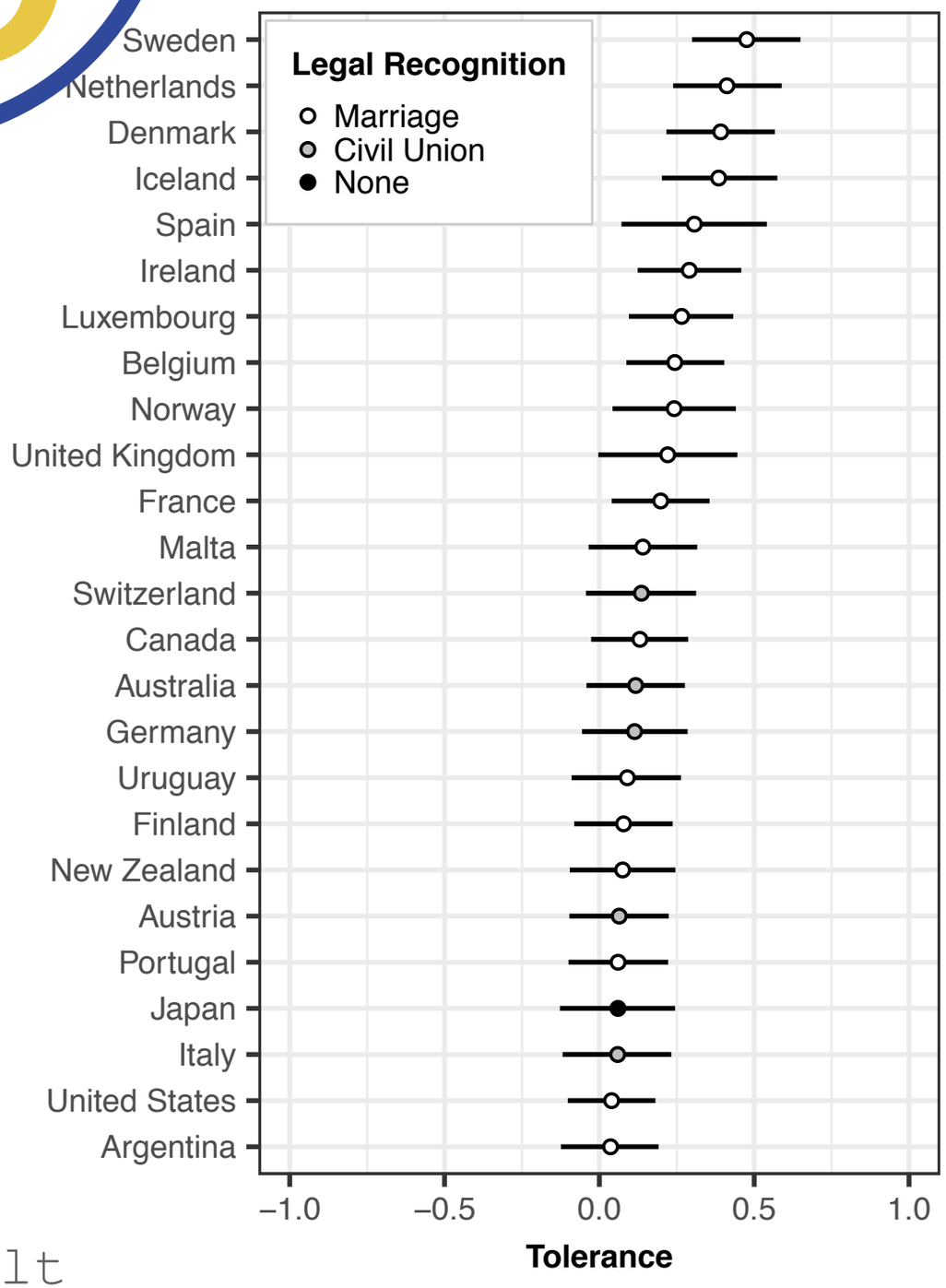
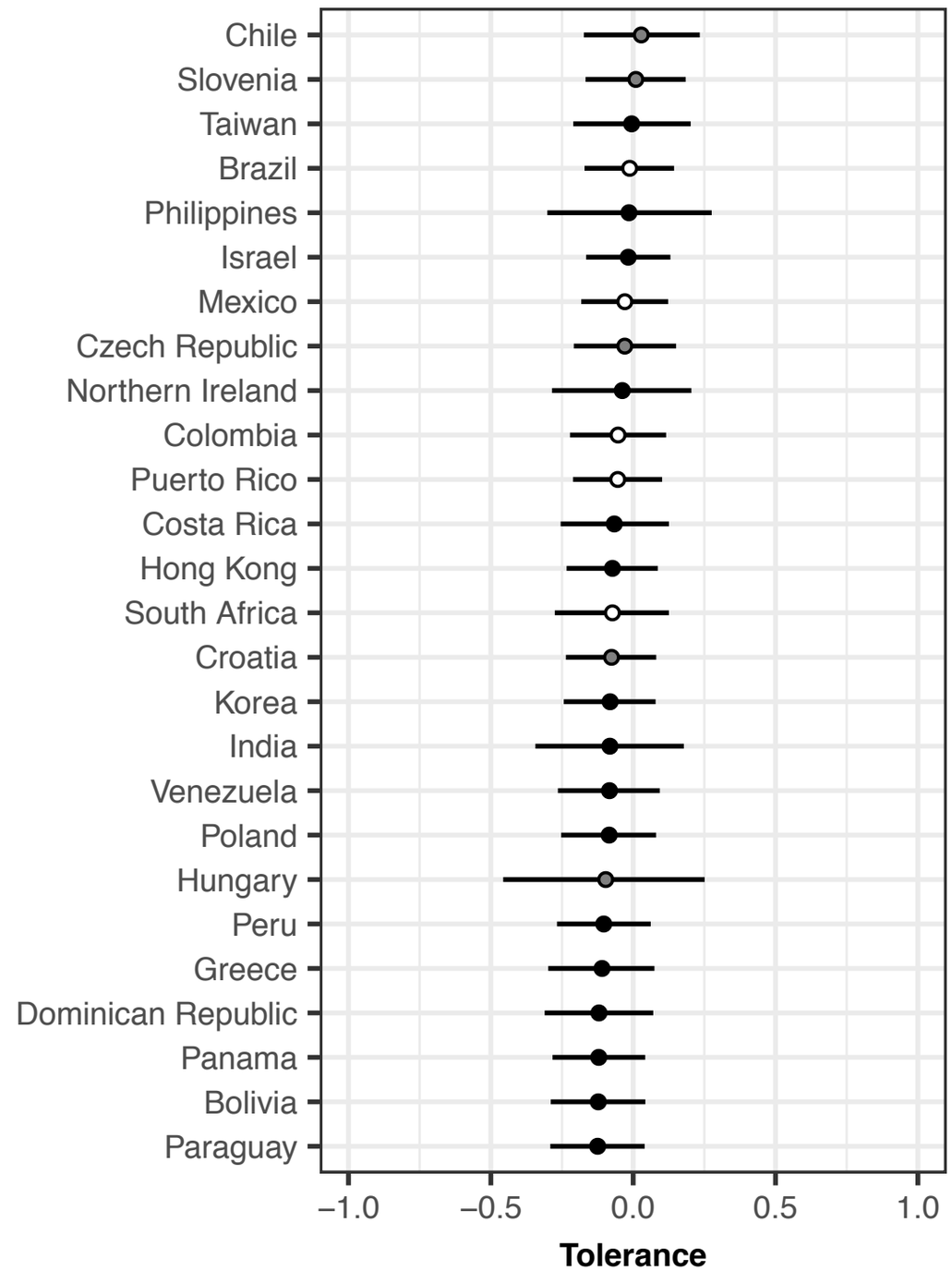
Attitudes Toward Homosexuality





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Let's study POLICY FEEDBACK!

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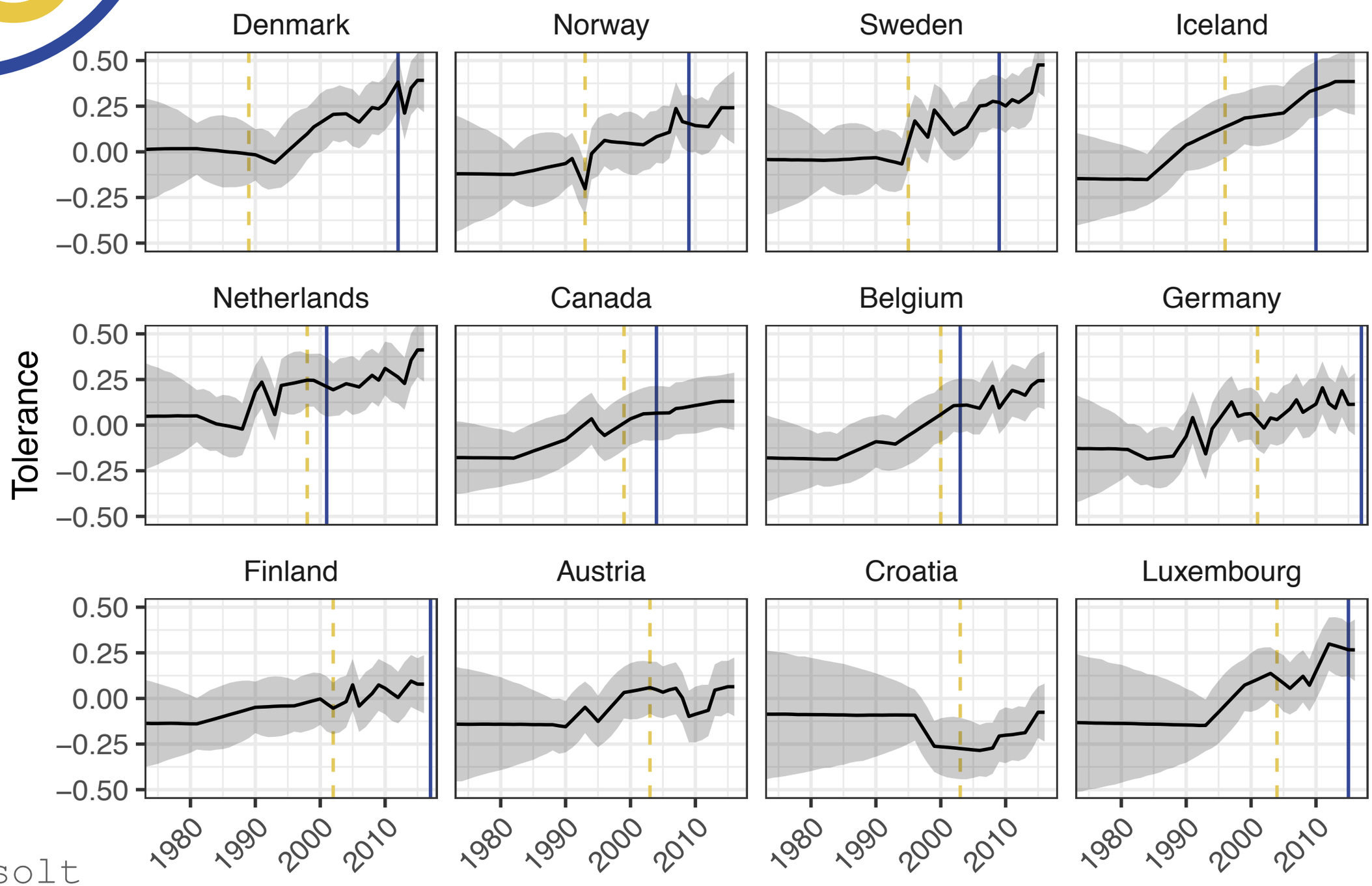
https://www.flickr.com/photos/fibonacciblue/4526037142

Attitudes Toward Homosexuality



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DC
PO

Dynamic Comparative Public Opinion

Frederick Solt
University of Iowa
@fredericksolt
http://fsolt.org

DCPO

Dynamic
Comparative
Public
Opinion

An early beta of the **DCPO** package is available **now**:

https://github.com/fsolt/DCPO

Frederick Solt
University of Iowa
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http://fsolt.org

DCPO

Dynamic
Comparative
Public
Opinion

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University of Iowa
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Thanks for listening!