

# What Scientists Around the World Really think about Religion and Why It Matters

## Elaine Howard Ecklund

Herbert S. Autrey Chair, Social Sciences & Professor of Sociology  
Director, Religion and Public Life Program  
Rice University

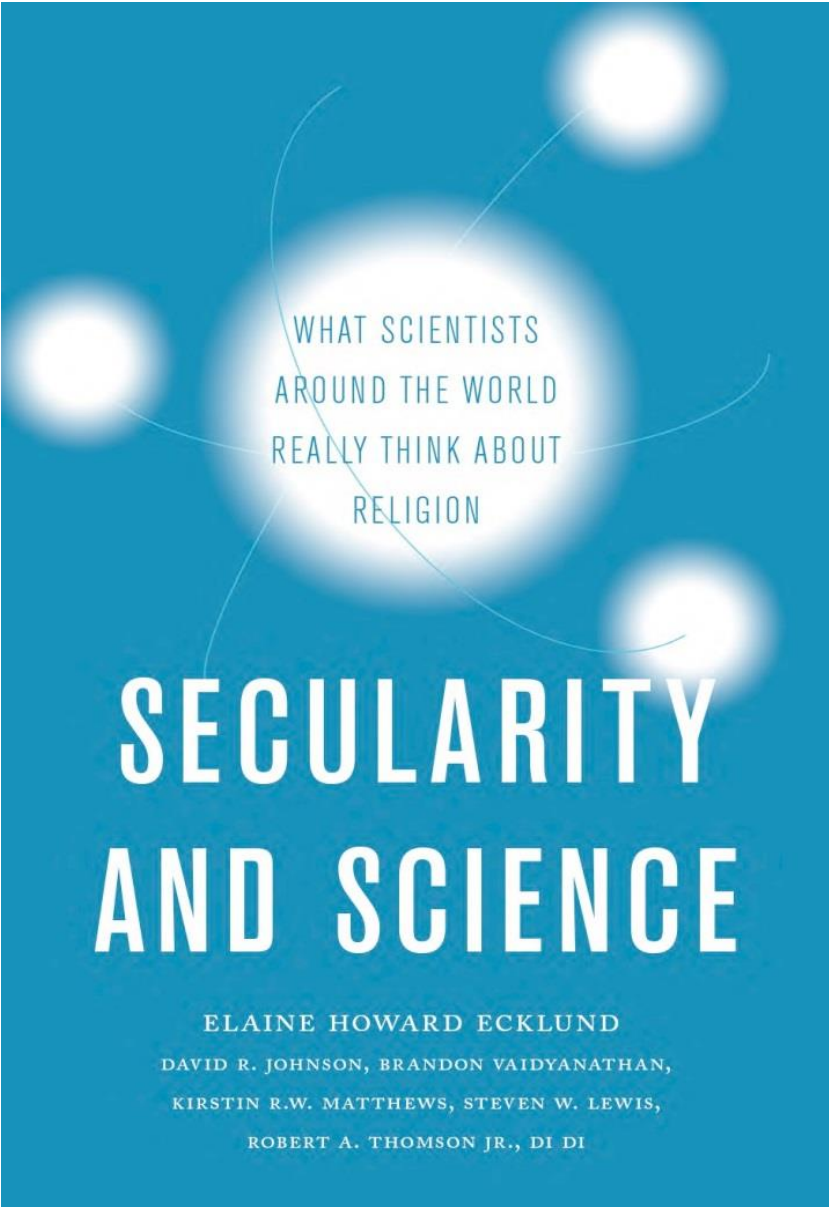
## David R. Johnson

Assistant Professor of Higher Education Leadership  
University of Nevada, Reno

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WHAT SCIENTISTS  
AROUND THE WORLD  
REALLY THINK ABOUT  
RELIGION

# SECULARITY AND SCIENCE

ELAINE HOWARD ECKLUND

DAVID R. JOHNSON, BRANDON VAIDYANATHAN,

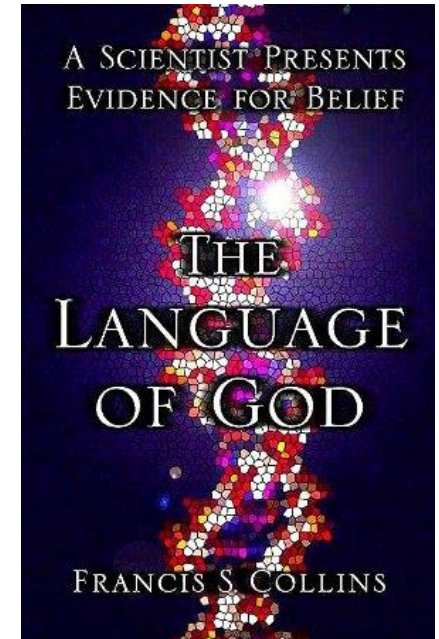
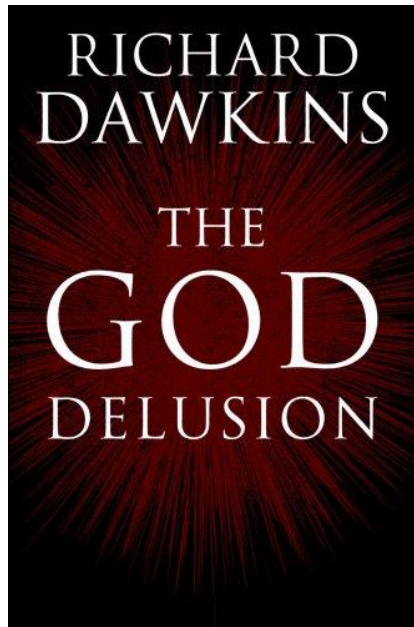
KIRSTIN R.W. MATTHEWS, STEVEN W. LEWIS,

ROBERT A. THOMSON JR., DI DI

**5.8 billion** individuals, or nearly 85 percent of the global population, are religious.

The Organization for Economic Cooperation and Development (OECD) estimates that in 2015 the global science and engineering workforce in OECD countries was **4.8 million**.

The science and faith interface lives large in the public imagination around the world.



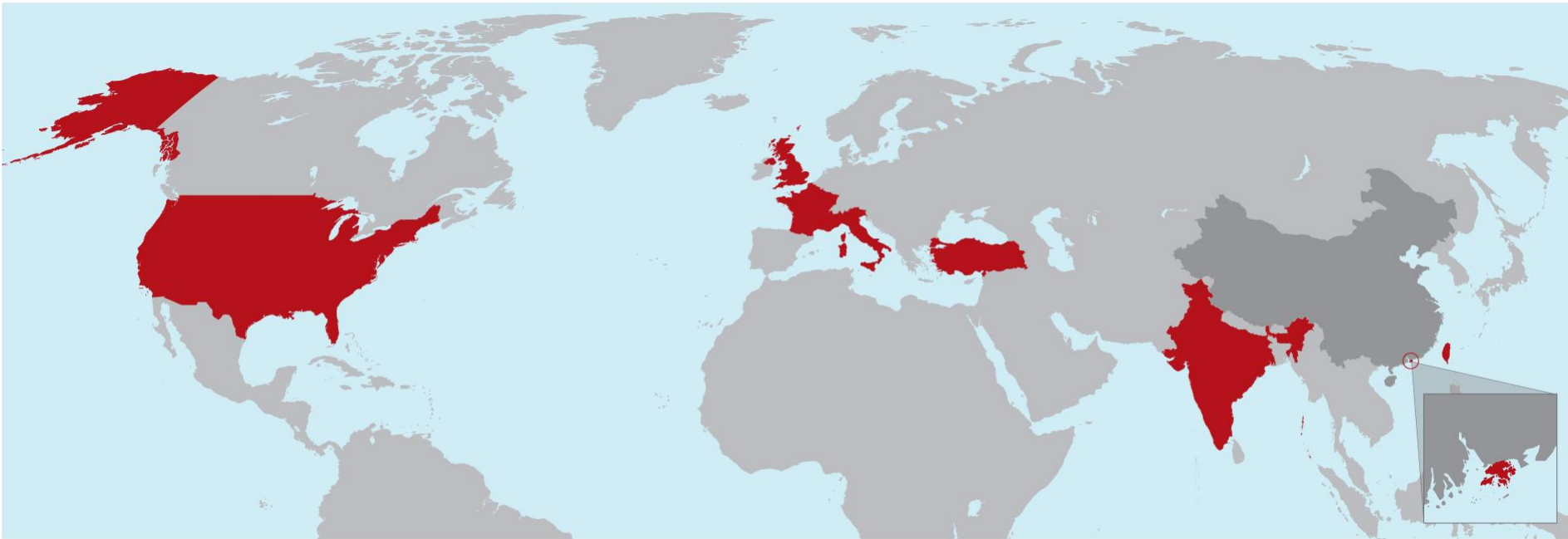
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# Science & Religion



1. Around the world there are religious scientists.
2. Atheist scientists are more varied than we might think.
3. Most scientists do not see religion and science as conflicting.
4. Religion comes up in the scientific workplace.
5. In the US, religion may be part of increasing racial and gender diversity in science.



REGIONS ▶ UNITED STATES ▶ UNITED KINGDOM ▶ FRANCE ▶ ITALY ▶ TURKEY ▶ INDIA ▶ HONG KONG ▶ TAIWAN

# METHODS





## **8** International Contexts

France, Hong Kong, India, Italy, Taiwan, Turkey, United Kingdom, and United States

**2** disciplines: biology and physics

**61,020** biologists and physicists in sampling frame

**22,525** scientists surveyed

**9,422** survey respondents

**609** interviews

# AT A GLANCE

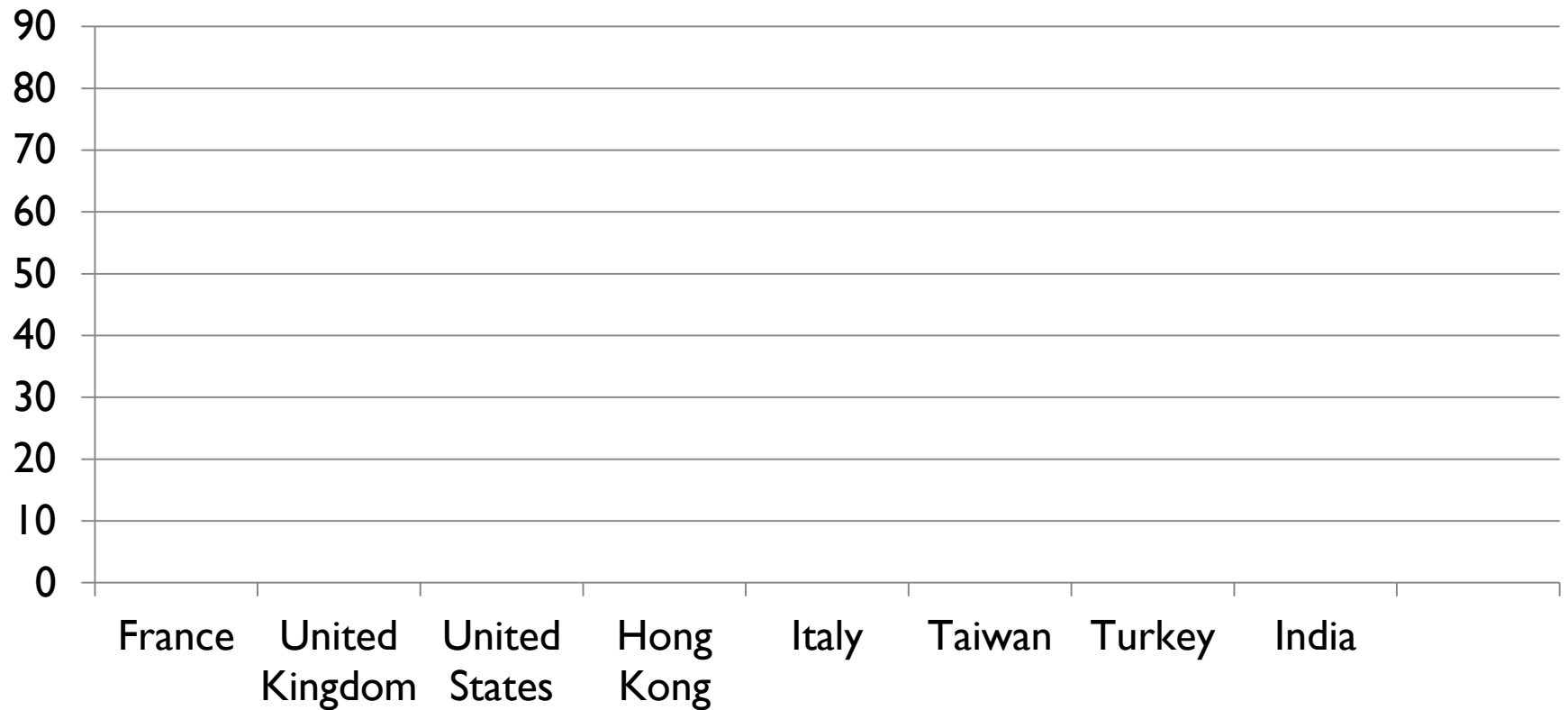


# **I. AROUND THE WORLD THERE ARE MORE RELIGIOUS SCIENTISTS THAN WE MIGHT THINK**





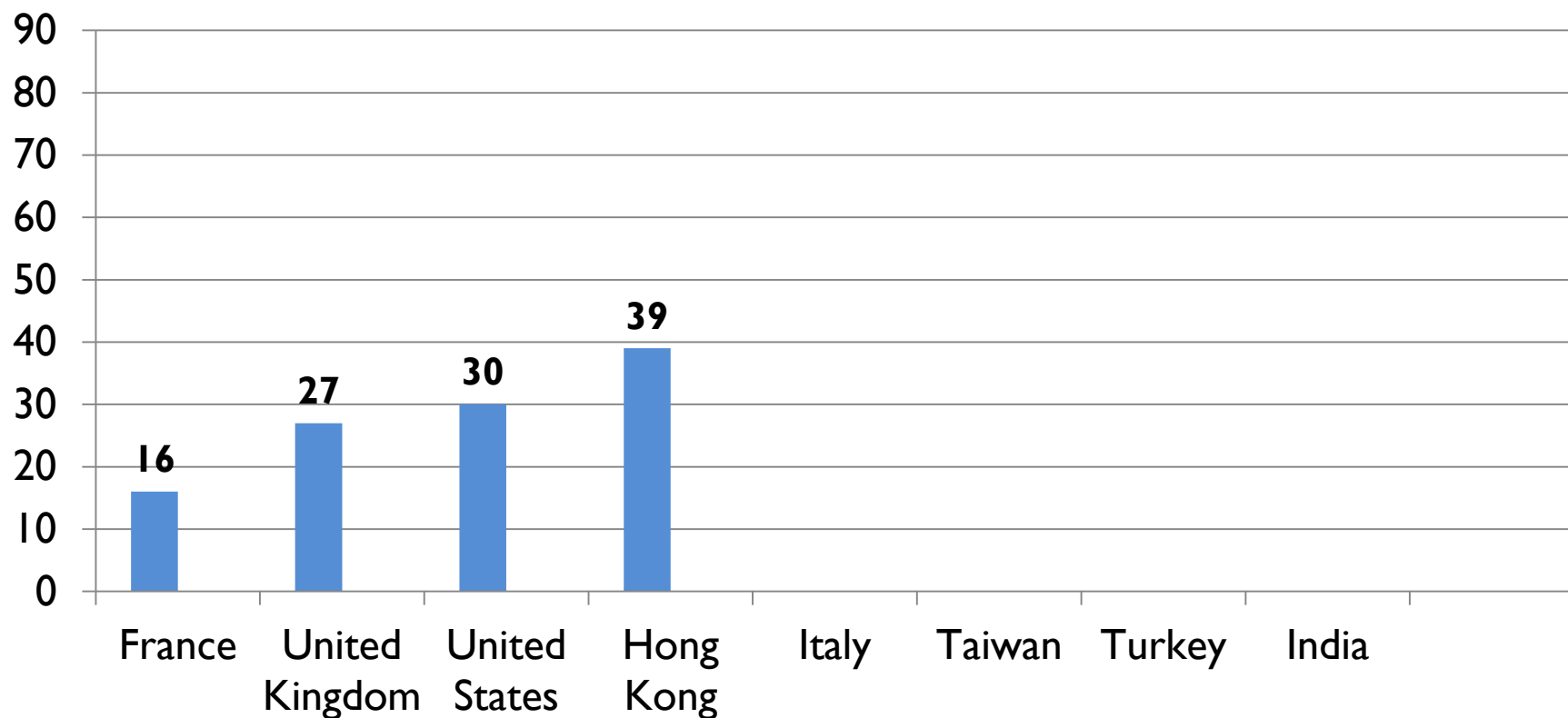
# Proportion of Religious Scientists (%)



Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)



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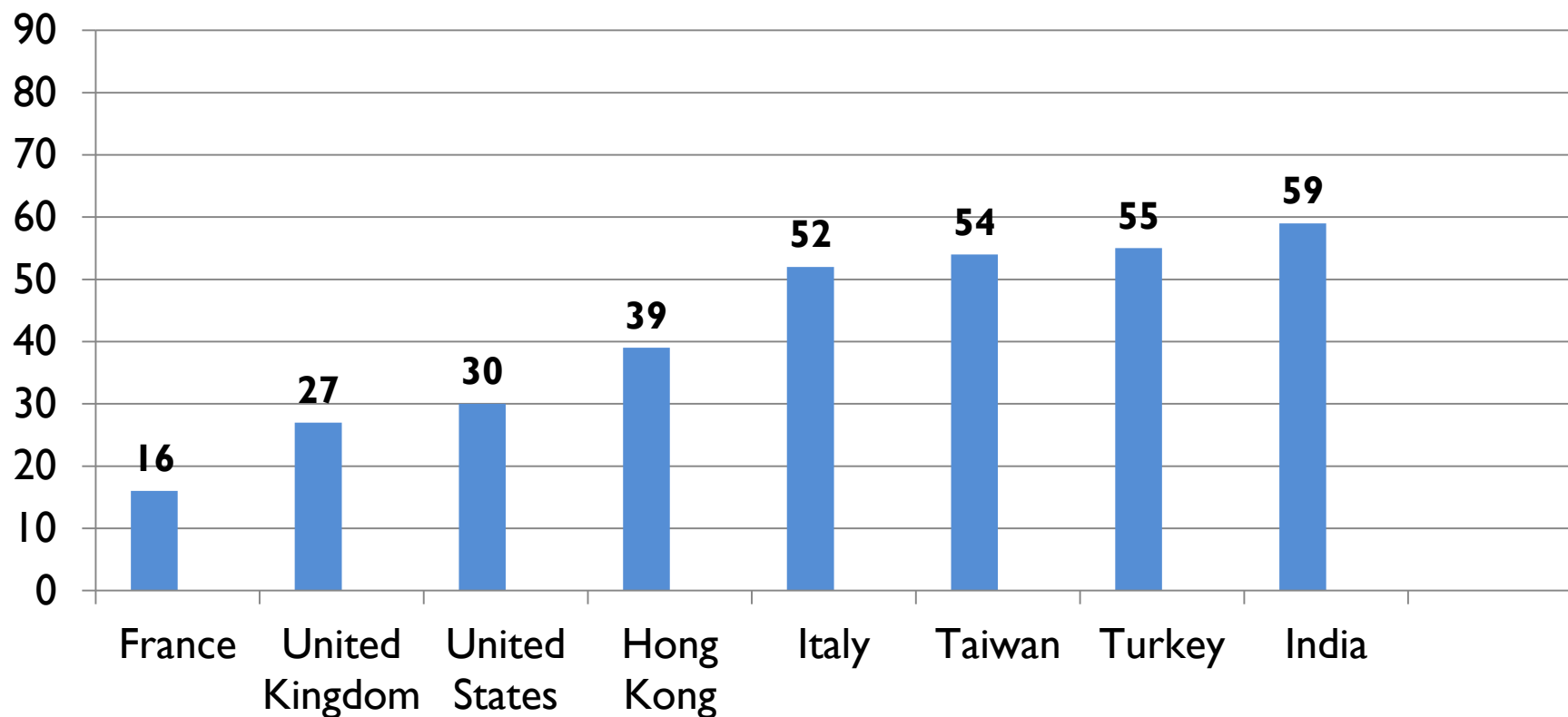


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■ Scientists



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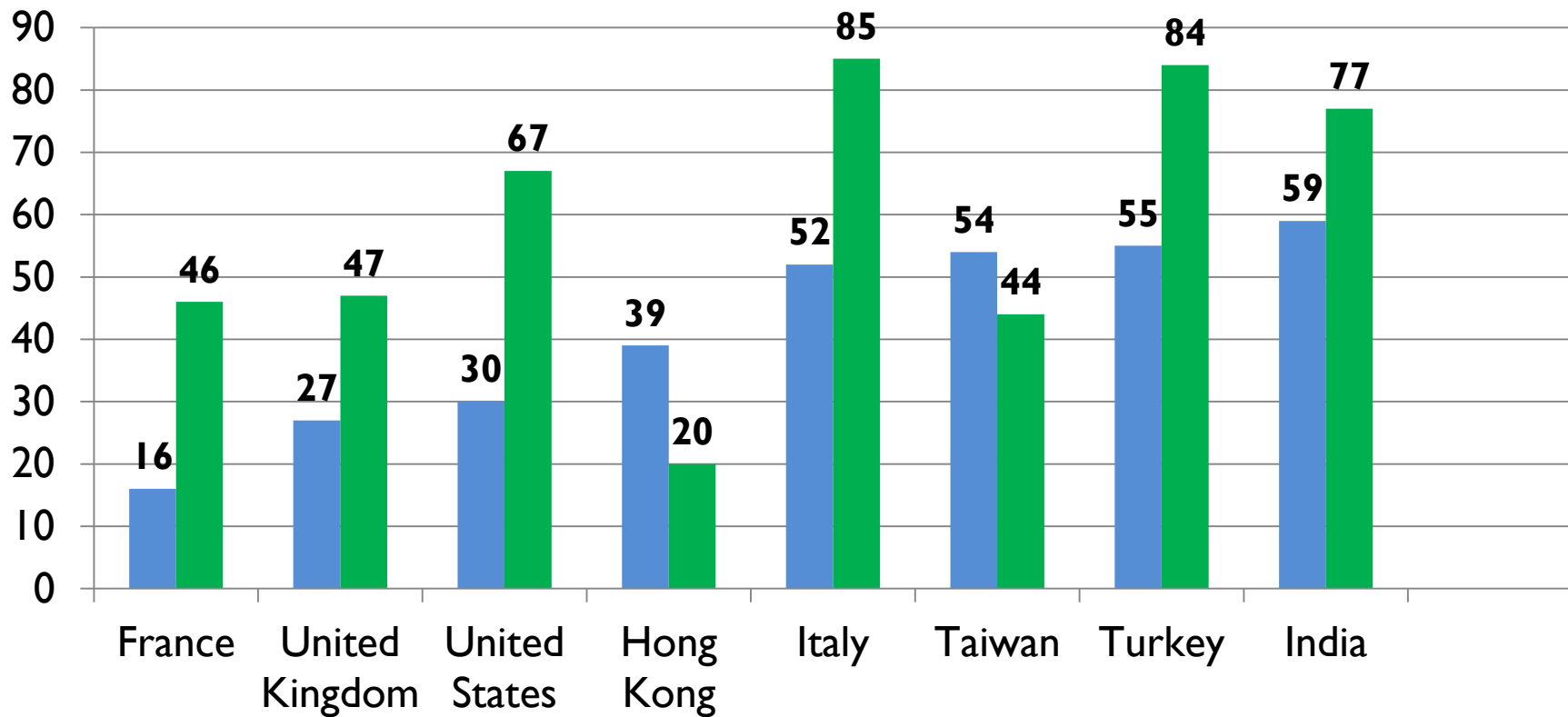


Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)

■ Scientists



# Proportion of Religious Scientists Compared to Public (%)



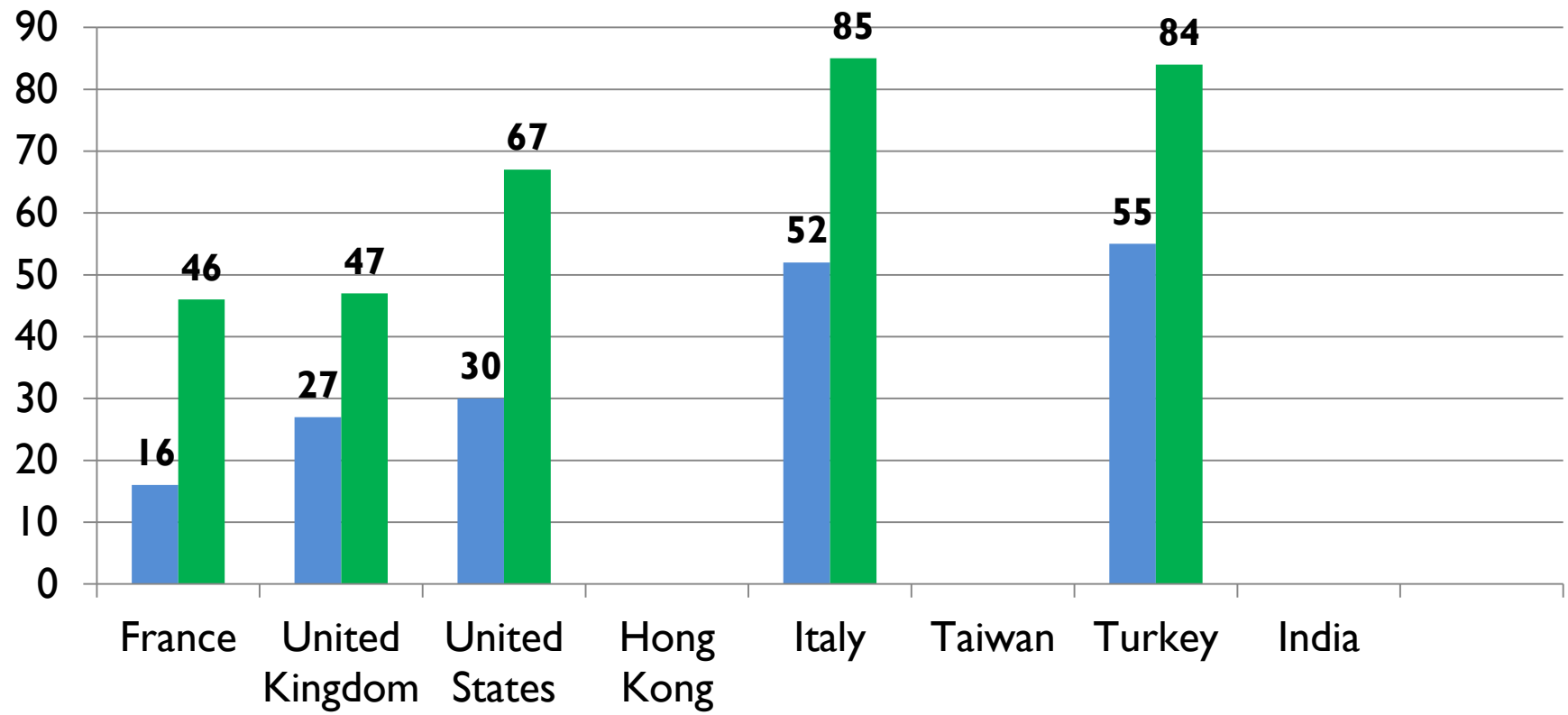
Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)

■ Scientists

■ General Population



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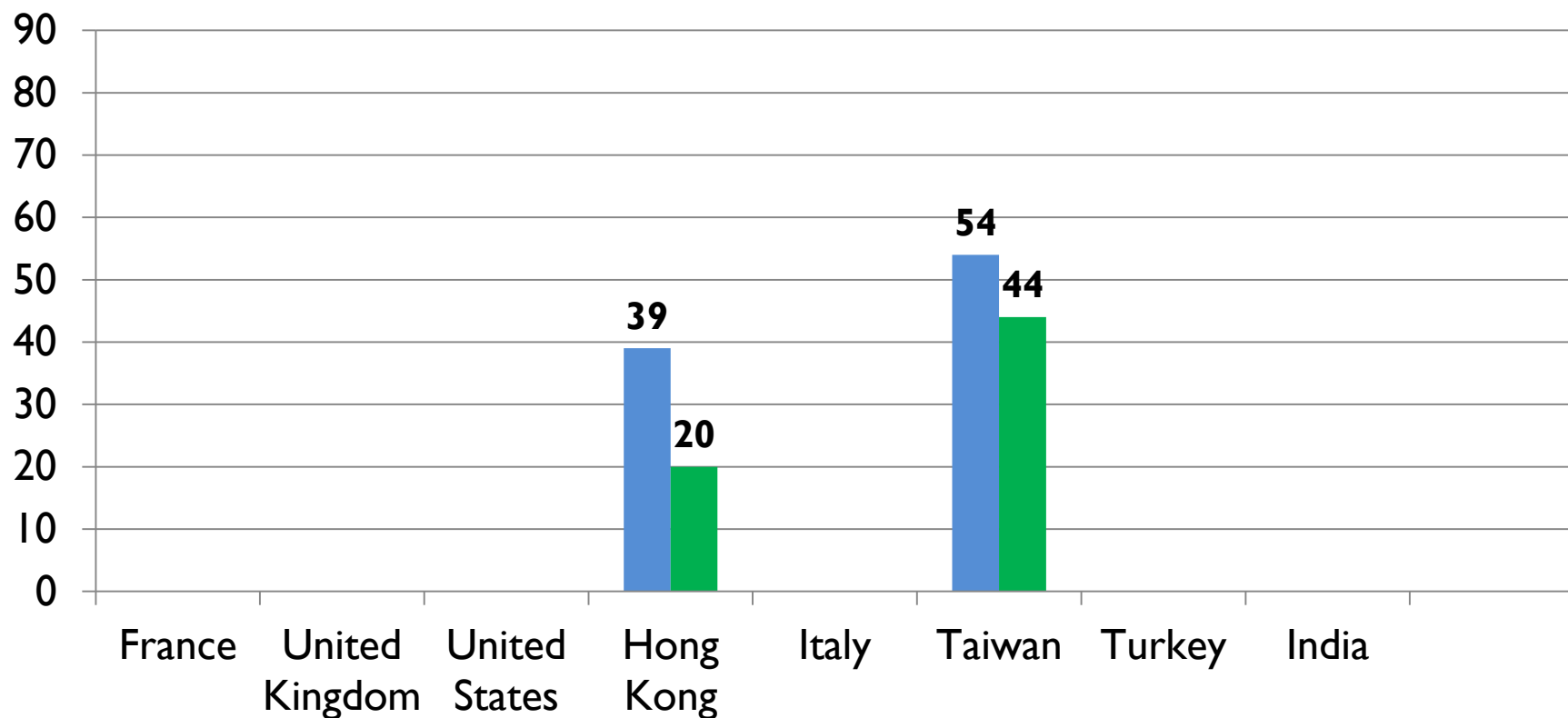
Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)

■ Scientists      ■ General Population





# Proportion of Religious Scientists Compared to Public in HK and TW (%)



Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)

■ Scientists    ■ General Population

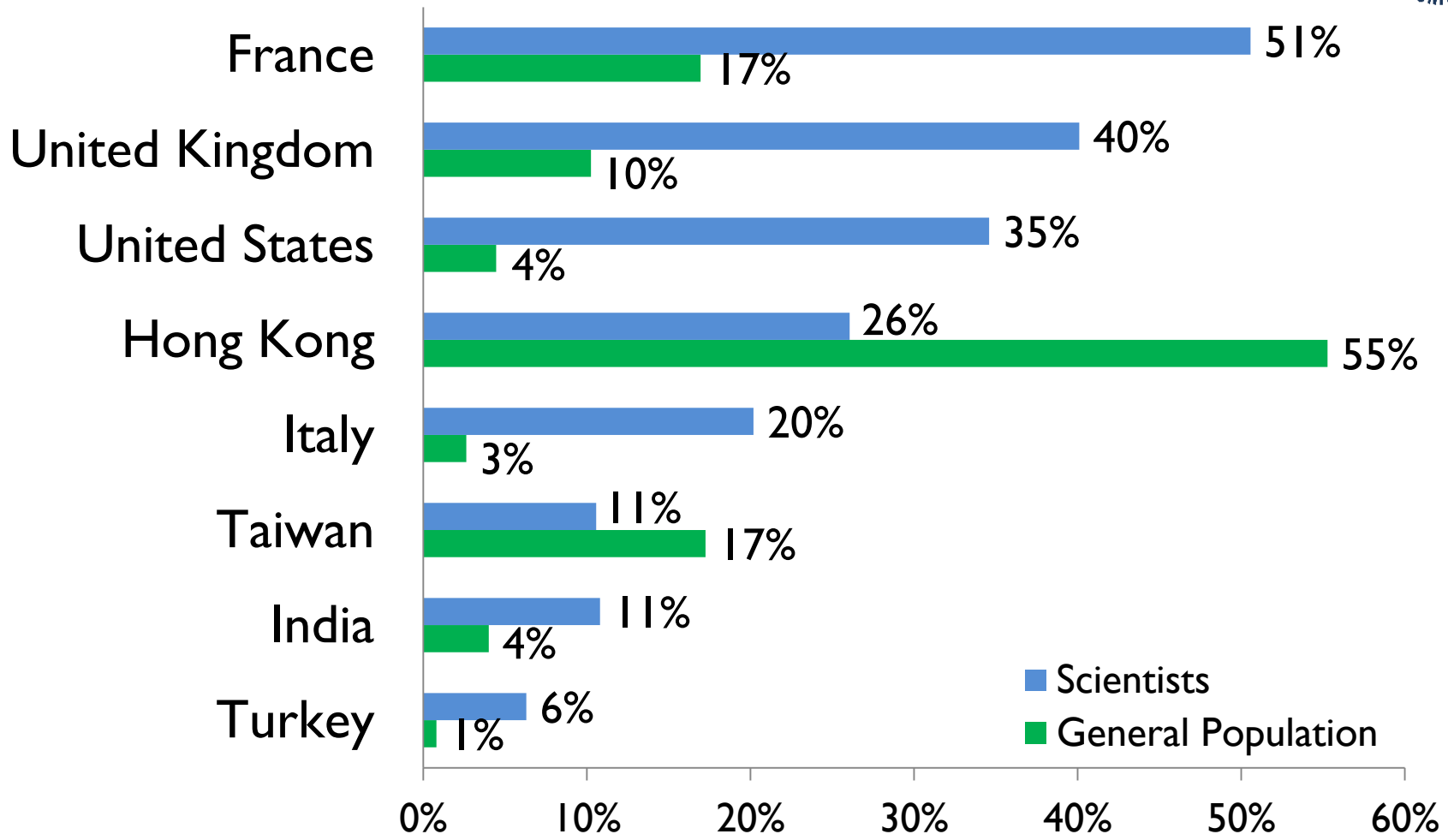


## **2. ATHEIST SCIENTISTS ARE MORE VARIED THAN WE MIGHT THINK**





# Belief “There is no God”



Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)





# Modernist Atheists



*So, if [religion is] moderate and if it's intelligent and conscious, then I think it's very beneficial. If it's irrational and hysterical and dogmatic then I think it can be very dangerous and can block science.*

UK, BIOLOGY



# Spiritual Atheists



*The spirituality part of it ... is why you do the work...I mean, I'm interested in understanding how the universe began, possibly what its long-term future is going to be. I think those are certainly spiritual questions.*

US, PHYSICS



# Culturally Religious Atheists



*I have no problem going to church services...It's like looking at another part of your culture, but I have no faith religiously. It doesn't worry me that religion is still out there.*

UK, PHYSICS



# 3. MOST SCIENTISTS DO NOT SEE SCIENCE AND RELIGION AS CONFLICTING

# Conflict Between Religion and Science

Frequency of responses to survey question: "For me personally, my understanding of science and religion can be described as a relationship of..." (by percent)

	France	Hong Kong	India	Italy	Taiwan	Turkey	U.K.	U.S.
Conflict; I consider myself to be on the side of science	31	25	19	23	10	24	32	29
Independence; they refer to different aspects of reality	63	48	44	61	66	34	48	57
Collaboration; each can be used to help support the other	6	25	27	16	23	32	12	13

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# Independence

*No, there is no conflict. [Science and religion] are completely distinct, because there is no connection between the physical reality described by science and the existence or not existence of God. Again, there is no intersection in the sense that science can explain...in other words, you will never be able to prove or disprove God. God is outside the reach and the limits of science.*

ITALY, PHYSICS

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# Collaboration



*For me personally, I don't experience a conflict. My religious side guides my hope for my professional work, and my professional work guides my openness to my religion.*

US, BIOLOGY



# 4. RELIGION COMES UP IN THE SCIENTIFIC WORKPLACE



# Religion in the Workplace: General Overview



Through immigration

Through interaction with the public

Through ethics



- Vaidyanathan, Brandon, Simranjit Khalsa, and Elaine Howard Ecklund, “Gossip as Social Control: Policing Informal Ethical Violations in Scientific Workplaces in the US, UK, and India,” *Social Problems* 63(4):554-572.
- Johnson, David and Elaine Howard Ecklund, “Ethical Ambiguity in Science,” *Science and Engineering Ethics*, 22:989-1005.

# Immigrants Enter Science

*I had an interview with a Muslim girl who wants to apply to come here, so I did an interview with her through Skype, but then I could see that she was Muslim because she had the veil... We had a lab meeting and then I said, ok, I interviewed this woman and stuff. She seems okay... and then I brought the issue that she was a Muslim with a veil... [Some colleagues] didn't want that in the lab. They think it will interfere with the work.*

FRANCE, PHYSICS







# Interface with Public



*I work with food and sometimes the research work would involve tasting or analyzing samples that may not be compatible with everyone's religious background so if...I knew that a number of my participants would prefer halal meat because that is what their religion sort of suggests, we would try to source halal and be clean about it or we would offer the choice not to participate if they feel that the samples are not compatible with their religious views.*

UK, BIOLOGY



# Ethics



*[Religion provides a] check on those occasions where you might be tempted to shortcut because you want to get something published and you think “Oh, that experiment wasn’t really good enough, but if I portray it in this way, that will do.”*

- UK, BIOLOGY



# 5. IN US, RELIGION IS A PART OF RACIAL AND GENDER DIVERSITY IN SCIENCE



# Race and Gender US Scientists (%)

<b>Gender</b>	<b>Overall</b>	<b>Biology</b>	<b>Physics</b>
Women	32	39	17
Men	68	61	82
Transgender	<1	0	<1
<b>Race/Ethnicity</b>			
White, non-Hispanic	64	65	60
Black	1	2	<1
Hispanic <sup>‡</sup>	4	5	2
Asian*	27	24	33
Other	4	4	3

<sup>‡</sup> 43% of Hispanic Scientists in the US are not native to the US (44% of Biologists; 38% of Physicists)

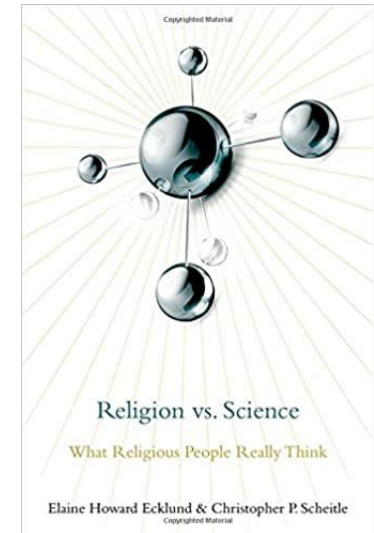
\* 92% of Asian Scientists in the US are not native to the US (90% of Biologists; 96% of Physicists)



# Proportion of US Religious Scientists Compared to US Public (%)



Religious Affiliation	US Population	US Scientists
Catholic	22	10
Protestant	25	11
None	34	61
Orthodox	<1	1
Judaism	2	3
Islam	<1	2
Hinduism	<1	5
Buddhism	2	2
Other	16	5



Data Source: World Values Survey (2010-2014), RASIC Survey (2013-2015)



# GENDER: US Religious Scientists Compared to US Public: (Cell Percentages of Gender by Religious Affiliation)



	US General Population		US Scientists	
	Men	Women	Men	Women
Subtotal	(48%)	(52%)	(68%)	(32%)
Christian	21%	23%	16%	7%
Other Religion	7%	7%	11%	5%
No Religion	20%	22%	41%	20%

**Pew Research Center: Christian women are more religious than Christian men.**

Data Source: World Values Survey (2017), RASIC Survey (2013-2015)



# Gender, Religion, Parenting

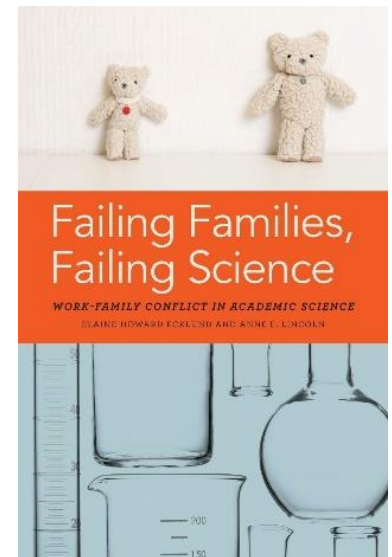


39% of religious women in science have children

55% of religious men in science have children

[Ecklund, Elaine Howard and Anne E. Lincoln.](#)

[2011. "Scientists Want More Children," \*PLoS ONE\*, 6\(8\):e22590.](#)





# Religion, Science, and Gender



- Christian women were particularly underrepresented in science, accounting for only **7%** of scientists participating in our study.
- **88%** of **Christian women scientists** report having been discriminated in the context of their work—including **26%** because of their religion and **69%** because of their gender.





# RACE: US Religious Scientists Compared to US Public: Racial Differences (% with Religious Affiliation, by type)



Overall	US General Population	US Scientists
Christian	71	23
Other Religion	6	17
No Religion	23	60
Black		
Christian	79	64
Other Religion	3	15
No Religion	18	21
Hispanic		
Christian	76	32
Other Religion	3	8
No Religion	20	60

Data Source: World Values Survey (2017), RASIC Survey (2013-2015)



# US Scientists

## Religious Affiliation by Race/Ethnicity

Religious Affil.	Overall	White, Non-Hispanic	Black	Hispanic	Asian	Other
No religion	60%	60%	21%	60%	64%	69%
Catholic	10%	13%	19%	23%	2%	14%
Protestant	11%	13%	45%	9%	6%	3%
Orthodox	1%	2%	-	-	-	<1%
Jewish	3%	5%	-	<1%	-	1%
Muslim	2%	1%	-	-	4%	<1%
Hindu	5%	-	-	-	16%	-
Buddhist	2%	<1%	-	-	5%	6%
Other	5%	5%	15%	7%	2%	5%



# Religious *and* Racial Othering



*A lot of what attracts people is seeing people that look like them. And so we don't see a lot of scientists that look like us or believe like us.*

*RISE\_AfAm I2, Female, Pastor*

*[Hispanics] look at [science] as more of an Anglo field, so that...their biggest fear [is] to step into that realm, because they might be discriminated against, they might be looked down on.*

*RISE\_LUP04, Male, Benefits Coordinator*



# Religious *and* Racial Othering



*I think trust is major for a lot of African American churches. [...] when you talk about going into a context like science we ask, ‘what are you doing with our kids? What is the outcome of this? What’s really going to happen?’ Because we have been used to produce certain kinds of [science experiments] that were not in our favor, taken advantage of ... Come to me with a nice package and a presentation, but there is an ulterior motive.*

Pastor, Black Church

*Science still for a lot of African Americans is a no-trespassing zone.*

Pastor, Black Church





# Religious Organizations as Science Outreach Sites for URM



- We often in the scientific community broadly frame religion as a **problem** for science.
- *“We would be happy to have a scientist who is a Christian visit our church to talk about majoring in science for our college bound seniors.” - Black Pastor*
- *And Important for Black and Hispanic scientists within the faith tradition “to see someone who looks like me and hear someone who believes like me.”*





## STAY IN TOUCH

rplp@rice.edu



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