



# REFLECTIONS ON RESEARCH

Andrew Francis-Tan

LKYSPP Spotlight

June 17, 2022

## Just for fun

"The Wages of Sin: How the Discovery of Penicillin Reshaped Modern Sexuality"  
[Archives of Sexual Behavior](#) (2013)

"'A Diamond is Forever' and Other Fairy Tales: The Relationship between Wedding Expenses and Marriage Duration" (with Hugo Mialon)  
[Economic Inquiry](#) (2015)

- Traditional explanations for the “sexual revolution” during the 1960s/1970s: birth control pill, changing attitudes
- An alternative explanation: the discovery of penicillin
- In 1943, penicillin was found to be an effective treatment for syphilis
- My hypothesis— a decrease in the “cost” of acquiring syphilis spurred an increase in non-traditional sex

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- Nationally comprehensive vital statistics illustrate the era of modern sexuality originated in the mid to late 1950s
- Measures of non-traditional sexual behavior (e.g., gonorrhea rate) began to rise during this period
- Trends appear to coincide with the collapse of the syphilis epidemic
- Significant media coverage including National Public Radio, The Wall Street Journal, The Huffington Post, and others

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Economic Inquiry (2015)

- Wedding industry has grown substantially due in part to efforts to commodify love and romance
- However, the message linking wedding expenditures with longer-lasting marriages has never been evaluated
- My co-author and I investigate the relationship between wedding expenses and marriage duration
- We conducted an online survey of over 3,000 ever-married persons residing in the U.S.

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- We find little evidence that expensive weddings and the duration of marriages are positively related
- On the contrary, marriage duration is inversely associated with spending on the engagement ring and wedding ceremony in some statistical models
- Lots of media attention including The Wall Street Journal, Today Show, The Huffington Post, The Atlantic, and others
- 9th most downloaded paper all-time of approximately 800,000+ papers on the Social Science Research Network (SSRN)



A flashlight beam is shown originating from the top left corner, illuminating a white rectangular box in the center. The text 'V.I.S.' is written in red inside the box. The background is a dark teal color.

V.I.S.

A flashlight beam is shown originating from the top left corner of the image, shining across the dark blue background towards a white rectangular box. The beam is a soft, yellowish-white glow that tapers as it moves. The white box is positioned in the lower right quadrant of the image and contains three lines of text. The first line is "Vulnerable populations", the second is "Inequality", and the third is "Social identities". Each line has its first letter in red and the rest in black.

Vulnerable populations

Inequality

Social identities



# V.I.S. (who I am academically)

- Most of my research aims to understand...
  - Public policies intended to empower vulnerable populations
  - Patterns of inequality
  - Factors that influence social identities like race, ethnicity, gender, sexuality, and religion
- My research relates directly or indirectly to social policy
- In what follows, I'll review work in various areas

# Sexuality

"The Economics of Sexuality: The Effect of HIV/AIDS on Homosexual Behavior in the United States"

Journal of Health Economics (2008)

"The Optimal Penalty for Sexually Transmitting HIV" (with Hugo Mialon)

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"Tolerance and HIV" (with Hugo Mialon)

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Social Science & Medicine (2012)

- Much research has examined the effect of the HIV/AIDS epidemic on sexual behavior, e.g., condom use and the number of sexual partners
- I am the first to explore another possible response: movements along the heterosexual-homosexual margin
- My hypothesis— changes in the cost of sexual activities may affect the trade-off between heterosexual and homosexual behavior
- To test the theory, I examine the HIV/AIDS epidemic in the U.S.

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Social Science & Medicine (2012)

- HIV dramatically altered the cost of risky sexual activities
- 3,500 times more likely a man would get HIV from sex with another man than sex with a woman
- Evidence suggests that HIV caused some men to shift from homosexual to heterosexual identity, attraction, and behavior
- Featured in New York Times Magazine article that was included in the revised and expanded edition of Freakonomics by Levitt and Dubner

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Social Science & Medicine (2012)

- HIV is still prevalent worldwide, so it's crucial to craft policies to prevent the spread of the disease
- My co-author and I develop a game-theoretic model to evaluate U.S. laws against exposure to HIV
- We find that current laws are not optimal because:
  - They only penalize knowing transmission, which discourages testing
  - They penalize exposure as well as transmission, which fails to promote safer sex practices
- Awarded the American Law and Economics Review Distinguished Article Prize of 2009

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- Besides reforming law, promoting tolerant attitudes toward LGBTQ persons may also minimize the spread of HIV
- Tolerance is % of respondents who say that sexual relations between two adults of the same sex is not wrong at all or wrong only sometimes
- In a state-level panel dataset, tolerance is negatively associated with the HIV rate
- Then, we provide some evidence about the causal mechanisms
- The evidence indicates that tolerance for LGBTQ persons might decrease the HIV rate
  - By causing low-risk men to enter the pool of sexual partners and/or
  - By causing sexually active men to substitute away from underground, anonymous, and risky behaviors

# Gender

"Sex Ratios and the Red Dragon: Using the Chinese Communist Revolution to Explore the Effect of the Sex Ratio on Women and Children in Taiwan"

Journal of Population Economics (2011)

"Partners or rivals? Exploring the relationship between men's and women's empowerment in Bangladesh" (with Sonia Akter)

Journal of Development Studies (2021)

"Can empowering men reduce violence against women?"

Working paper (2022)

"Conflicting signals: Exploring the implications of gender discordant names" (with Aliya Saperstein)

Working paper (2022)

- Considerable scholarly interest in the sex ratio, the number of men divided by the number of women
- Challenging to identify causal effects because changes in the sex ratio are typically not exogenous
- I use the case of Taiwan as a "natural experiment"
- Hundreds of thousands of men fled from Mainland China to Taiwan in the aftermath of the Chinese Communist Revolution

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- I collected and merged population statistics with a survey of women
- In sum, as the sex ratio increases:
  - The bride price relative to the dowry increases
  - The fraction of girls born increases and the total number of children decreases
  - The education of boys and girls increases
- Thus, as competition among men for women intensifies, household bargaining power shifts from men to women and children's welfare rises

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- Research on women's empowerment has been growing over the past two decades
- As efforts to empower women and girls accelerate around the world, a deeper understanding of intra-household gender dynamics is important
- Yet, research on men's empowerment and the relationship between men's and women's empowerment is largely missing
- Prof Sonia and I investigate the association between husbands' empowerment and wives' empowerment using longitudinal data from Bangladesh



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- 5 empowerment measures: input in productive decisions, ownership of assets, daily workload, community influence, power to make life decisions
- We find the interaction between spouses' empowerment varies across measures
- The association is positive with regard to community influence and daily workload adequacy ("partners" hypothesis)
- The association is negative with regard to input in productive decisions and ownership of assets ("rivals" hypothesis)

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Working paper (2022)

- One current working paper is about discrimination against gender nonconforming persons
- In particular, my co-author and I explore the role of one's first (or personal) name
- Most names send consistent gender signals, e.g., when a person's gender matches the gender of more than 99% of people with the same name
- Some names send conflicting signals, e.g., when a person's gender matches the gender of less than 50% of people with the same name

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- Using a large dataset from Brazil, we examine the consequences of having a gender discordant name on education and earnings
- We find that both men and women with gender discordant names attain significantly less education
- Gender discordant names are also negatively associated with earnings
- But only people with the most discordant names have significantly lower earnings after controlling for education

# Race in Brazil

"Using Brazil's Racial Continuum to Examine the Short-Term Effects of Affirmative Action in Higher Education" (with Maria Tannuri-Pianto)

Journal of Human Resources (2012)

"Black Movement: Using discontinuities in admissions to study the effects of college quality and affirmative action" (with Maria Tannuri-Pianto)

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"Inside the black box: affirmative action and the social construction of race in Brazil" (with Maria Tannuri-Pianto)

Ethnic and Racial Studies (2015)

- Race-targeted affirmative action (AA) programs are intensely debated in Brazil and elsewhere
- My co-author and I evaluate AA at the University of Brasilia (UnB), a selective federal university
- In 2004, UnB established racial quotas reserving 20% of admissions slots for students who self-identified as black
- We obtained data from the university and conducted our own survey of students who matriculated between 2003 and 2005

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Ethnic and Racial Studies (2015)

- We estimate the effect of the policy on the racial and socioeconomic profile of students, pre-university academic effort, and racial gaps in college academic performance
- Our results suggest that racial quotas:
  - Raised the proportion of black students
  - Did not reduce the pre-university effort of applicants or students
  - Did not widen racial disparities in college academic performance
- Brazilian media featured our findings, and the university's legal team used our findings in its successful case at the Supreme Court

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Ethnic and Racial Studies (2015)

- Then, explore the longer term effects of AA
- We link the admissions outcomes of UnB applicants in 2004-2005 to their education and labour market outcomes in 2012 using administrative data
- We compare the outcomes of applicants just above and below major-specific admissions cutoffs (regression discontinuity design)
- Male quota applicants enjoyed an increase in years of education, college completion, and labour earnings
- Male non-quota applicants enjoyed an increase in earnings
- However, female applicants did not experience any gains in education or earnings

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Ethnic and Racial Studies (2015)

- A key theme in my research is that public policy can impact social identities
- We investigate this phenomenon in the context of racial quotas in Brazil, where race is fluid, based on phenotype, and exists along a continuum
- In the EDCC paper, we document evidence that racial quotas had inspired a shift in identification from non-black to black and from lighter to darker racial categories
- We also find that conditional on skin tone, higher socioeconomic status is associated with lighter racial classification

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Ethnic and Racial Studies (2015)

- However, an open question remained whether the effect of quotas on identity would continue beyond college
- In the ERS paper, we confirm that these shifts indeed persisted, based on a follow-up survey conducted five years later
- As a whole, the results indicate that the policy induced race-making boundary effects, confirming social constructionist theories
- These are among just a few quantitative studies to estimate the effect of a public policy on racial identity



# Skin tone

"The Redistributive Equity of Affirmative Action: Exploring the Role of Race, Socioeconomic Status, and Gender in College Admissions" (with Maria Tannuri-Pianto)

Economics of Education Review (2012)

"Light and shadows: An analysis of racial differences between siblings in Brazil"

Social Science Research (2016)

"Setting the tone: An investigation of skin color bias in Asia" (with Jacqueline Chen)

Race and Social Problems (2022)

- Previous literature has used sibling differences to estimate the effects of birth weight, health, and poverty on education and other outcomes
- Rarely does a study consider sibling differences with respect to skin tone
- Doing so helps to control for household-specific variables correlated both with skin tone and outcomes
- In the EER paper, we regress differences in entrance exam score between siblings on differences in race/skin tone for UnB applicants

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Race and Social Problems (2022)

- In the SSR paper, this method was extended to the 2010 Brazilian census in which almost 20% of families exhibited within-sibling racial heterogeneity
- Darker siblings aged 20-25 are (slightly) more disadvantaged than their lighter brothers and sisters
- They have lower education, personal income, formal employment, and occupational status
- These patterns are most likely indicative of individual racial discrimination

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Race and Social Problems (2022)

- Social stratification by skin colour is evident across the globe, but patterns in Asia are much less studied
- My co-author and I examine colourism in an Asian context
- First, we use data on global participants in an Implicit Associations Test (IAT)
- An IAT measures the extent to which people associate dark skin colour with negative concepts and light skin colour with positive concepts
- East Asia emerged as the world region with the highest level of skin colour bias

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- Then, we conducted experiments in Singapore
- Participants were asked to evaluate the profiles of job applicants for a fictitious entry-level job
- Applicant profiles consisted of a photo and a set of qualifications; three versions of each photo were created: dark, medium, and light
- We document a modestly sized bias against dark- and medium-skinned applicants, driven by female participants
- Biases strongest when distinguishing between applicants of similar qualifications
- Participants with lower socioeconomic status exhibited more bias

# Ethnicity in China

"Racial Revolution: Understanding the Resurgence of Ethnic Minority Identity in Modern China" (with Zheng Mu)

Population Research and Policy Review  
(2019)

"Examining ethnicity: Patterns of minority identification among children of interethnic marriages in China" (with Zheng Mu)

Demography (2022)

"Gender and ethnic identification in China" (with Zheng Mu)

Working paper (2022)

- Quantitative research on the determinants of ethnoracial identity in Asia is rare
- My work with Zheng Mu (NUS Sociology) aims to fill in the gap
- Our paper published in PRPR makes use of Chinese census data from the years 1982, 1990, and 2000
- The proportion of ethnic minorities surged by 30% between 1982 and 2000
- Yet, demographic forces alone cannot account for this rise

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- We explore the role of the One-Child Policy (OCP), which raised the incentives to identify as a minority
- We find that the OCP inspired millions of individuals to shift from identifying as majority Han Chinese to identifying as ethnic minorities
- Fines for unauthorized births are positively associated with minority identity only in provinces where ethnic minorities are allowed to have an additional child
- The estimates become larger for persons in households with low socioeconomic status

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- Our recent paper in Demography seeks to deepen our understanding of ethnicity in China
- We focus on children of interethnic parents, an extraordinary population that has a choice regarding their officially recognized ethnic group
- We use census data from 2000 and survey data from 2010–2018 (the China Family Panel Studies or CFPS)
- A number of predictors are included in regression models including eligibility for bonus points on the national college entrance examination, or gaokao

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- We find that the strongest predictor of a child's minority identification is the father's ethnicity
- Minority identification is also associated with gender, mother's education, household income, the geographic concentration of minorities, and eligibility for bonus points on the gaokao
- Taken together, children's ethnoracial identity is shaped by family demographic characteristics as well as by education policy



# Religion in China

"Fluidity of faith: Predictors of religion in a longitudinal sample of Chinese adults" (with Felicia Tian)

Journal for the Scientific Study of Religion (2022)

"Economy of shadows: Religious regulation and religiosity in China"  
Working paper (2022)

- Not only is ethnic identity fluid in China but also religious identity
- Broadly defined, religious fluidity is variability in religious belonging, behavior, and belief at the individual level
- Such variability is not random but patterned by social and cultural context
- My co-author and I examine the predictors of religiosity in a longitudinal sample of Chinese adults (the CFPS)
- This is one of only a few papers to identify within-person correlates of religious outcomes using a fixed effects regression model

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- Dependent variables include religious identification, religious behavior, and religious importance
- We find that religious outcomes are correlated with sociodemographic, political, and health variables
- All religious outcomes are positively associated with household income and the unfair treatment index, a measure of negative personal experiences with the government
- Measures of health problems are positively associated with religious importance, though not with identification or behavior

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**V**ulnerable populations

**I**nequality

**S**ocial identities

# Thanks!

Questions?

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