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## Education

Master of Public Affairs | University of Texas at Austin (LBJ School) | 2010-2013

- ◆ LBJ Scholar Award | 4.0 GPA

B.A. (Honours), Social and Political Sciences | University of Cambridge | 2004-2007

- ◆ Selwyn College president | Imber Lloyd / Tallow Chandlers Award: service to college/university life

College Preparatory Diploma with Distinction | Lakeside High School, Evans, Georgia | 2000-2004

- ◆ National Merit Scholar | Max Scores: SAT, SAT II Math/Writing | 5 AP 5/5s | Salutatorian / 98.2 avg

## Employment Subset: *Research/Academic Nexus*

GRA: Institutional Capacity for Complex Emergencies in Africa | Strauss Center for International Security and Law | 2011-2012

- ◆ Staffed year-long academic and fieldwork effort for multi-year, multimillion-dollar DoD grant
- ◆ Identified critical knowledge gaps amid data limitations, political sensitivities, and security concerns
- ◆ Synthesized ten country field teams' analysis of impetus for investment in preparedness [[Report link](#)]
- ◆ Co-authored and presented conference paper: "Shocks and Politics: The Political Economy of Natural Disasters in Africa" (with Jennifer Bussell), | *54<sup>th</sup> Annual Convention of the International Studies Association* / San Francisco, 2013. [[Paper link](#)] [[Slides link](#)]

Deputy Campaign Manager | Bell-Metereau and Jennings for Texas State Board of Education | 2010

- ◆ Campaign centered on scientific/social-scientific literacy and politicization of public school curricula

Coordinator | Cambridge University Students' Union | 2007-2009

- ◆ Elected twice by 20,000 stakeholders to navigate charity in complex regulatory / funding landscape
- ◆ Personally managed \$1m+ budget, 12+ FTEs, diverse volunteers, and large revenue-return programs
- ◆ Directed events with up to 10,000+ student attendees and hundreds of participant organizations

Intern / Senior Intern, Geopolitical Intelligence Analysis | Strategic Forecasting | 2005 and 2006

- ◆ Generated rapid-reaction analysis and reporting of major security, economic, and natural events
- ◆ Used own initiative to integrate software resources into new workflow tool for sweeping global media

## Work Examples Subset: *Demography, Hazards, Political Geography, Information Policy*

**US political donation records project** | Scripted postgresql/R-based method to enable analysis and matching of ~40m federal electoral donation records with poor entry standardization. Fuzzy textual matches, complex regression and neural net training used to probabilistically cluster transactions into individual donor and recipient profiles. Leveraged population-scale datasets (SSDI and name indices) to control for national and regional name rarity. Cross-matched with comprehensive state professional licensing dataset to enable further validation and extend proof of concept (2018). [[Info on request](#)].

**Cascading hazards simulation** | Designed unique simulation engine of social vulnerability to hurricane-induced industrial hazards in Nueces County (Corpus Christi), TX. Using ArcGIS/Access, created statistically-informed single-person units of analysis to enable sharper focus on outlier experiences as drivers of loss. Part of Disaster Resilient Cities graduate project at UT-Austin Community and Regional Planning (2013). [[Relevant excerpts from report draft](#) | [Full draft report](#)]

**Flood risk profiling** | "The Demographics of Flood Risk in Harris County, Texas: A Spatial Analysis Approach." Original graduate GIS research project, UT-Austin (2012). [[Paper link](#)]

**Critical analytic methods application** | “Relating Social Unrest to Prior Disasters in African States, 1997-2009: Random- and Fixed-effects Approaches.” Original research in new applications of empirical methods. Graduate paper in Analytic Methods (2011). [[Paper link](#)]

**Dynamic social hazard modeling with live data** | An experimental platform built on fully open-source tools and data for integrating statistical hazard vulnerability and real-time event information in Central Texas. Includes auto-profiling the households that are downstream of a low-water crossing closure or recent flooding-related 911 call. (2012-14) [[Limited screenshots link](#)]

**State agency capacity-building analysis** | “The Texas Commission on State Emergency Communications: Obstacles and Options for the Next-Generation 9-1-1 Transition.” Graduate paper in Public Management, LBJ School at UT-Austin (2010). [[Paper link](#)].

**Flood insurance social impact** | Generated detailed conceptual foundations, supporting demographic and economic research, and roadmap of analytic priorities necessary for proposed research to evaluate social disparities related to the functioning of the US NFIP. [On request]

**Post-disaster fieldwork** | “Acts of God: Katrina and the Religious Communities of the U.S. Gulf Coast.” Original human-subjects fieldwork design and pilot. Cambridge Univ. Faculty of Social and Political Sciences (Undergraduate, 2006). [On request].

**Rethinking blackout mitigation** | Short paper on lessons from 2003 NYC event (2013) [On request]

#### **Other experimental data visualizations |**

- ◆ “US Congress: 2016 vulnerability and control by place, party, committee, and constituents”. Application of a custom cartogram algorithm in a fully open-source OS/GIS stack, with self-updating parameters and graphics. Includes wallchart-style images of committee memberships’ constituency demographics. [[Link to overview post](#) containing menu of all images].
- ◆ 2016 US House Election results – equal-area geography vs. population and representation cartograms. [Overview animation: [stream-friendly low-res overview version](#) | [high-res version](#)]
- ◆ “Freedom Wheel”. An interactive visualization of global population stratified by age bracket, with a focus on countries’ Freedom House scores. [ [Link to 1-minute demo video](#) ] of web-based interactive tool.
- ◆ *Meh-garegions/Confetti-rate States* . Informal contribution to the debate over US urban connectedness, with 3D models and commentary on spatial unit-of-analysis problems. [[Gallery Link](#)]
- ◆ “Last five US presidential election results scaled to voting-eligible population.” [[Image Link](#)]

#### **Information policy and public management presentations |**

- ◆ “Public Management Information Systems and the Insider/Outsider Boundary” [presentation and panel]. | *Conference of the American Society for Public Administration, District 4* | Austin, 2011
- ◆ “Information Transparency and the Needle in the Haystack: The Example of Texas School Finance Data” [presentation and panel]. | *Texas Government 2.0 Conference* | Austin, 2011
- ◆ “Leading Across Generations” [original presentation and course session mentoring nationally-selected undergraduates]. | *Hatton W. Sumners Student Leadership Conference* | Austin, 2012

#### **Further Skills and Interests**

- ◆ FOSS: Linux | pgSQL/PostGIS | QGIS | Python
- ◆ Federal and state public information/data policy
- ◆ (intermed.) | R/R-postgre (learning)
- ◆ CERT participation and program development
- ◆ ArcGIS/HAZUS | Stata | SAS | Excel | Adobe
- ◆ FEMA Independent Study Certifications
- ◆ International security policy
- ◆ Policing/judicial data research