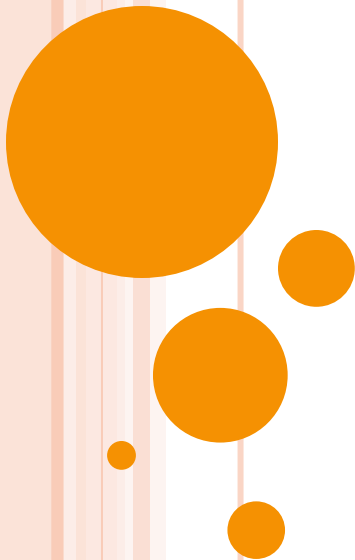


Persistence of Armed Conflict: 1816 to 2008

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Roadmap

1. Motivation
2. Theory
3. Data
4. Results (is there persistence?)
5. Preliminary Tests
6. Conclusion



MOTIVATION 1: CIVIL WAR AS A PREEMINENT PUBLIC HEALTH PROBLEM

- Nearly 20 million killed as a result of civil war violence since 1945;
- Though a decline in civil war violence in the 1990s, civil wars rage today in Syria, Iraq, Libya, Afghanistan, Pakistan, South Sudan, Democratic Republic of Congo, and Nigeria, with devastating consequences in human suffering.



MOTIVATION 2: CIVIL WAR AS A CONSTRAINT ON GROWTH

Region	Average Annual Growth hit * (%)	<i>p</i> value	Average years of war (if some war)	Average total decline in GDP (%)
Asia	0.45	0.24	27.4	-13
E. Europe	-7.64	0.04	6.0	38
LA/CA	-3.67	0.00	12.4	37
NA/ME	-1.79	0.15	18.7	29
SSA	-2.92	0.02	18.2	42

•“Hit” is the coefficient from a regression of WB growth rates on a dummy for civil war, country and region-year FE’s (standard errors are clustered by country).



MOTIVATION 3: STUNNING RESULTS ON LONG-TERM HISTORICAL IMPACTS

- Examples:
 - Political Institutions (AJR, “extractive” vs. “inclusive”)
 - Medieval institutions and efficient democracy in Italy (Putnam)
 - Plantation economies in the new world (Engerman and Sokoloff)
 - Slavery on economic growth (Nunn)
 - Culture on democracy (Tabellini, in re. Europe)
 - Protestant Missionaries and Rule of Law (Woodberry)
- Could this be the case for armed conflict?
 - Not included in any econometric estimations of the correlates of post WWII civil wars
- Question is only beginning to get addressed (Besley and Reynal-Querol, who find conflict persistence (or recurrence) from 1400-1700 to post-1960!



Questions:

- How much of intrastate warfare today is a reflection, or continuation, of persistence of conflict in an earlier era?
- More specifically: does conflict history pre-1945 predict post-1945 armed conflict?
- If yes, why? If no, why not?



Theory 1

We might see persistence for *exogenous* or *endogenous* reasons...



Exogenous:

- Geography and population
- Warlike culture
- Strategic location

Endogenous:

- Cycles of Revenge
- Destruction of institutions
- Return on Investment in military organization



Theory 2:

We might NOT see persistence because of substantial changes in the international system...



Internationally:

- Diffusion of civilized norms (Elias; Pinker)

In Europe:

- Nuclear weapons
- European integration
- Trade
- Democracy

In Asia and Africa:

- Decolonization creates new fissures for political competition



Theory 3:

We might also see both...



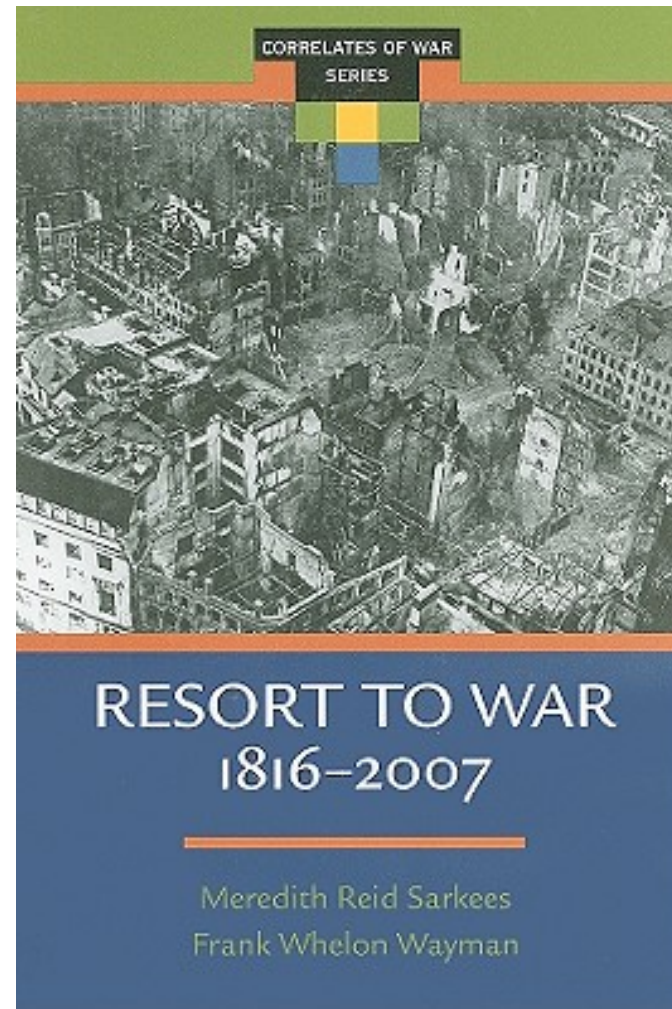
- Some wars may be *state-destroying* and lead to more war.
- Other wars may be *state-building* and lead to peace (Tilly).



Data Sources: 1

Correlates Of War (COW):

- List of all wars from 1816 to the present.
- Strict Definition of war with minimum of 1,000 battle deaths.
- Categorization of wars: interstate, intrastate, extrastate, and nonstate.



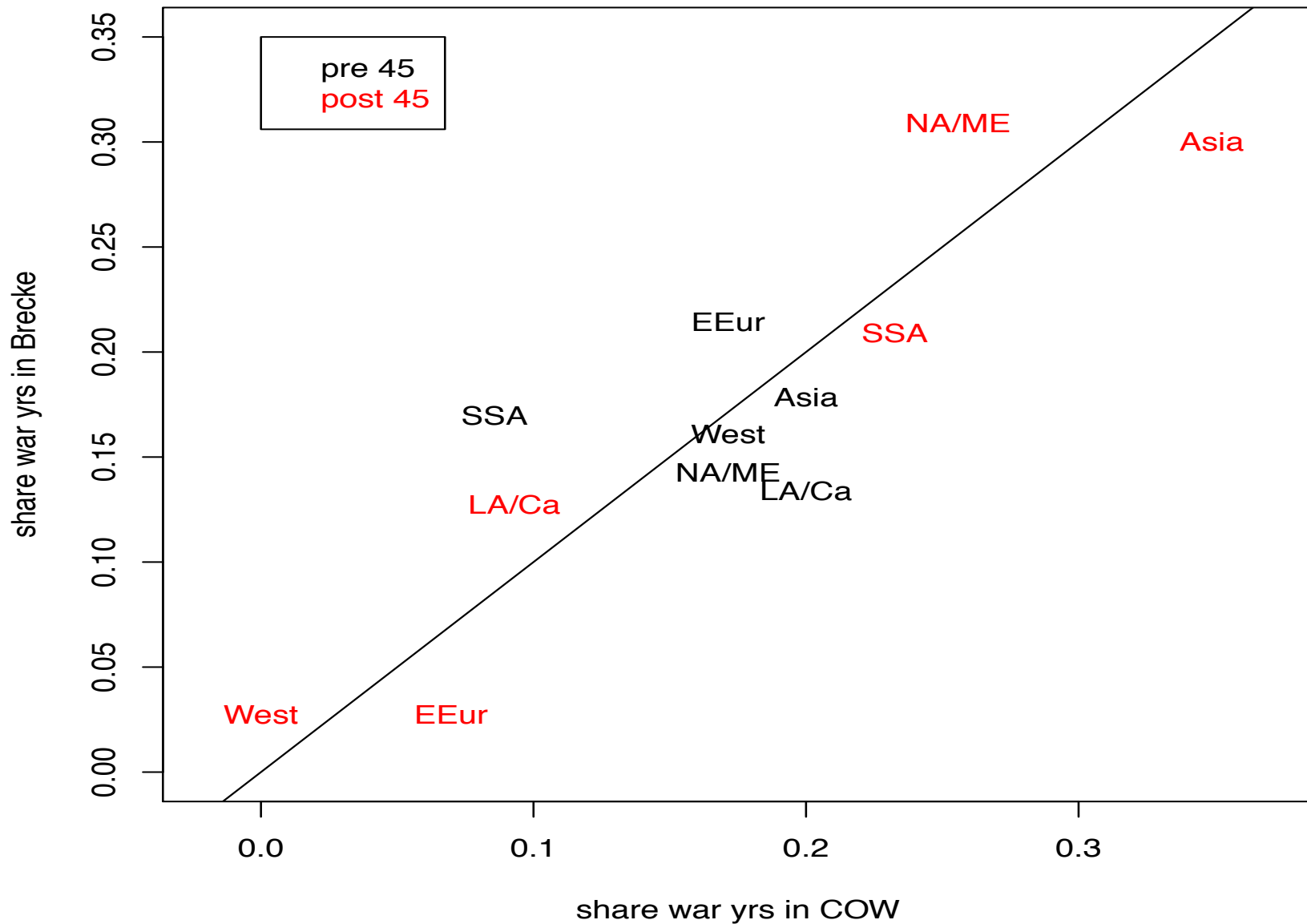
Data Sources: 2

Enumeration of Violent Conflicts (Peter Brecke, Georgia Tech):

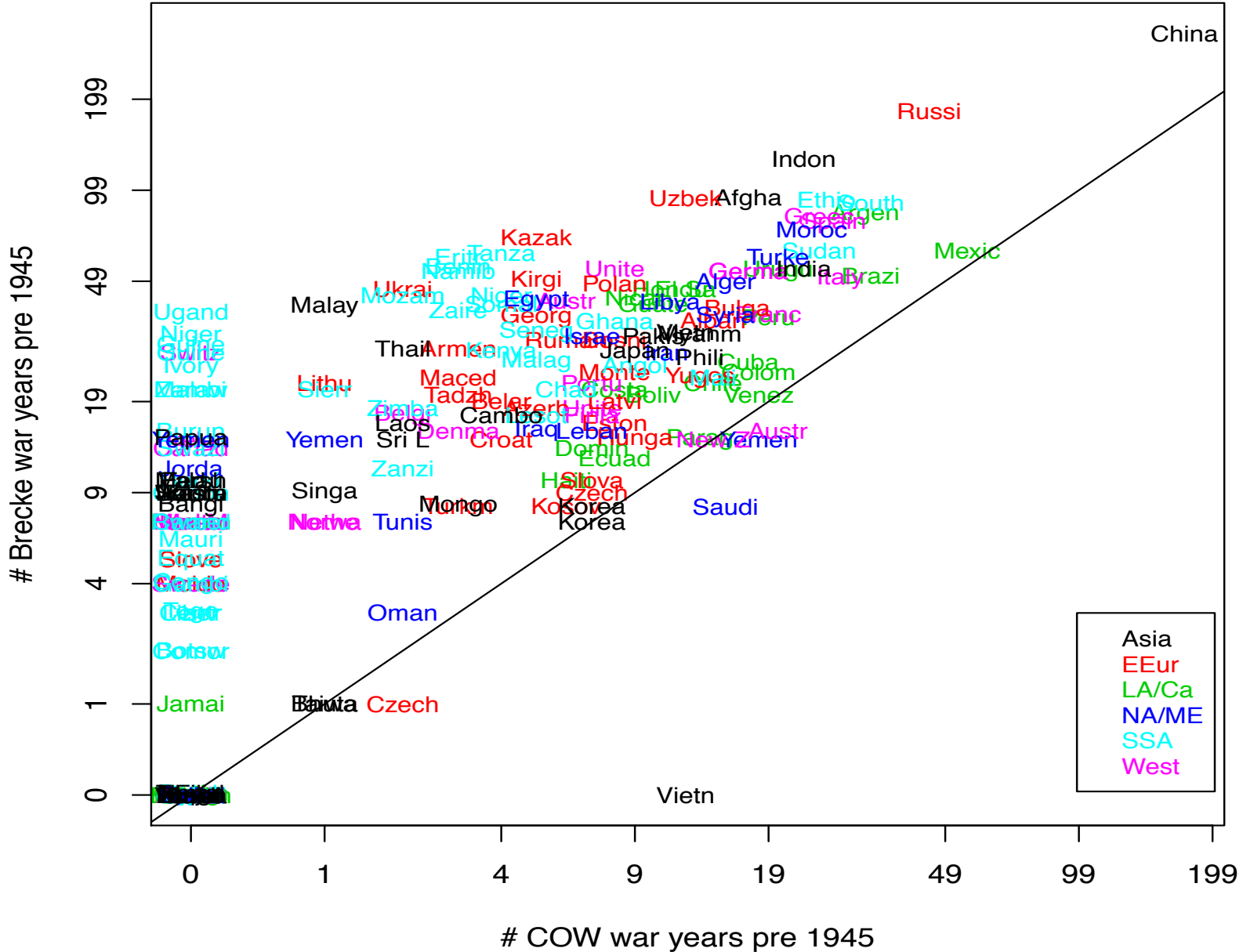
- List of violent political conflicts from 1400 to the present.
- Definition of armed conflict: 31 combat deaths (but in practice use of a variety of explorer/ diaries, encyclopedias, secondary histories to record all mentions of armed conflicts w/out a strict accounting).



**Brecke and COW have similar regional distributions,
except maybe SSA and LA pre45**



Brecke records much conflict in SSA that doesn't appear at all in COW

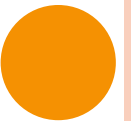


DATA SOURCES: TWO OBSERVATIONS

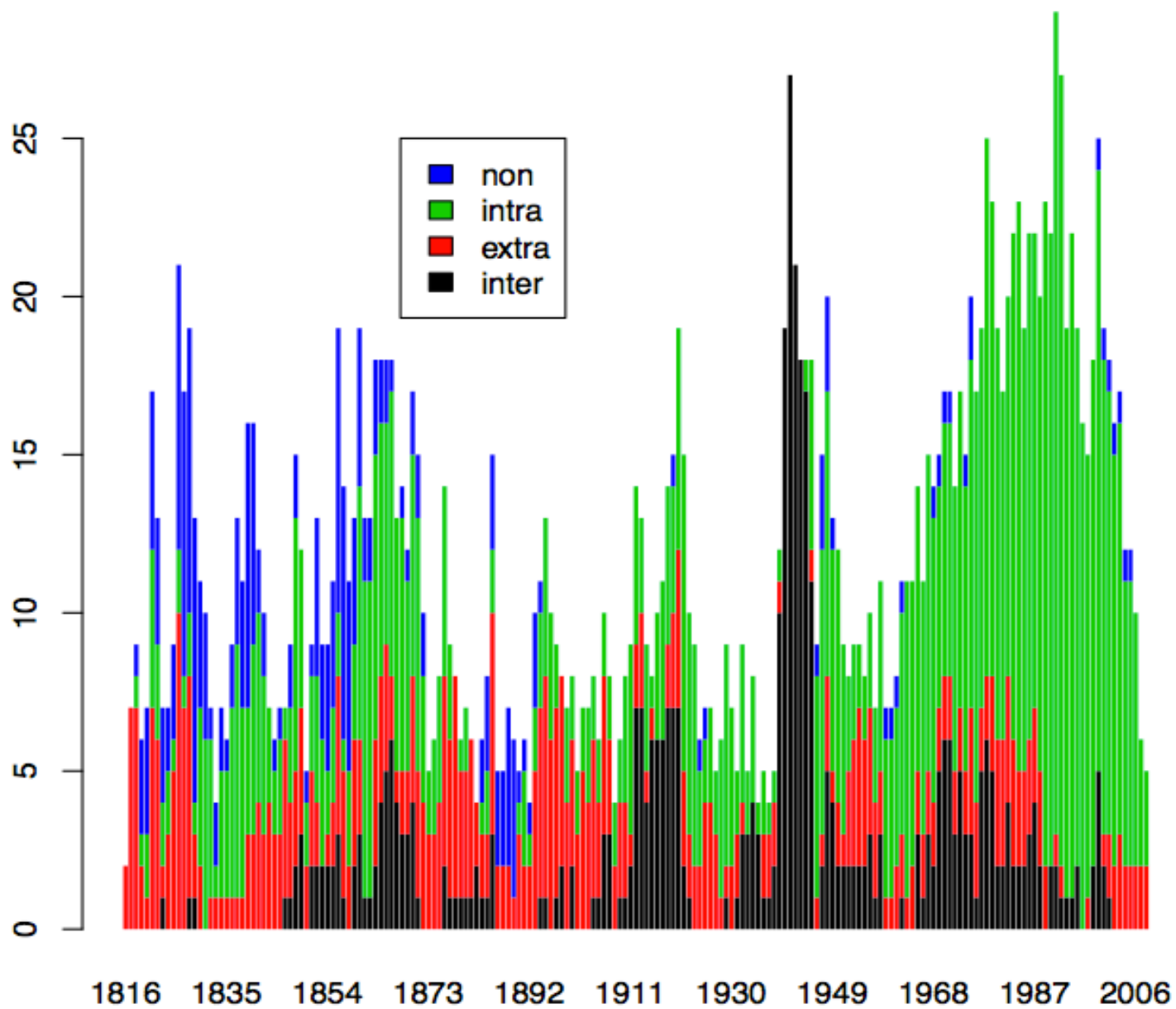
- 1. Rather than reconcile these two data sources for a F/L “gold standard” list meeting pre-specified criteria, we keep the integrity of both, as a robustness test, to see if results hold from two independent sources of data on the dependent variable.
- 2. Our big contribution to both these datasets has been to geo-locate all wars in both datasets as to what countries (in today’s boundaries) those wars were actually fought.
 - Why not the Michalopoulos strategy of virtual countries?



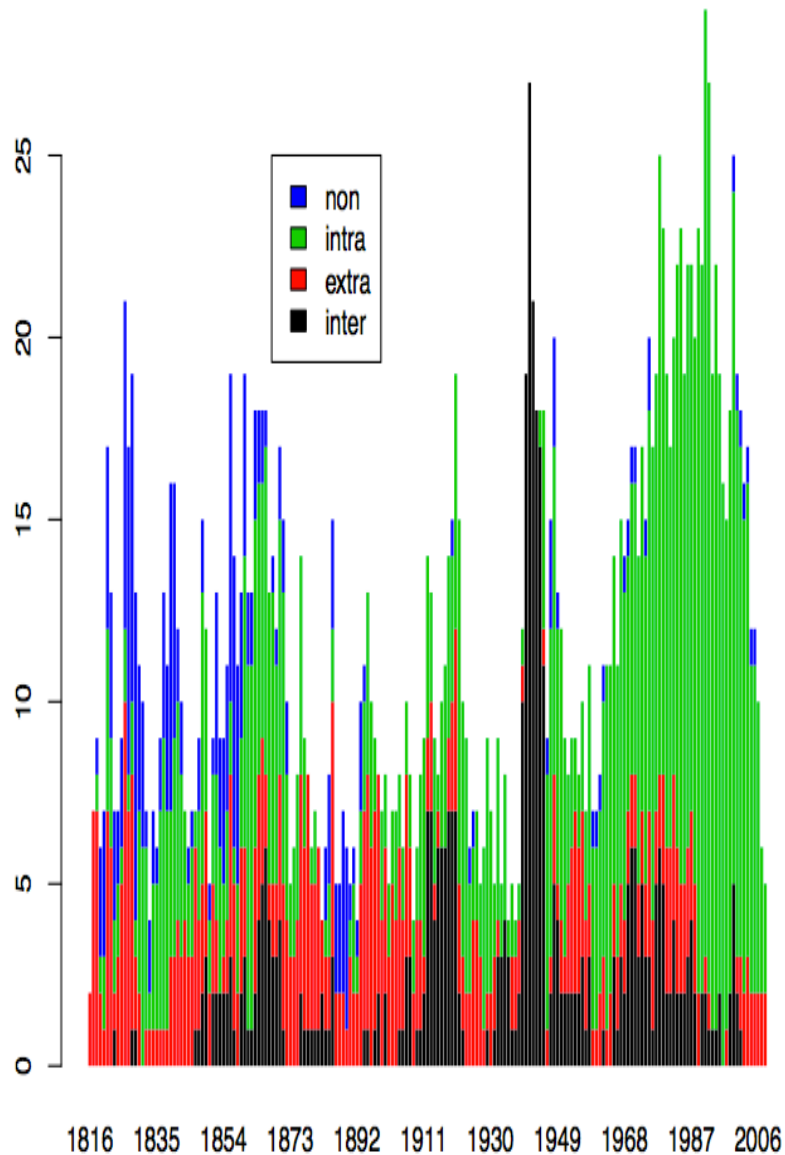
Well, is there persistence?



Types of COW war in current state boundaries, 1816–2008



Types of COW war in current state boundaries, 1816–2008



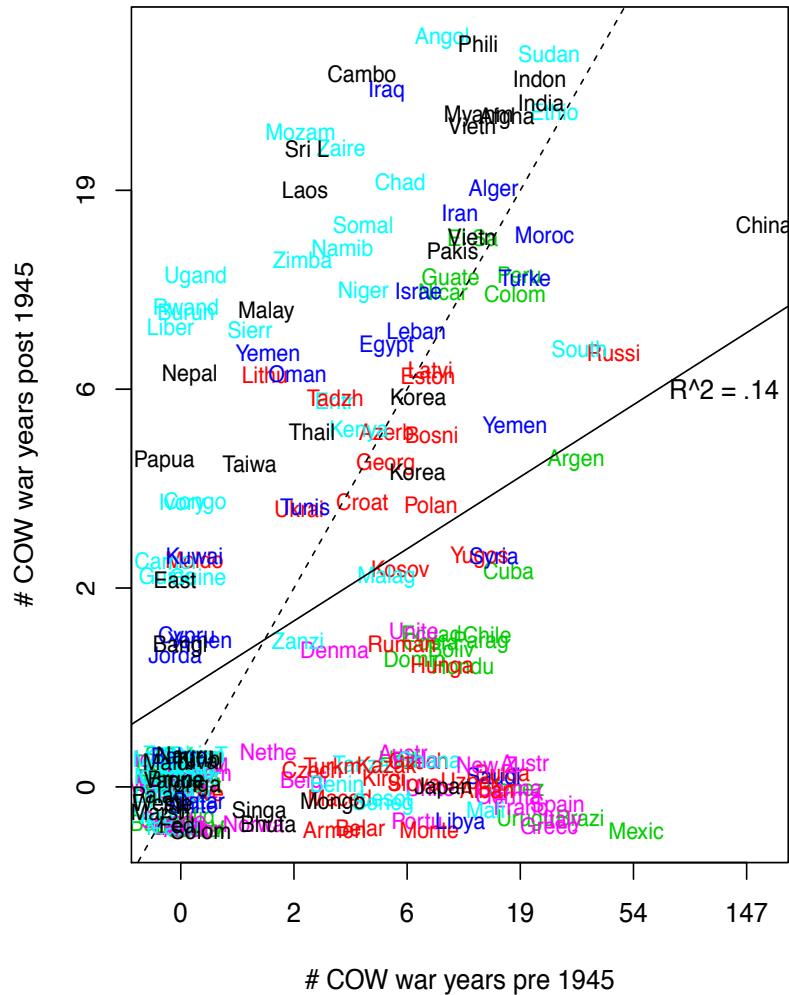
Three trends:

- 1. Large number of non and extrastate wars in the 19th century.
- 2. Relatively less interstate war after WWII.
- 3. Predominantly intrastate war post-1945.
- Inference: new distributions of war types over time suggest low probability of persistence.

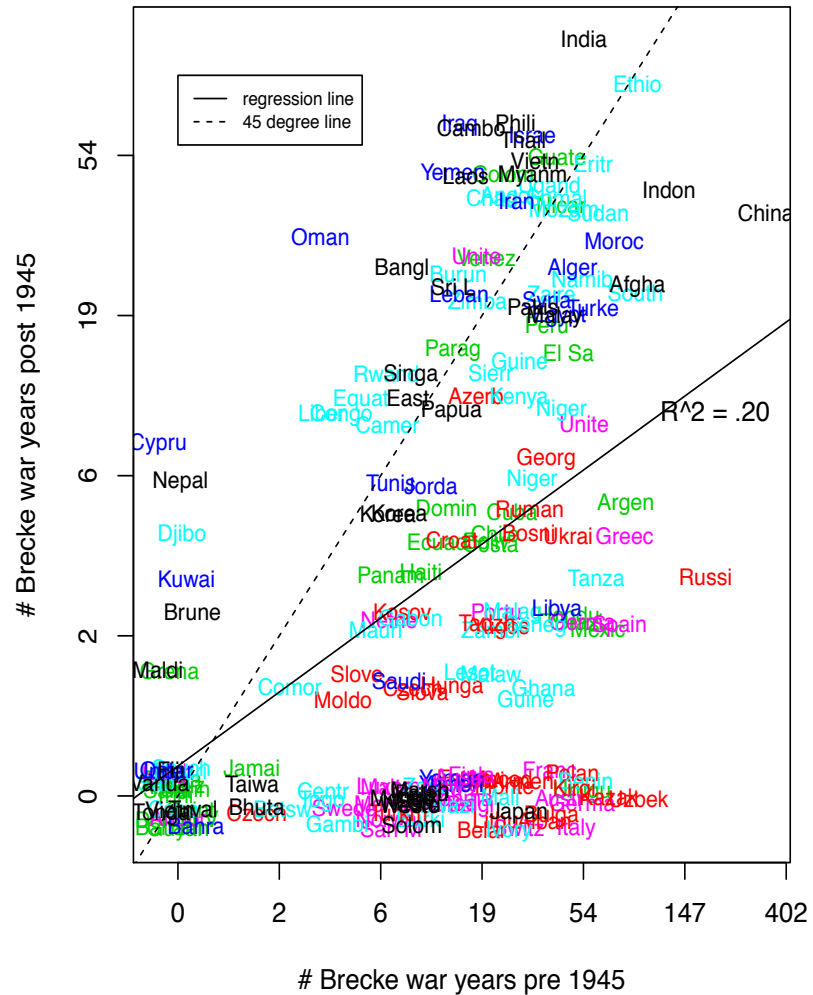


Data Reveal Significant Persistence

Persistence of armed conflict: COW data



Persistence of armed conflict: Brecke data



PERSISTENCE REMAINS SIGNIFICANT WITH STANDARD CONTROLS (COW DATA; DV=LOG(POST45 WARS + 1))

Models	1	2	3	4	5
Log(pre45 war yrs +1)	0.37*** (0.06)	0.44*** (0.06)	0.25** (0.07)	0.24** (0.08)	0.20* (0.10)
Log (pop in 1800)			0.17*** (0.04)	0.16*** (0.04)	0.15* (0.08)
Log (% rugged)				0.10* (0.05)	0.15† (0.08)
Log (total langs, ≈ 1800)					0.06 (0.08)
Constant	0.47*** (0.11)	0.92*** (0.17)	-1.04* (0.52)	-0.91† (0.53)	-0.71 (1.03)
<i>N</i>	200	200	199	197	144
<i>R</i> ²	0.14	0.35	0.40	0.41	0.37
Region FE's	No	Yes	Yes	Yes	Yes

OLS: SE's in parens; †*p* <.10; * *p* < .05; ** *p* <.01; *** *p* < .001



CORRELATES OF WARFARE IN BOTH ERAS

DV	Pre45 wars	Pre45 wars	Post 44 wars	Post 44 wars
Log (# langs ≈ 1800)	0.16* (0.07)		0.09 (0.08)	
ELF (1960)		0.06 (0.34)		.93* (0.36)
Log (pop in 1800)	0.37** (0.06)	0.41*** (0.05)	0.22** (0.07)	0.25*** (0.05)
Log (% rugged)	0.14† (0.07)	0.11 (0.07)	0.18** (0.08)	0.16* (0.08)
Constant	-4.37*** (0.85)	-4.39*** (0.79)	-1.57 (0.96)	-2.09* (0.84)
<i>N</i>	144	160	144	160
<i>R</i> ²	0.46	0.41	0.35	0.37
Region FE's	YES	YES	YES	YES

OLS: SE's in parens; †*p* < .10; * *p* < .05; ** *p* < .01; *** *p* < .001

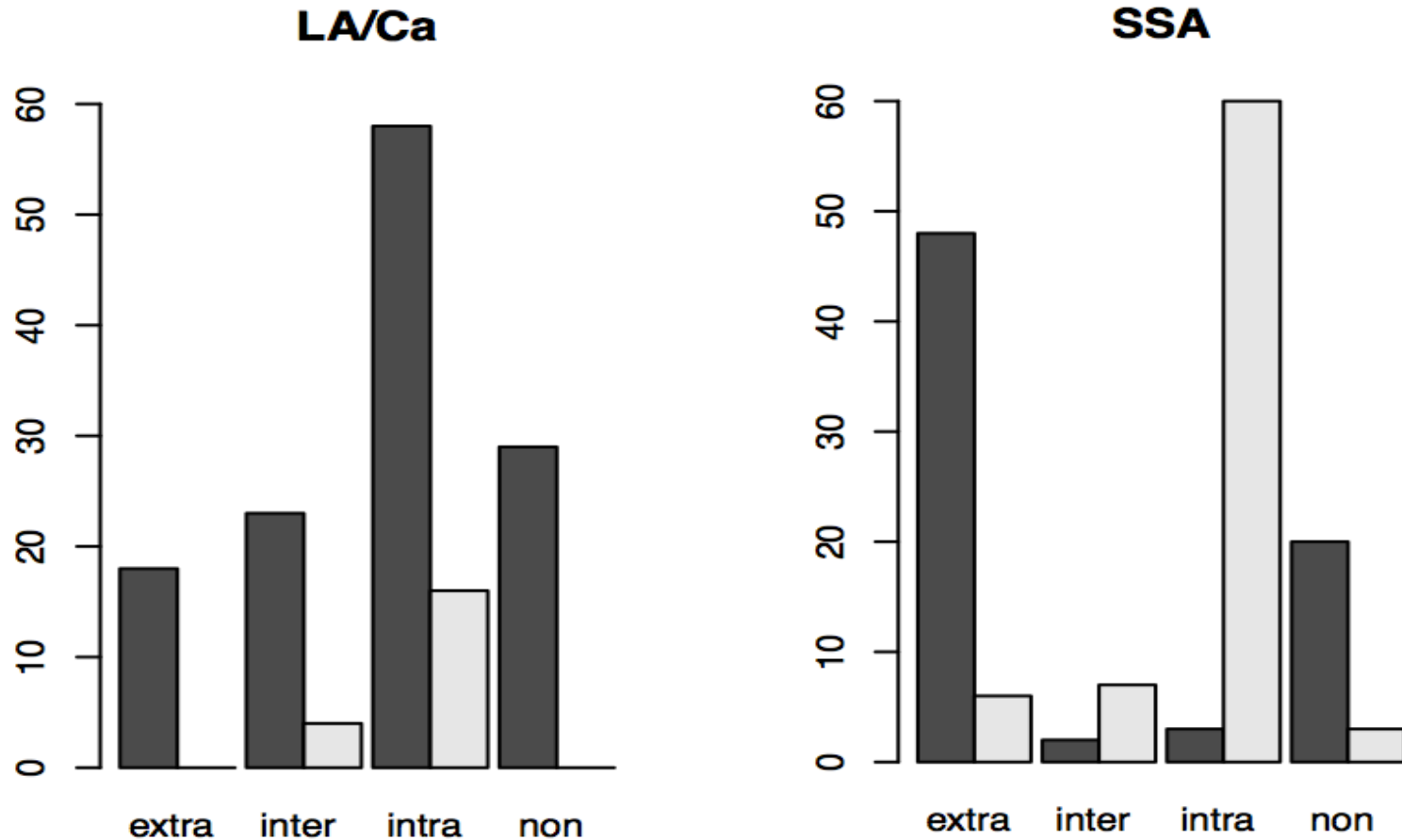


SUMMARY OF REGRESSION RESULTS FOR EACH ERA

- On average, five more years of war pre-1945 associates with about one more year post-1945
- Controlling for population in 1800 has a big effect, could be due to “exposure” (i.e. more people, more chances for an insurgency) or the difficulty of governing large populations
- Rough terrain related to more conflict in both periods, but more so after 1945
- Ethnic diversity in 1800 (see Laitin/Robinson) related to conflict pre 1945, but not after. ELF measured after 1945 related to total conflict after 1945, but not before. Suggests ethnic diversity is endogenous to state building in the long term.



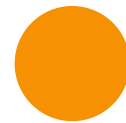
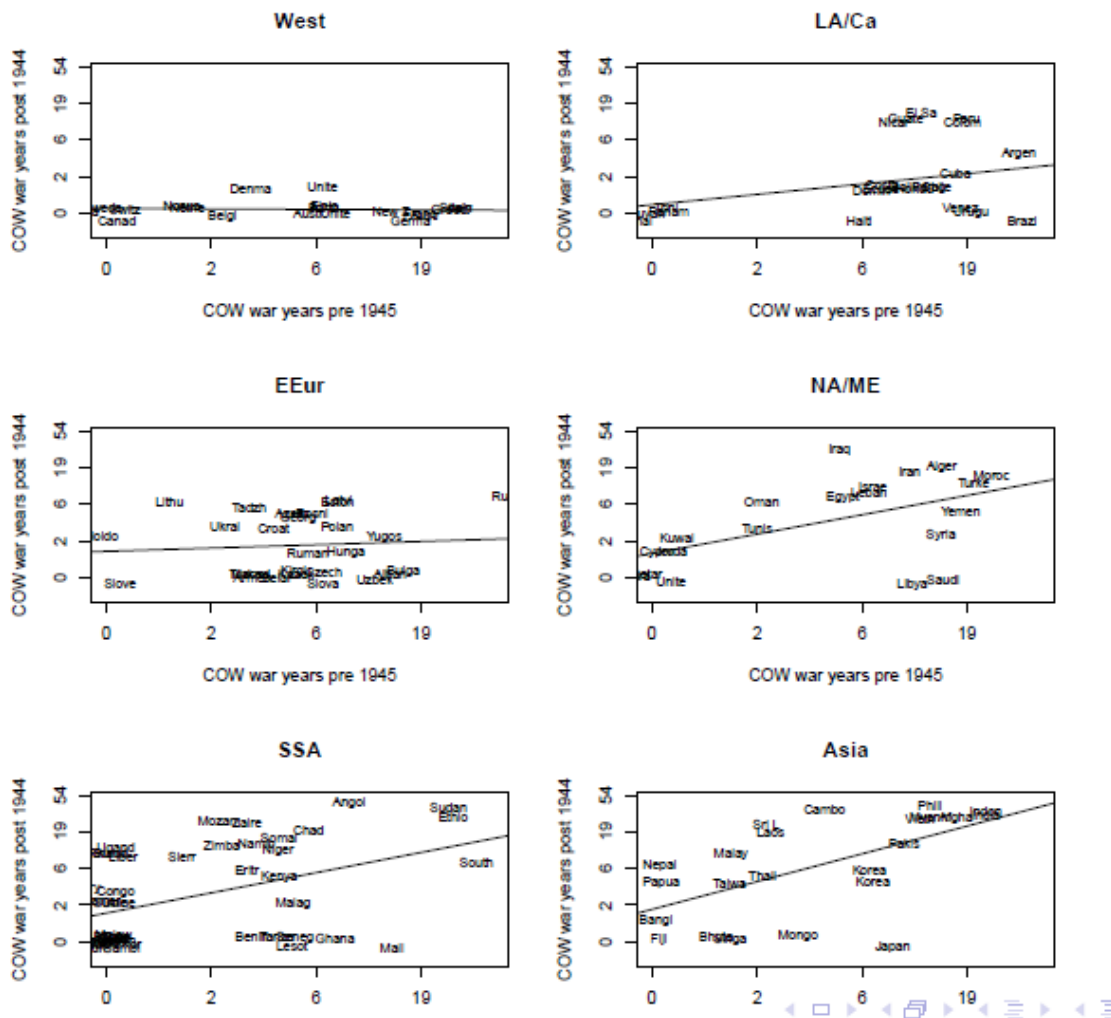
Continental “reversals of fortune” also show distinct regional effects



wars before 1945
wars after 1945



INDEED PERSISTENCE IS NOT SIMILAR ACROSS REGIONS:



REGIONAL EFFECTS: SUMMARY

- Lots of warfare in EEur/FSU pre45 due to interstate conflict and Russian imperial expansion. That ends for many territories under Soviet and post-Soviet rule;
- Western Europe has great variation in warfare pre45 but nearly all countries close to zero post44
- Moderate number of African and Asian cases that saw no COW warfare pre45, but have major conflicts post44: e.g.: Uganda, Rwanda, Burundi, Liberia, Ivory Coast, Nepal, PNG
- Clearly we need to control for, and look *within* regions



Explaining Persistence: Some Preliminary Findings



FIRST FINDING:

- Extra State Wars pre-45 are associated with intra-state wars post-44
- Intra-state wars pre-45 have no relationship with intra-state wars post-44
- Conjecture: extra-state wars appear to be state-destroying while intra-state wars have Tilly-like state-building implications.



Strong extra pre/intra post correlation
accounts for much of the general findings:

	post 45 war years			
pre 45 war years	inter	intra	extra	non
inter	-0.02	0.03	-0.07	-0.06
intra	0.04	0.07	-0.03	-0.04
extra	0.25	0.51	0.36	0.15
non	0.11	0.22	-0.01	0.02



Relation between civil war yrs post 45 and colonial war yrs pre 45, Brecke data

DV = ln(civil war yrs post45)	1	2	3	4	5
ln(extra _{pre45})	0.50*** (0.06)	0.50*** (0.07)	0.34*** (0.08)	0.34*** (0.08)	0.28*** (0.08)
ln(land area)			-0.01 (0.05)	-0.01 (0.05)	-0.07 (0.06)
ln(pop 1800)			0.19** (0.06)	0.17** (0.06)	0.18** (0.06)
ln(ruggedness)				0.16** (0.06)	0.18** (0.06)
ln(# langs in 1800)					0.21* (0.08)
constant	0.45*** (0.12)	0.75*** (0.21)	-1.43* (0.59)	-1.20* (0.59)	-1.17* (0.59)
<i>N</i>	200	200	199	197	192
region fixed effects	<i>N</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
adj. <i>R</i> ²	0.24	0.27	0.32	0.35	0.37

Standard errors in parentheses

† significant at $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$



SECOND FINDING

- No evidence of “persistent enemies” or of groups especially conflict-prone.
- Three procedures to investigate this:
 - A) Read secondary literature on a random selection of countries asking if there is correspondence across eras of combatants
 - B) Select and research on countries with high pre- and high post-where correspondence would be most likely found
 - C) Add precise “combatant name” to Breke and COW datasets to investigate this question statistically (now being done).
- Preliminary analysis: lots of new conflicts post-independence between groups that formerly had little to do with each other, or fought together against the colonial power. Almost no evidence of “ancient hatreds” driving recurrent warfare.



PERMANENT ENEMIES FROM RANDOM LIST: ANGOLA

Persistence [war years pre-1945 (HiLo); post-1944 (HiLo)]	Analysis
22 (Hi); 38 (Hi)	<ol style="list-style-type: none">1. Persistent high2. No common enemies [1815-44, mostly Portugal vs. the rebellious kings; 1945-present, at first Portugal vs. insurgencies of urban/based militias that hide in rural tribal areas; and then wars among the different insurgent groups]; no common areas of resource value.]3. Military organizations (e.g. the Bailundu kingdom) in the 19th c. play no role in the post 1960 insurgencies. UNITA (see Marcum) was based in Ovimbundu territory, but its organization as an independence seeking party/militia was all organized by the “new men” educated at the religious mission schools who recruited from forced labor, and (those influenced by Maoism) from the peasantry.



PERSISTENT ENEMIES FROM RANDOM LIST: TANZANIA

Persistence [war years pre-1945 (HiLo); post-1944 (HiLo)]	Analysis
70 (Hi); 3 (Low)	<ol style="list-style-type: none">1. Nine wars (23 years of war) pre-45 involving the Arabs, or the Arab trade, or control over Zanzibar; one revolution post-44 in 1964 in Zanzibar could be considered a persistent organization for conflict, a persistent enemy (Arab traders vs. inland interests), or a persistently valuable port worth fighting over (Mombasa and Zanzibar)2. Maji-Maji rebellion the largest in the pre-1945 era; one of the belligerents was the Ngoni who fought a war with the Germans in 1897; but Maji-Maji has no implications for post-independence insurgency. Here is a case of non-persistence of heroic organization.3. Perhaps the largest death count was with the Hehe (Breke has them with 2 wars in the 1890s), the first in which the Germans were defeated. However, they did not participate in Maji Maji and have not been an insurgent force in post WWII Tanganyika/Tanzania. Here is another case of non-persistence of heroic organization.



PERSISTENT ENEMIES FROM HIGH-HIGH LIST: INDIA

Group fought pre and post	Group fought pre, but not post	Group fought post, but not pre
1. Sikhs (1845, 1848, 1984)	1. Marathas (1817) 2. Burma vs Assam (1821) 3. Bharatpuran (1825) 4. Jammu/Tibet (1841) 5. Gwalior (1843) 6. Dards (1852) 7. Santals (1855) 8. Sepoy's (1857) 9. Moplahs (1921)	1. Hindus and Muslims in partition (1946) 2. Telanganas/Razakars (1947) 3. Hyderabad (1948) 4. Naxalites (1970) 5. Kashmir (1947, 1965, 1990)



PERMANENT ENEMIES FROM HIGH-HIGH LIST: CHINA

Group fought pre and post	Group fought pre, but not post	Group fought post, but not pre
<ol style="list-style-type: none">1. Tibet (1912, 1918, 1950, 1956)2. Communists vs. Republicans/KMT	<ol style="list-style-type: none">1. Muslim rebels2. Kokand3. Taiping4. Miao vs. Han5. Nian vs. Han6. Yunnan Muslims7. Zaili/Jindan sects8. Hui Muslims9. Gansu Muslims10. Multiple regional warlords11. Etc...	<ol style="list-style-type: none">1. State vs. Counter-revolutionaries (Cultural Revolution)



PERMANENT ENEMIES FROM HIGH-HIGH LIST: SUDAN

Group fought pre and post	Group fought pre, but not post	Group fought post, but not pre
[None]	<ol style="list-style-type: none"> 1. Ottomans vs. Sultans (1820) 2. Egypt vs. Mahdi (1824) 3. Egypt vs. Hadendowa (1831) 4. Egypt vs. Bahr el Ghazal (1869) 5. Egypt vs. slavers (1878) 6. UK, Ethiopia, Italy vs. Mahdi (1881, 1889, 1894, 1896) 	<ol style="list-style-type: none"> 1. Anya Nya – southerners vs. center(1963) 2. SPLA – southerners vs. center (1983) 3. Dinka vs. Nuer – intra-southerner (1991) 4. Darfur – agriculturalists vs. herdsman with support of state (2003)



OTHER PRELIMINARY FINDINGS

- 1. Exogenous factors, as we saw in earlier tables, such as rugged terrain and population density remain significant across both eras
- 2. Evidence from our random list of countries do not reveal many strategic locations over which wars have been fought repeatedly (perhaps Zanzibar, and its location for the Arab trading system, is an exception).
 - This can be explained by the fact that what constitutes a strategic location in the 19th century (e.g. a river bend ideal for a fort) is different in the 20th (e.g. oil reserves). We therefore have had trouble finding cross-era coding rules for strategic location.



CONCLUSIONS

- 1. Non-trivial within-region persistence of armed conflict, before 1945 to after: this is particularly evident in Asia, SSA, NA/ME, and LA/Ca
- 2. Not completely eliminated by controlling for population, rough terrain, and ethnic diversity in 1800 (but we can't be sure other durable factors won't eliminate it).
- 3. Ethnic diversity correlates with warfare in each era, but is not an exogenous source of conflict (i.e. it changes values across eras)
- 4. Results are primarily due to colonial/imperial war correlating with post-independence civil war
- 5. The persistence story is less about ancient hatreds/permanent enemies, and more about the arc of state-building

