Webpage Appendix to "Segmentary Lineage Organization and Conflict in Sub-Saharan Africa"

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Abstract:

This is a webpage appendix that accompanies the paper "Segmentary Lineage Organization and Conflict in Sub-Saharan Africa." Section 1 provides an overview of the data used in the paper, including the source material and a description of the construction of each variable. Section 3 provides additional information that accompanies the tables reported in the paper's Supplementary Materials. It is reported here, rather than with the tables, due to *Econometrica*'s page restrictions on the Supplementary Materials. Section 4 reports and provides a description of additional tables not reported in the paper or the Supplementary Materials.

1. Data, their Sources, and their Construction

A. *Conflict*

Our primary source of conflict data is the *Armed Conflict Location and Event Data Project* (ACLED): `https://www.acleddata.com`. The data are coded from a variety of sources, including "reports from developing countries and local media, humanitarian agencies, and research publications" (`http://www.acleddata.com/about-acled/`). The database includes information on the location (latitude and longitude), date, and other characteristics of all known conflict events in Africa since 1997, including the number of conflict deaths resulting from each conflict event and information about conflict type. We use the "Interaction" variable to group conflicts by the following three sub-types:

- **Civil Conflict** if the Interaction variable takes a value between 10–28. These are all conflict events that involve the government military or rebels (who are seeking to replace the central government) as one of the actors.
- **Non-Civil Conflict** if the Interaction variable takes a value between 30–67. These are all conflict events that are not civil conflicts.
- **Within-Group** or **Localized Conflict** if the Interaction variable takes a value between 40–47, 50–57, or 60–67. These are all conflict events for which both actors in the conflict are geographically local and/or ethnically local groups.

For each of the four types of conflict—all ACLED conflict plus the three types listed above—we construct three measures of the frequency or prevalence of each type: the number of deadly conflict incidents, number of conflict deaths, and number of months from 1997–2014 with a deadly conflict incident. A "deadly conflict" is a conflict incident with at least one battle death. In total, we have twelve measures of conflict. As reported in Table B.I, all measures are positively correlated, with correlation coefficients that range from 0.49–0.93.

As an alternative source of conflict data, we use the *Uppsala Conflict Data Program* (UCDP): `http://ucdp.uu.se/#/exploratory`. The UCDP data record the location, date, and other characteristics of conflict events beginning in 1989 and only include conflict events with at least one associated fatality.

Table B.I: Pairwise correlation between conflict measures.

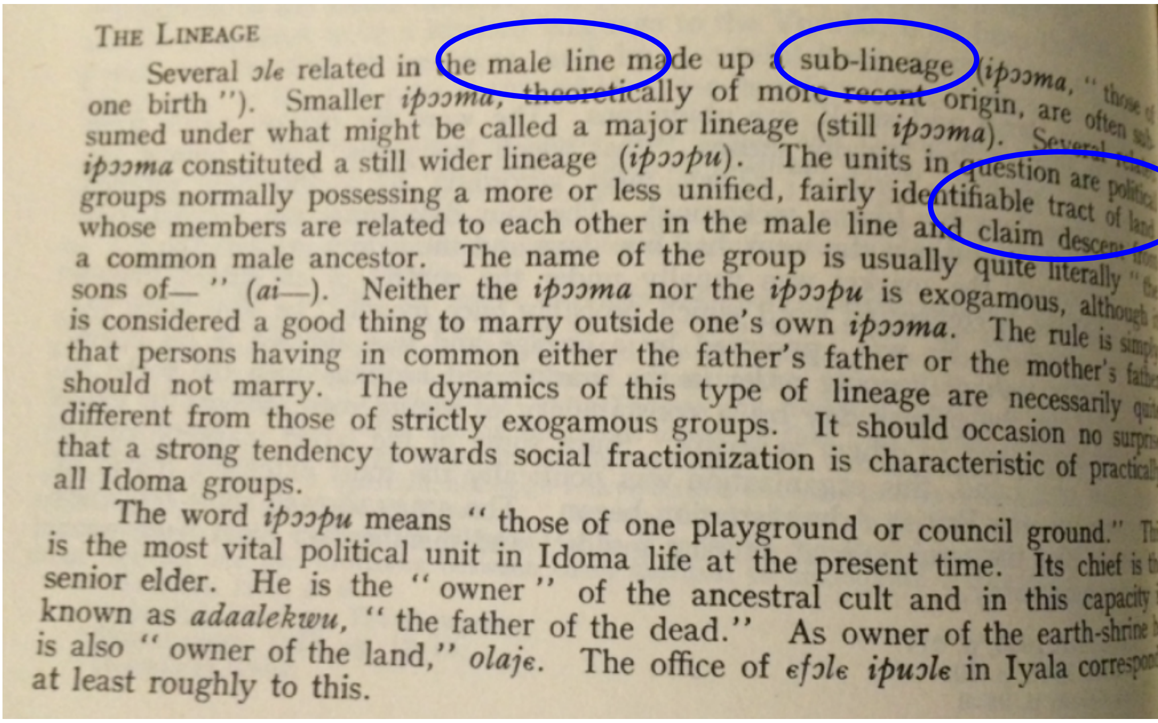
	(1) All Conflict	(2) Civil Conflict	(3) Non-Civil Conflict	(4) Within-Group Conflict
ln (1+Deadly Conflict Incidents):				
All Conflict	1.000			
Civil Conflict	0.831	1.000		
Non-Civil Conflict	0.827	0.781		
Within-Group Conflict	0.736	0.481	0.772	1.000
ln (1+Conflict Deaths)				
All Conflict	1.000			
Civil Conflict	0.925	1.000		
Non-Civil Conflict	0.896	0.722	1.000	
Within-Group Conflict	0.685	0.487	0.845	1.000
ln (1+Months of Deadly Conflict)				
All Conflict	1.000			
Civil Conflict	0.932	1.000		
Non-Civil Conflict	0.947	0.811	1.000	
Within-Group Conflict	0.769	0.617	0.868	1.000

Notes : The unit of observation is an ethnic group. Each cell reports the pairwise correlation coefficient between the conflict measure noted in the left column and the conflict measure noted in the top row. All coefficients are statistically significant ($p<0.01$).

Conflicts are matched to ethnic groups using the map of African ethnic groups from Murdock (1959). They were matched to grid cells using the location of the conflict incidents. Summary statistics of the various conflict measures at the ethnicity-level and grid-cell-level are reported in Tables B.II and B.III respectively.

B. ***Segmentary Lineage Organization***

We now turn to our coding of segmentary lineage organization and each of its components. We provide an example of the coding that was used for the Idoma, which is from pages 60–61 of Dudley (1968). This is reported in Figure B1 with information for each part of the definition circled in blue. The first line notes that individuals are related in the "male line," indicating unilineal lineage. This is confirmed later in the paragraph where it is written that within a lineage "members are related to each other in the male line and claim descent from a common male ancestor." This is part (*i*) of the definition that we use. The entry also states that there are "sublineages." Further in the paragraph it is written that the "units in question are political groups, normally possessing a more or less unified, fairly identifiable tract of land." This suggests that parts (*ii*) and (*iii*) of the definition also hold. There are segmented sub-lineages that are political (part (*ii*)) and that live on a more or less unified, fairly identifiable tract of land (part (*iii*)).



THE LINEAGE

Several ɔlɛ related in the male line made up a sub-lineage (ipɔɔma, "those of one birth"). Smaller ipɔɔma, theoretically of more recent origin, are often subsumed under what might be called a major lineage (still ipɔɔma). Several ipɔɔma constituted a still wider lineage (ipɔɔpu). The units in question are political groups normally possessing a more or less unified, fairly identifiable tract of land whose members are related to each other in the male line and claim descent from a common male ancestor. The name of the group is usually quite literally "the sons of— " (ai—). Neither the ipɔɔma nor the ipɔɔpu is exogamous, although it is considered a good thing to marry outside one's own ipɔɔma. The rule is simply that persons having in common either the father's father or the mother's father should not marry. The dynamics of this type of lineage are necessarily quite different from those of strictly exogamous groups. It should occasion no surprise that a strong tendency towards social fractionization is characteristic of practically all Idoma groups.

The word ipɔɔpu means "those of one playground or council ground." This is the most vital political unit in Idoma life at the present time. Its chief is the senior elder. He is the "owner" of the ancestral cult and in this capacity is known as adaalekwu, "the father of the dead." As owner of the earth-shrine he is also "owner of the land," olajɛ. The office of ɛfɔlɛ ipuɔlɛ in Iyala corresponds at least roughly to this.

Figure B1: An example illustrating the coding of our segmentary lineage variable.

We next document all sources that were used to code the segmentary lineage variable. All ethnic groups in the sample are listed by classification, along with the source(s) used to determine whether the ethnic group was a segmentary lineage society or not. If one of the sources is from the *Ethnographic Survey of Africa*, it is listed first.

Ethnic groups with segmentary lineages:

ACHOLI

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda*, pp. 81–82.

2. Parkin, David (1969) *Neighbors and Nationals in an African City Ward*, p. 200.

ALUR

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda*, pp. 174–175.

2. Southall, Aidan W. (2004), *Alur Society: A Study in Processes and Types of Domination*, p. 62.

3. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 15.

AMBA

1. Taylor, Brian K. (1963), *The Western Lacustrine Bantu*, pp. 74, 76–77.

2. Runciman, W. G. (1989), *A Treatise on Social Theory (Volume II)*, p. 321.

ANUAK

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda*, pp. 68–70.

2. Eisenstadt, S. N. (1959), "Primitive Political Systems: A Preliminary Comparative Analysis," *American Anthropologist*, p. 209.

BALANTE

1. Morier-Genou, Eric (2012), *Sure Road? Nationalisms in Angola, Guinea-Bissau & Mozambique*, p. 62.

2. Sigrist, Christian (2004), "Segmentary Societies: The Evolution and Actual Relevance of an Interdisciplinary Conception," *Difference and Integration*, p. 15.

BAMBARA

1. Paques, Viviana (1954), *Les Bambara*, pp. 50–51.

BANZA

1. Burssens, Herman (1956), *Les peuplades de l'entre Congo-Ubangi (Ngbandi, Ngbaka, Mbanja, Ngombe et Gens d'Eau)*, p. 117.

BARI

1. Huntingford, George W. B. (1953), *The Northern Nilo-Hamites*, pp. 35–36.

2. Barclay, Harold (1982), "Sudan (North): On the Frontier of Islam" in *Religion and Societies: Asia and the Middle East* ed. Carlo Caldarola, p. 148.

CHOKWE

1. McCulloch, Merran (1978), *The Southern Lunda and Related Peoples*, pp. 40–41.

2. Miller, Joseph C. (1977), "Imbangala Lineage Slavery" in *Slavery In Africa: Historical and Anthropological Perspectives* eds. Suzanne Miers and Igor Koptoff, p. 207.

DIGO

1. Waaijenberg, Henk (1994) *Mijikenda Agriculture in Coast Province of Kenya?: Peasants in between Tradition, Ecology and Policy*, p. 35, 38.

2. UNESCO World Heritage Convention (2008), "The Sacred Mijikenda Kaya Forests," p. 59.

DINKA

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda*, pp. 120–121.

2. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 14.

DOGON

1. Palau Martí, Montserrat (1957), *Les Dogon*, p. 37.

2. Tait, David (1950), "An Analytical Commentary on the Social Structure of the Dogon," *Africa* 20(3), p. 197.

DOROBO

1. Huntingford, George W. B. (1969), *The Southern Nilo-Hamites*, pp. 72–73.

2. Eisenstadt, Shmuel Noah (2009), *From Generation to Generation*, p. 119.

DUALA

1. Ardener, Edwin (1956), *Coastal Bantu of the Cameroons*, pp. 51, 57.

2. Teresa, Meredith (2013), *Nation of Outlaws, State of Violence*, p. 270.

EDO

1. Bradbury, R. E. (1957), *The Benin Kingdom and the Edo-Speaking Peoples of the South-Western Nigeria*, pp. 88–89.

EWE

1. Manoukian, Madeline (1952), *The Ewe-speaking people of Togoland and the Gold Coast*, pp. 22–24.

FALI

1. Palau Martí, Montserrat (1957), *Les Dogon*, p. 37.

FANG

1. Alexandre, Pierre & Jaques Binet (1960), "Le groupe dit Pahouin (Fang, Boulou, Beti)," *Revue de l'histoire des religions* 160(1), pp. 48–49.

2. Terretta, Meredith (2013), *Nation of Outlaws, State of Violence: Nationalism, Grassfields Tradition, and State Building in Cameroon*, p. 270.

GA

1. Manoukian, Madeline (1964), *Akan and Ga-Adangme Peoples of the Gold Coast*, p. 73.

2. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 17.

GANDA

1. Fallers, Marcaret Chave (1968), *The Eastern Lacustrine Bantu (Ganda, Soga)*, p. 52.

2. F.B. Welbourn, “A Sacral Kingship in Buganda? An Essay in the Meaning of Religion,” *Department of Religious Studies, University of Bristol*, p. 2.

GBARI

1. Gunn, Harold D. & F. p. Conant (1960), *Peoples of the Middle Niger Region: Northern Nigeria*, pp. 94–96.

GISU

1. La Fontaine, J.S. (1959), *The Gisu of Uganda*, pp. 24–26, 29–31.

2. La Fontaine, J.S., “Witchcraft in Bugisu” in *Witchcraft and Sorcery in East Africa* eds. John Middleton and E.H. Winter, p. 188.

GURENSI (TALENSI)

1. Manoukian, Madeline (1951), *Tribes of the Northern Territories of the Gold Coast*, pp. 26–27.

2. Smith, M.G., “On Segmentary Lineage Systems,” in *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 86(2), p. 40.

3. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 12.

GUSII

1. Cohen, Yehudi (1971), *Man in Adaptation: The Institutional Framework*, pp. 294-295.

2. Smith, M.G., “On Segmentary Lineage Systems,” in *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 86(2), p. 40.

IBO

1. Forde, Darryll & G.I. Jones (1967), *The Ibo and Ibibio Speaking Peoples of South Eastern Nigeria*, pp. 15-16.

2. Southall, Aidan (1975), “From Segmentary Lineage to Ethnic Association–Luo, Luhuya, Ibo and Others” in *Colonialism and Change; Ikenna Nzimiro, Studies in Ibo Political Systems* ed. Maxwell Owusu, pp. 100–101.

3. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 17.

IDOMA

1. Armstrong, Robert G. (1955), “The Idoma-Speaking Peoples” in *Peoples of the Niger-Benue Confluence* ed. Darryll Forde, pp. 94–95.

2. Dudley, B.J. (1968), *Parties and Politics in Northern Nigeria*, pp. 60–61.

ITSEKIRI

1. Lloyd p.C. (1957), "The Itsekiri" in *The Benin Kingdom and the Edo-Speaking Peoples of the South-Western Nigeria* ed. R.E. Bradbury, pp. 182, 186.

KAMBA

1. Middleton, John & Greet Kershaw (1972), *The Central Tribes of the North-Eastern Bantu*, pp. 71–74.

2. Edgerton, Robert B. (1970), "Violence in East African Tribal Societies," in *Collective Violence* eds. James F. Short Jr. & Marvin E. Wolfgang, pp. 168–169.

KARANGA

1. Hughes, A.J. B. & J. van Velsen (1954), *The Shona and Ndebele of Southern Rhodesia*, p. 19.

KIKUYU

1. Middleton, John & Greet Kershaw (1972), *The Central Tribes of the North-Eastern Bantu*, pp. 23–24, 27–29, 38.

KIPSIGI

1. Huntingford, George W. B. (1969), *The Southern Nilo-Hamites*, pp. 43–45.

KISSI

1. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 17.

KONGO

1. Soret, Marcel (1959), *Les Kongo*, pp. 72–73.

KONJO

1. Taylor Brian K. (1969), *The Western Lacustrine Bantu*, p. 92.

KONKOMBA

1. Froelich, J. C. et al. (1965), *Les population du Nord-Togo*, p. 142.

2. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 13.

KEWRE

1. Beidelman, T. O. (1967), *Matrilineal Peoples of Eastern Tanzania*, p. 23.

LAMBA

1. Froelich, J. C. et al. (1965), *Les population du Nord-Togo*, p. 89.

2. Mitchell, James Clyde, and John Arundel Barnes (1950), *The Lamba Village: Report of a Social Survey*.

LANGO

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda* pp. 98–99.

LENDU

1. Kaberry, Phyllis (1957), "Primative States", *The British Journal of Sociology* 8(3), p. 230.

LUGBARA

1. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 12.

LUGURU

1. Beidelman, T. O. (1967), *Matrilineal Peoples of Eastern Tanzania*, p. 28.

2. Pets, Peter (1996), "The Pidgnization of Luguru Politics: Administrative Ethnography and the Paradoxes of Indirect Rule," *American Ethnologist*, p. 744.

LUNGU

1. Willis, Roy G. (1966), *The Fipa and Related Peoples*, pp. 49–50.

LUO

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda* pp. 110–111.

2. Shipton, Parker (1984), *Lineage and Locality as Antithetical Principles in East African Systems of Land Tenure*, p. 123.

MADI

1. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 15.

MERU

1. Moore, Sally Falk & Paul Puritt (1977), *The Chagga and Meru of Tanzania*, pp. 110–111

2. Munson, Robert B. (2013), *The Nature of Christianity in Northern Tanzania* p. 17.

MIJERTEIN (SOMALI)

1. Lewis, I.M. (1999), *A Pastoral Democracy: A Study of Pastoralism and Politics Among the Northern Somali of the Horn of Africa*, pp. 127, 161.

2. Lewis, I.M. (1994), *Blood and Bone: The Call of Kinship in Somali Society*, p. 19.

MINIANKA

1. Holas, Bohumil (2006), *Les Sénufo: (y compris les Minianka)*, pp. 65, 78.

MOBA

1. Froelich, J. C. et al. (1965), *Les population du Nord-Togo*, p. 142.

MONDARI

1. Huntingford, George W. B. (1953), *The Northern Nilo-Hamites*, pp. 58, 63–64.

NANDI

1. Huntingford, George W. B. (1953), *The Northern Nilo-Hamites*, pp. 24–26.

NDEMBU

1. McCulloch, Merran (1978), *The Southern Lunda and Related Peoples*, pp. 18–21.

2. Gough, Kathleen (1961), "Descent Group Variation Among Mobile Cultivators" in *Matrilineal Kinship* eds. David Murray Schneider & Kathleen Gough, p. 537.

NGBANDI

1. Burssens, Herman (1956), *Les Peuplades de l'Entre Congo-Ubangi (Ngbandi, Ngbaka, Mbanja, Ngombe et Gens d'Eau)*, p. 117.

NGURU

1. Beidelman, T. O. (1967), *Matrilineal Peoples of Eastern Tanzania*, p. 59.

NUER

1. Butt, Audrey (1952), *The Nilotes of the Anglo-Egyptian Sudan and Uganda*, pp. 138–139.
2. Middleton, John & David Tait (2004), *Tribes Without Rulers*, p. 12.

POKOMO

1. Prins, A. H. J. (1952), *The Coastal Tribes of the North-Eastern Bantu*, pp. 16–22.

REGA

1. Biebuyck, Daniel p. (1973), *Lega Culture: Art, Initiation and Moral Philosophy Among a Central African People*, pp. 44–46.
2. Biebuyck (1973), p. 46.

RUANDA

1. Trouwborst, A. A., Mercel d'Hertefelt & J. H. Scherer (1962), *Les Anciens royaumes de la zone interlacustre méridionale, Rwanda, Burundi, Buha*, p. 41.

SAFWA

1. Willis, Roy G. (1966), *The Fipa and Related Peoples*, p. 71.

SAGARA

1. Beidelman, T. O. (1967), *Matrilineal Peoples of Eastern Tanzania*, pp. 42–43.

SOGA

1. Fallers, Marcaret Chave (1968), *The Eastern Lacustrine Bantu (Ganda, Soga)*, pp. 59–60.

SONGHAI

1. Rouch, Jean (1954), *Les Songhay*, p. 35.

SOTHO

1. Sheddick, V.G.J. (1953), *The Southern Sotho*, pp. 26–33 esp. 28.

TEITA

1. Prins, A. H. J. (1952), *The Coastal Tribes of the North-Eastern Bantu*, pp. 112, 114–122.

2. Eisenstadt, Shmuel Noah (2009), *From Generation to Generation*, p. 119.

TEM

1. Alexandre, Pierre (1963), "Organisation politique des Kotokoli du Nord-Togo," *Cahiers d'etudes africaines* 4(14), pp. 233–237.

TENDA

1. Burssens, Herman (1956), *Les peuplades de l'entre Congo-Ubangi (Ngbandi, Ngbaka, Mbanja, Ngombe et Gens d'Eau)*, p. 118.

TIV

1. Bohannan, Laura (1969), *The Tiv of Central Nigeria*, pp. 19–22.

2. Sahlin's, Marshall (1961), "The Segmentary Lineage: An Organization of Predatory Expansion," *American Anthropologist* 63(2), p. 322.

TURKANA

1. Southall, Aidan (2004), *Alur Society: A Study in Processes and Types of Domination*, p. 242.

2. *Changing Identifications And Alliances In North-east Africa*, eds. G′unther Schlee & Elizabeth E. Watson p. 9.

WOLOF

1. Gamble, David (1957), *The Wolof of Senegambia*, pp. 46–52.

YAKO

1. Smith, M. G. (1956), "On Segmentary Lineage Systems" *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 86(2), p. 40.

2. Douglass, Mary & Phyllis Kaberry (1969), *Man in Africa* p. xxii.

YORUBA

1. Forde, C. Daryll (1951), *The Yoruba Speaking Peoples of South Western Nigeria*, pp. 10–15.

ZIGULA

1. Beidelman, T. O. (1967), *Matrilineal Peoples of Eastern Tanzania*, p. 68.

ZULU

1. Laband, John (2007), *Kingdom in Crisis: The Zulu Response to the British Invasion of 1879*, p. 23.

2. Radcliffe-Brown, A. R. & Daryll Forde (1950), *African Systems of Kinship and Marriage*, p. 186.

Ethnic groups without segmentary lineages:

AKYEM

1. Bamfo, Napoleon (2000), "The Hidden Elements of Democracy among Akyem Chieftaincy: Enstoolment, Destoolment, and Other Limitations of Power," *Journal of Black Studies* 31(2), pp. 1156–1157.

BAGIRMI

1. Azevedo, M. J. (2005), *The Roots of Violence: A History of War in Chad*, pp. 28–33.

BAKAKARI

1. Gunn, Harold D. & F. p. Conant (1960), *Peoples of the Middle Niger Region: Northern Nigeria*, pp. 39–40.

BAMILEKE

1. Littewood, Margaret (1954), "Bamum and Bamileke" in *Peoples of the Central Cameroons* ed. Merran McCulloch, pp. 102–103.

BASA

1. Gunn, Harold D. & F. p. Conant (1960), *Peoples of the Middle Niger Region: Northern Nigeria*, pp.

79–80.

BEMBA

1. Whiteley, Wilfred Howell, and J. Slaski (1950). *Bemba and Related Peoples of Northern Rhodesia*.

BENA

1. Swartz, Mark J. (2012), "Legitimacy and Coercion in Bena Politics" in *Government and Rural Development in East Africa: Essays on Political Penetration*, eds. L. Cliffe, J. S. Coleman, and M. R. Doornbos p. 285.

2. Swartz, Mark J. (2002) "Bena of Southwestern Tanzania" in *Encyclopedia of World Cultures Supplement 2002*.

BIROM

1. Gunn, Harold D. (1953), *Peoples of the Plateau Area of the Northern Nigeria*, pp. 86–87.

BUBI

1. Sundiata, Ibrahim (1994), *State Formation and Trade: The Rise and Fall of the Bubi Polity, c. 1840–1910*, pp. 508–509.

CHAGA

1. Moore, Sally Falk and Paul Puritt (1977), *The Chagga and Meru of Tanzania*, pp. 27, 29.

ELOYI

1. The Joshua Project, "Eloyi/Afo in Nigeria".

FIA

1. Dughast, I. (1954), "Banen, Bafia [Fia] and Balom" in *Peoples of the Central Cameroons* ed. Merran McCulloch p. 160.

FIPA

1. Willis, Roy G. (1966), *The Fipa and Related Peoples of South-West Tanzania and North-East Zambia*, p. 21.

FON

1. Argyle, William John (1966), *The Fon of Dahomey: A History and Ethnography of the Old Kingdom*, esp. pp. 120–126.

GURMA

1. Skutsch, Carl (2013), *Encyclopedia of the World's Minorities*, p. 534.

HAYA

1. Taylor, Brian K. (1962), *The Western Lacustrine Bantu*, p. 134.

IBIBIO

1. Forde, Darryll & G.I. Jones (1967), *The Ibo and Ibibio Speaking Peoples of South Eastern Nigeria*, pp. 72–73.

IGALA

1. Armstrong, Robert G. (1955), "The Igala" in *Peoples of the Niger-Benue Confluence* ed. Darryll Forde, pp. 86–87.

IGBIRA

1. Brown, Paula (1955), "The Igbira" in *Peoples of the Niger-Benue Confluence* ed. Darryll Forde, pp. 63–64.

IRAQW

1. Huntingford, G.W.B. (1969), *The Southern Nilo-Hamites*, p. 130.

JERAWA, CHAWAI (SW)

1. Gunn, Harold D. (1953), *Peoples of the Plateau Area of the Northern Nigeria*, p. 23.

KABRE

1. Piot, Charles D. (1993), "Secrecy, Ambiguity, and the Everyday in Kabre Culture" *American Anthropologist* 95(2), pp. 355–356.

KAMUKU

1. Gunn, Harold D. & F. p. Conant (1960), *Peoples of the Middle Niger Region: Northern Nigeria*, pp. 65–66.

KANEMBU

1. Bondarev, Dimitry & Abba Tijani (2014), "Performance of Multilayered Literacy: Tarjumo of the Kanuri Muslim Scholars" in *African Literacies: Ideologies, Scripts, Education* eds. Ashraf Abdelhay, Yonas Mesfun Asfaha & Kasper Juffermans, pp. 119–120.

KATAB

1. Gunn, Harold D. (1956), *Pagan Peoples of the Central Area of Northern Nigeria*, pp. 67, 74, 85.

KORANKO

1. McCulloch, Merran (1950), *The Peoples of the Sierra Leone Protectorate*, pp. 91–92.

KORO

1. Gunn, Harold D. & F. p. Conant (1960), Peoples of the Middle Niger Region: Northern Nigeria, p. 120.

KPE

1. Ardener, Edwin (1956), *The Coastal Bantu of the Cameroons*, pp. 54, 71.

KUBA

1. Vansina, Jan (1978), "The Kuba State," in *The Early State* eds. H.J.M. Claessen & Peter Skalink, pp. 359–360.

KUKU

1. Huntingford, G.W.B. (1968), *The Northern Nilo-Hamites*, pp. 45–46, 48.

KUNG

1. Lee, Richard B. (1972), "The Intensification of Social Life Among the !Kung Bushmen," in *Population Growth: Anthropological Implications* ed. B. Spooner, pp. 346–348.

KURAMA, GURE (NE)

1. Gunn, Harold D. (1956), *Pagan Peoples of the Central Area of Northern Nigeria*, pp. 42–43.

LELE

1. Douglas, Mary (1963), *The Lele of Kasai*, p. 51.

LOTUKO

1. Somerset, Fitz R.R. (1918), "The Lotuko" in *Sudan Notes and Records* 1(3), p. 155.

LOZI

1. Turner, V.W. (1954), *The Lozi Peoples of North-Western Rhodesia*, p. 33.

LUBA

1. Maret, Pierre de (1979), "Luba Roots: The First Complete Iron Age Sequence in Zaire" *Current Anthropology* 20(1), p. 234.

LUNDA

1. McCulloch, Merran (1978), *The Southern Lunda and Related Peoples*, pp. 11–12, 19.

LUCHAZI

1. McCulloch, Merran (1978), *The Southern Lunda and Related Peoples*, p. 67.

MAKONDE

1. Douglas, Mary (1950), *The Peoples of the Lake Nyasa Region*, p. 28.

MAKUA

1. Douglas, Mary (1950), *The Peoples of the Lake Nyasa Region*, p. 25.

MAMVU

1. Geluwe, H. van (1957), *Mamvu-Mangutu et Balese-Mvuba*, pp. 56, 61.

MASAI

1. Huntingford, George W. B. (1969), *The Southern Nilo-Hamites*, pp. 112–113.

2. Southall, Aidan (2004), *Alur Society: A Study in Processes and Types of Domination*, p. 243.

MATAKAM

1. Lembezat, B. (1950), *Lew Populations Paiennes du Nord-Cameroun*, pp. 37–39.

MBUNDU

1. McCulloch, Merran (1952), *The Ovimbundu of Angola*, pp. 17, 29.

MENDE

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C. ***Geographic variables (ethnicity level)***

- **Land Area.** The land area occupied by each ethnic group calculated in square kilometers from the Murdock Map (Murdock, 1959).
- **Distance to National Border.** Distance calculated in kilometers from the centroid of each ethnic group in the Murdock Map (Murdock, 1959) to the nearest national border.
- **Split Ethnic Group Indicator.** An indicator that equals one when at least 10% of an ethnic group's land area partitioned into different countries. This variable is motivated by Michalopoulos and Papaioannou (2016).
- **Agricultural Suitability Index and Crop-Specific Maximum Potential Yield.** The suitability index is calculated by the Food and Agriculture Organization (FAO) and reported in their *Global Agro-Ecological Zones* (GAEZ) database. We compute the average suitability for each ethnic group using the shapefile associated with Plate 46 that can be accessed at: `http://webarchive.iiasa.ac.at/Research/LUC/GAEZ/index.htm`. The index ranges from 0-1. The crop-specific suitability measures are computed from the maximum potential yield data files for those crops reported by FAO GAEZ and are measured in hectograms per hectare. For both the suitability index and the measures for individual crops, we assume rain-fed cultivation with low input use.
- **Elevation.** Calculated as the mean elevation in kilometers in each ethnic group as defined by the boundaries on the Murdock Map (Murdock, 1959). Data are from GTOPO30, a "global digital elevation model (DEM) with a horizontal grid spacing of 30 arc seconds," which can be accessed at: `https://lta.cr.usgs.gov/GTOPO30`.
- **Ecological Diversity.** This variable measures local ecological diversity and is constructed as a Herfindahl index from the shares of the area in an ethnic group that are located in each

ecological zone. These data are from Fenske (2014).

- **Temperature.** Calculated as the mean temperature in degrees Celsius within an ethnic group's boundaries as defined by Murdock (1959). The data used for this measure are from Alsan (2015), and originally from the University of East Anglia Climatic Research Unit: `http://www.cru.uea.ac.uk/data`.

- **Malaria Ecology Index and Tse Tse Suitability Index.** The malaria ecology index is computed from a model incorporating both the "human biting tendency" of the mosquito and the mortality rate; data used to compute the index are collected from field studies and incorporate the most prevalent mosquito type in a given area. These data are from Alsan (2015), and originally from Kiszewski, A.Mellinger, Spielman, Malaney, Sachs and Sachs (2004). The Tse Tse Suitability Index is a measure of how favorable the environment of each ethnic group is to the Tse Tse Fly. This measure is from Alsan (2015).

- **Sickle Cell Allele Frequency.** This variable measures the average frequency of the sickle cell allele in each ethnic group. The data are from Depetris-Chauvin and Weil (2017) and were originally constructed by Piel, Patil, Howes, Nyangiri, Gething, Williams, Weatherall and Hay (2010).

- **Latitude & Longitude.** Calculated at the centroid of each ethnic group in the Murdock Map (Murdock, 1959).

- **Precipitation.** The rainfall data are from the Tropical Rainfall Measuring Mission (TRMM) satellite. Wherever possible, TRMM data are also validated using data from "ground-based radar, rain gauges and disdrometers" (`https://pmm.nasa.gov/TRMM/ground-validation`). The TRMM precipitation data are available at a 0.25-by-0.25-degree resolution at three-hour intervals. We first calculate the average daily precipitation (mm) in each month and grid-cell. We then calculate the average daily precipitation for each month and ethnic group by taking the average over all grid-cells that fall within the land occupied by each ethnicity, where ethnic group land area is defined by Murdock (1959). The data can be accessed at `https://pmm.nasa.gov/data-access/downloads/trmm`. The relevant download is the "3B42 RT: 3-Hour Realtime TRMM Multi-satellite Precipitation Analysis."

D. ***Historical characteristics (ethnicity level)***

- **Levels of Jurisdictional Hierarchy Beyond the Local Community.** Variable v33 from Murdock's Ethnographic Atlas. This variable takes integer values from 1–5.

- **Levels of Jurisdictional Hierarchy of the Local Community.** Variable v32 from Murdock's Ethnographic Atlas. This variable takes integer values from 1–3.

- **Election of Local Headman.** Coded from variable v72 in Murdock's Ethnographic Atlas. We construct an indicator variable that equals 1 if v72=6 (that is, if succession to the office of local headman determined by "election or other formal consensus, nonhereditary").

- **Property Rights in Land.** Coded from variable v74 in Murdock's Ethnographic Atlas as an indicator variable that equals 1 if v74 is not equal to 1 ('absence of individual property rights').

- **Settlement Complexity.** Variable v30 from Murdock's Ethnographic Atlas. This variable takes integer values from 1–8 increasing in pre-colonial settlement complexity. The categories range from 'nomadic or fully migratory' (1) to 'complex settlements' (8).

- **Major City in 1800.** An indicator that equals 1 if a major city fell within the Murdock boundary of the ethnic group in 1800. Geospatial data on city location – defined as locations with over 20,000 inhabitants – are from Chandler (1987). They have been used in Nunn and Wantchekon (2011), Alsan (2015), Michalopoulos and Papaioannou (2016), among other studies.

- **Population Density.** Ethnic group population density, parameterized as log (0.01 + population per square kilometer), is computed for 1960. The data, from the *UN Environment Programme / Global Resource Information Database* (UNEP/GRID), can be accessed at: `https://na.unep.net/siouxfalls/datasets/datalist.php`.

- **Single Inheritor of Land.** Coded from variable v75 in Murdock's Ethnographic Atlas as an indicator variable that equals 1 if v75 is equal to 2, 3, or 4 (exclusive, ultimogeniture, or primogeniture).

- **Patrilineality and Matrilineality.** Coded from variable v43 in Murdock's Ethnographic Atlas as indicator variables that equals 1 when v43 = 1 ('patrilineal') or 3 ('matrilineal'), respectively.

- **Patrilocality and Matrilocality.** Coded from variable v12 in Murdock's Ethnographic Atlas as indicator variables that equals one when v12 = 8 ('patrilocal') or 5 ('matrilocal') respectively.

- **Polygyny.** Coded from variable v9 in Murdock's Ethnographic Atlas as an indicator variable that equals one if v9>2

- **Cousin Marriage.** Coded from variable v24 in Murdock's Ethnographic Atlas as indicator variables that equals one when v24 is not equal to 8 ('no first or second cousin marriages').

- **Bride Price.** Coded from variable v6 in Murdock's Ethnographic Atlas as indicator variables that equals one when v6 = 1 ('bride price or bride wealth').

- **Presence of Active God.** Coded from variable v34 in Murdock's Ethnographic Atlas. We construct an indicator that equals 1 if v34=3 or 4 (i.e. if there is a high god that is either "active in human affairs but not supportive of human morality" or "supportive of human morality.")

- **Herding Society.** Constructed as in Becker (2019) as an interaction between the ethnic group's dependence on agriculture and an indicator that equals one if the if the group's predominant animal is a herding animal. Dependence on agriculture (measured as a share of total subsistence, between 0 and 1) is computed from v4 in Murdock's Ethnographic Atlas using the midpoint of each bin. The herding animal indicator is also constructed from Murdock's Ethnographic Atlas. as an indicator that equals one if v40>2. The final variable ranges from 0–1.

- **Female Participation in Agriculture.** Coded from variable v54 in Murdock's Ethnographic Atlas. We construct from v54 a variable that takes integer values from 1–5 increasing in female participation in agriculture. The raw v54 variable takes integer values ranging from 1–9. We exclude groups where v45>6. No ethnic groups in the Ethnographic Atlas are coded as 7 or 8, and groups are coded as 9 if agriculture is an "absent or unimportant activity." We also combine groups coded as 3 or 4 into a single category, since both suggest equal participation of men and women in agriculture.

- **Historical Dependence on Gathering, Hunting, Fishing, Animal Husbandry, and Agriculture.** Variables v1–v5 respectively in Murdock's Ethnographic Atlas. The variables take integer values from 0–9 increasing in percent dependence on the food source. For example, the integer 0 indicates 0–5% dependence while 9 indicates 86–100% dependence.

- **Intensity of Agriculture.** Variable v28 from Murdock's Ethnographic Atlas. The variable takes integer values from 1–6 increasing in agricultural intensity. The categories range from 'no agriculture' (1) to 'intensive irrigated agriculture' (6)

- **Historical Slave Exports.** We use ethnic group-level measures of Atlantic and Indian Ocean slave exports from Nunn and Wantchekon (2011): `https://scholar.harvard.edu/nunn/pages/data-0`. Following Nunn (2008), we normalize slave exports by land area using ethnic group land area, which is calculated using a digitized version of the map from Murdock (1959).

- **Mission Stations.** Data on the location of Catholic and Protestant mission states are from Nunn (2010), originally from Roome (1924). We compute an indicator that equals one if there was a mission station in an ethnic group using the digitized geo-coded map from Nunn (2010).

- **Railway Lines.** Data on the location of colonial railways are from Nunn and Wantchekon (2011), and originally from Century Company (1911). We compute an indicator that equals one if an ethnic group is intersected by a colonial railway line.

- **Pre-19th Century Conflict.** We use historical conflict data from Besley and Reynal-Querol (2014) and Jaques (2007). Using Besley and Reynal-Querol (2014), we construct an indicator that equals one for ethnic groups that experienced conflict between 1400 and 1700AD. Their dataset only includes conflict during this time period. Using Jaques (2007), we construct an indicator variable that equals one for ethnic groups that experienced a conflict between 0 and 1900AD. For each group, we also calculate their total number of conflicts and number of years with at least one conflict in the Jaques (2007) data. Conflicts were linked to ethnic groups using the location of each conflict as mapped by Murdock (1959).

E. ***Contemporary characteristics (ethnicity level)***

- **Muslim Majority.** We construct an indicator that equals 1 if the majority of an ethnic group's population is Muslim. This was coded individually for each ethnic group using the World Religion Database: `http://www.worldreligiondatabase.org/wrd_default.asp`.

- **Light Density.** Following Michalopoulos and Papaioannou (2013), we compute light density as the average luminosity across pixels that fall within an ethnic group's boundaries in Murdock (1959). For the empirical analysis, we take the log of ethnicity-level light density normalized by population. We use data from the U.S. National Oceanic and Atmospheric Administration/National Geophysical Data Center Earth Observation Group, which can be accessed at: `https://ngdc.noaa.gov/eog/`.

F. ***Motivation behind the characteristics examined in Table I***

We now discuss the reasoning and motivation behind the characteristics examined in Table I. Panel A of Table I includes the twelve conflict outcome variables that we use throughout the analysis. These are discussed in detail in Section A of the paper. Panels B, C, and D report balance tests for variables that are geographic, historical, and contemporary in nature.

Panel B: Geographic Variables. A first set of geographic variables are included because they are potentially correlated with conflict. These include each ethnic group's: land area, distance to the nearest national border, and an indicator if a group is split by a national border (Michalopoulos and Papaioannou, 2016).

A next set of geographic characteristics is designed to capture differences across ethnic groups in productivity and the potential for self-sufficiency and trade. This was motivated in part by the fact that some anthropological work suggests that geographic characteristics related to self-sufficiency and trade affected the emergence of segmentary lineage organization (e.g. Forde, 1953, 1970, Verdon, 1982). To capture local agricultural productivity, we include a total agricultural suitability index, as well as separate measures of each group's suitability for maize, cassava, millet, sorghum, potato and yam. To capture factors that might be correlated with access to or demand for trade, we included measures of elevation, a measure of ecological diversity from Fenske (2014), the standard deviation of agricultural suitability, an indicator for whether an ethnic group is on the coast, an indicator if it contains a perennial river, terrain ruggedness, and average temperature.

The next set of geographic characteristics are motivated by the hypothesis, discussed recently in Enke (2019), that a hostile disease environment makes individuals less likely to venture beyond the limits of their own ethnic groups, which might make the development of segmentary lineage organization more likely. Therefore, we include in our set of geographic variables a malaria suitability index, a tsetse fly suitability index, and a measure of sickle cell allele frequency, which is a measure of the historical prevalence of malaria.

Finally, we include latitude, longitude, and absolute latitude to assess whether segmentary lineage groups and non-segmentary lineage groups are systematically located in different parts of sub-Saharan Africa.

Panel C: Ethnicity-Level and Historical Variables. The ethnicity-level and historical characteristics reported in Panel C of Table I are meant to capture characteristics that could be correlated with segmentary lineage organization and/or conflict. In segmentary lineage societies, lineage segments take a corporate form and affect administrative and political organization. Therefore, it is important to know whether segmentary lineage societies are, on average, different from non-segmentary lineage societies along observable political dimensions. The political variables that we include are: levels of jurisdictional hierarchy beyond the local level, levels of jurisdictional hierarchy of the local community, an indicator that equals one if the headman is elected, and an indicator for the presence of individual property rights in land.

It also might be the case that, historically, segmentary lineage societies were poorer than non-segmentary lineage societies. If this were true, then then it would affect our interpretation of the mechanism underpinning our baseline results. To check for this, we include measures of settlement pattern complexity, the presence of a city in 1800, and population density in 1960.

Segmentary lineage organization might be correlated with a range of characteristics of an ethnic group's social structure. Motivated by this, we examine a range of ethnicity-level characteristics related to other features of an ethnic group's social structure, including indicators that equal one if: land is inherited by a single child, descent is patrilineal, descent is matrilineal, living arrangements are patrilocal, living arrangements are matrilocal, marriage customs are polygynous, there is cousin marriage, and the marriage custom is bride price. We also examine an indicator that equals one if the ethnic group believes in a moralizing high God.

We also include a measure of traditional reliance on pastoralism, measured using the dependence on pastoralism index from Becker (2019). This is done to examine the potential that segmentary lineage organization might be correlated with a 'culture of honor', which can lead to an escalation of violence and conflict (Nisbett and Cohen, 1996, Grosjean, 2014). We also include female participation in agriculture to check whether the role of women (in this activity) is different in segmentary lineage societies.

It has been hypothesized that segmentary lineage societies are more likely to develop in particular geographic settings. While we included a range of geographic characteristics to test for these differences in Panel B, in Panel C we include additional measures that capture geographic endowments that affect the nature of subsistence activities and production. These are a group's: dependence on agriculture, dependence on husbandry, and intensity of agricultural production.

The last set of variables we include are measures of historical European contact, before and during the colonial period. Given the evidence of the effects of the various forms of European contact on African development, we check whether segmentary lineage organization is associated with these. The variables we include are: (natural log of) slave exports, an indicator for the presence of a Christian mission station, and an indicator for the presence of a colonial railroad.

Panel D: Contemporary Variables. The contemporary controls are included to better understand whether segmentary lineage societies are systematically poorer or more unequal today. If this is the case, our results might be due, in part, to the effect of poverty or inequality on conflict rather than solely a direct effect of the social structure. To measure wealth today, we include light density in 2010 (in levels and logs). To measure inequality, we include the standard deviation of light density in 2010 (in levels and logs). To capture recent changes in wealth and inequality, we also include the growth in the mean and standard deviation of light density from 2000–2010. Last, we include an indicator variable that equals one if an ethnic group is majority Muslim today.

G. *Grid-cell level characteristics*

- **Self-Reported Ethnicity.** Self reported ethnicity, used in Figure 5, is from geo-referenced versions of rounds 3–6 of the *Afrobarometer Surveys*. Individuals in the survey were matched to grid cells based on their location (latitude and longitude). To construct Figure 5, for each grid cell in a segmentary lineage society (based on the Murdock Map and our coding) in our sample, we compute the fraction of individuals from the *Afrobarometer Surveys* whose self-reported ethnicity matched the segmentary lineage society. For each grid cell in a non-segmentary lineage society, we compute the fraction of individuals from the Afrobarometer survey whose self reported ethnicity matched the adjacent segmentary lineage society. This variable is on the y-axis in Figure 5.

- **Latitude and Longitude.** Latitude and longitude are computed at the centroid of each grid cell.

- **Agricultural Suitability Index.** This suitability index is from the *Food and Agriculture Organization*'s (FAO) *GAEZ* database and is calculated for rain-fed crops and low input intensity. We compute the average suitability for each grid cell using the shapefile associated with Plate 46 that can be accessed at: `http://webarchive.iiasa.ac.at/Research/LUC/GAEZ/index.htm`.

- **Split Grid Cell.** An indicator that equals one if a grid cell is intersected by an international border. This variable is motivated by Michalopoulos and Papaioannou (2016).

- **Elevation and Slope.** Data for both elevation (m) and slope (degrees) are from GTOPO30, a "global digital elevation model (DEM) with a horizontal grid spacing of 30 arc seconds," which can be accessed at: `https://lta.cr.usgs.gov/GTOPO30`. To compute slope, we take the absolute value of each cell in the GTOPO30 data and compute the average over all cells within each grid cell. This an uphill slope measure equivalent to, for example, the measure used in Nunn and Puga (2012).

- **Temperature.** Average grid-cell level temperature in degrees Celsius was calculated for the period 2000–2010 from the University of East Anglia Climatic Research Unit, `http://www.cru.uea.ac.uk/data`.

- **Water Coverage.** We constructed an indicator that equals one if a grid cell is intersected by a body of water. Data on the distribution of land water are from the Inland Water Area Features dataset published by Global Mapping International (GMI). GMI shut down in June 2017.

- **Cereal Suitability.** Agro-ecological suitability cereal crops is from the FAO GAEZ database. The cereal composite measure incorporates the suitability of wheat, wetland rice, dryland rice, maize, barley, rye, pearl millet, foxtail millet, sorghum, oat, and buckwheat. We compute average suitability for each grid cell for both measures, assuming rain-fed cultivation and low input intensity. The data can be accessed at: `http://gaez.fao.org/Main.html#`.

- **Land Cultivation.** Data on the distribution of cultivated land, including both irrigated and rain-fed crops, are from the FAO GAEZ. For each grid cell, we compute the fraction of land under cultivation based on FAO estimates. The data can be accessed at `http://gaez.fao.org/Main.html#`.

- **Mission Stations.** Data on the location of Catholic and Protestant mission states are from Nunn (2010), originally from Roome (1924). We compute the number of mission stations in each grid cell using the digitized geo-coded map from Nunn (2010).

- **Railway Lines.** Data on the location of colonial railways are from Nunn and Wantchekon (2011), and originally from Century Company (1911). We compute an indicator that equals one if a grid cell is intersected by a colonial railway line.

- **Petroleum.** We compute an indicator that equals one if there is an oil field in the grid cell. Data on the distribution of oil fields is from the Petroleum Dataset published by the Peace Research Institute Oslo (PRIO), and can be accessed at: `https://www.prio.org/Data/Geographical-and-Resource-Datasets/Petroleum-Dataset/`.

- **Diamond Mines.** We compute an indicator that equals one if there is a diamond mine in the grid cell. Data on the distribution of diamond mines is from the Diamond Resources dataset published by the Peace Research Institute Oslo (PRIO), and can be accessed at: `https://www.prio.org/Data/Geographical-and-Resource-Datasets/Diamond-Resources/`

2. Additional Figures

Figure B2 shows an image taken from Abbink (1985, p. 5) which provides a sketch of the clan structure of the Somali lineage group, which has a segmentary lineage organization.

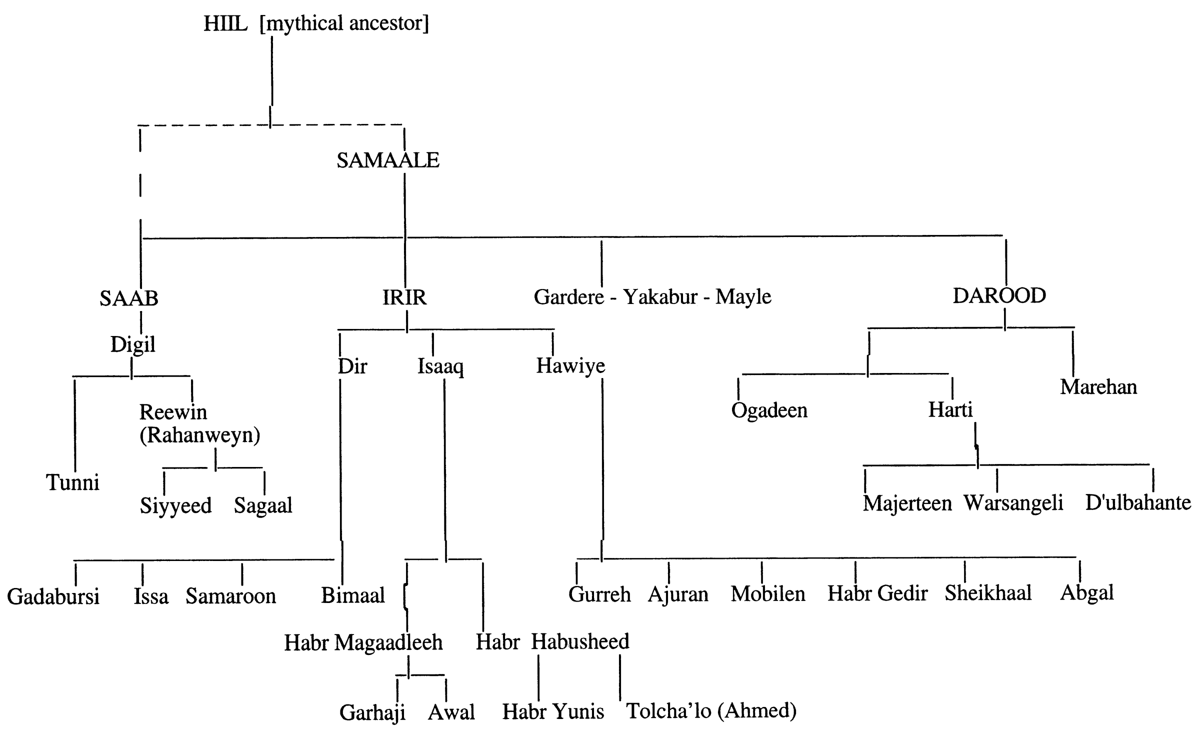

Figure B2: The segmentary lineage structure of the Somali Clan. Image is taken from Abbink (1985, p. 5).

As discussed in the main text of the paper, we are careful to make sure our results do not capture differences in the level of political centralization between segmentary lineage and non-segmentary lineage groups. In all specifications, we account for the number of levels of political authority beyond the local community. It is important that this measure of state centralization and segmentary lineage organization are not strongly correlated. As reported in the text, the correlation between the two is negative but modest. Figure B3 provides concrete examples of this, showing ethnic groups with and without segmentary lineage structures and with and without centralized states.

We categorize societies into four groups depending on: (1) whether or not they have a segmentary lineage structure, and (2) whether or not they are politically centralized, which we

	Centralized *Levels of Jurisdictional Hierarchy (v33) = 2-4*	Not Centralized / Stateless *Levels of Jurisdictional Hierarchy (v33) = 0-1*
Segmentary Lineage	**20** (e.g. Duala, Ndembu)	**53** (e.g. Nuer, Tiv)
Not Segmentary Lineage	**32** (e.g. Kuba, Haya)	**36** (e.g. Kung, Masai)

Figure B3: Matrix showing the number (and examples) of segmentary lineage and non-segmentary lineage societies that are considered as having a centralized state or being stateless.

define as having two or more levels of political authority beyond the local community according to variable *v33* from the *Ethnographic Atlas*. Thus, stateless societies have zero or one levels, while centralized societies have two, three or four levels. While there is a negative correlation between segmentary lineage organization and centralization, there are examples of ethnic groups in all four groups, and they are distributed fairly equally between the different cells.

3. Text to accompany of Appendix Tables reported in the 'Supplementary Materials'

In the Supplementary Materials, we present as series of extensions to our baseline OLS estimates. In this section, we provide further of the details of estimation procedure for those for which this is necessary.

In Appendix Table A.I, we investigate the relationship between characteristics of our baseline sample and characteristics of ethnic groups in the *Ethnographic Atlas* outside of our sample. We report the coefficient on an indicator variable that equals one if a group is in our sample for a range of outcome variables. The main take away is that groups in the sample are more populous and have more centralized states, which is intuitive since these are the groups about which there is most information.

We undertake several tests of the sensitivity of our OLS estimates. We test the robustness of our results to linking ethnic groups to conflict events using the description of the actors in the conflict rather than the location of the conflict. These estimates are reported in columns 1–3 of Appendix Table A.V. We also test the robustness of our results by using the UCDP-GED data. Columns 4–6 of Appendix Table A.V report the results of this exercise for three of our outcome variables, (log of) total conflict incidents, (log of) total fatalities and (log of) years of conflict. The results are very similar to our baseline results using the ACLED dataset both in the size of the coefficients and in their levels of statistical significance, which is reassuring.

An additional check of our cross-ethnic group results is to examine the sensitivity of the OLS estimates to the inclusion of potentially endogenous variables. Given the evidence from Besley and Reynal-Querol (2014) that historical conflict is correlated with post-colonial conflict, we include controls for the intensity of historical conflicts in our baseline regressions. It is possible that segmentary lineage organization increased conflict in the past, which results in more present-day conflict. Appendix Table A.VI reports estimates where we control for historical conflict in our baseline regression, using the most conservative specification from Table II. We measure conflicts using two sources: Jaques (2007) and Besley and Reynal-Querol (2014). Columns 1–3 report estimates where we control for measures of conflict, from 0–1900AD, taken from Jaques (2007); either, an indicator for the presence of at least one conflict, the number of conflicts during the historical period, or years of conflict during the period. Column 4 reports estimates where we control for the historical incidence of conflict measure taken from Besley and Reynal-Querol

(2014). Column 5 simultaneously controls for historical incidence measures from the two sources. As shown, the estimated coefficients for our variable of interest remain significant and very similar in magnitude, suggesting that historical conflict and its relationship to current conflict is not a primary channel.

One potential concern is that our OLS estimates could be driven by outliers or conflicts that have very large numbers of fatalities and last for longer stretches of time. This could include conflict events involving the Lord's Resistance Army in Uganda, in the territory of segmentary lineage societies such as the Acholi. Although Figure 3 in the paper suggests that this is not an obvious concern, we also take a more systematic approach to test for the robustness of our estimates to the exclusion of outliers. One strategy is to drop observations with high Cook's Distance, which is a commonly used measure of the leverage of an observation. Following Bollen and Jackman (1990), we drop observations with Cook's Distance greater than $4/n$ where $n = 141$ is the number of observations in the regression. These estimates are reported in panel A of Appendix Table A.VII. Our results are largely the same, aside from a drop in significance of the segmentary lineage indicator for outcome variables related to civil conflicts. As an additional test, we re-estimate the fully-controlled specification for each outcome variable after removing observations whose value for the dependent variable falls in the top 5 percent. As reported in Panel B of Appendix Table A.VII, the estimates remain robust to this procedure.

Another potential concern is that the results are biased by conflict incidents that are incorrectly or imprecisely geocoded in the ACLED database. To address this, we re-estimate our baseline regression after excluding conflict incidents coded in the ACLED data as having low geographic precision. Low precision incidents make up 4.75% of the overall ACLED data. While a minimum level of geographic information about a conflict incident is required for inclusion in the ACLED data, an incident is considered to have low geographic precision if the conflict can only be traced to a "larger region" within a province. These results, which are reported in panel C of Table A.VII, are very similar to the baseline estimates.

We also use nearest neighbor matching to compare each segmentary lineage society to the non-segmentary lineage society that is most similar, based on a range of observable characteristics. We measure distance using Mahalanobis distance, which is defined as $D_{ij} = \sqrt{(X_i - X_j)' S^{-1} (X_i - X_j)}$, where X_i and X_j are vectors of observable covariates and S^{-1} is the variance-covariance matrix of X_j.

Appendix Table A.VIII presents the results from this approach using different choices of X_i and X_j. In column 1, X_i and X_j consist of latitude and longitude. In column 2, they consist of our baseline set of geographic and historical controls. Finally, in the column 3, we continue to match ethnic groups based on all geographic and historical controls, and we additionally impose the requirement that members of a matched pair have the same number of levels of jurisdictional hierarchy beyond the local community. As discussed in the body of the paper, levels of jurisdictional hierarchy is of particular interest as a potential confounder. These results are similarly robust.

Since all of the conflict outcome variables are count variables, we check that our baseline estimates are robust to the use of count models instead of OLS. In Appendix Table A.IX, we report estimates of our most stringent specification but using using either Poisson (columns 1–3) or negative binomial (columns 4–6) regression models. For all outcome variables, our results remain robust to these alternative estimation strategies. In all cases, the coefficient of interest is positive and significant.

The next set of appendix tables in the Supplementary Materials investigate the heterogeneous effects of segmentary lineage organization. Heterogeneous effects based on country-level characteristics are reported in Table A.X and heterogeneous effects based on ethnicity-level characteristics are reported in Appendix Table A.XI. We do not find evidence of heterogeneous effects of segmentary lineage organization across a range of characteristics. We do find that the relationship between segmentary lineage organization and conflict is muted in wealthier countries and that the effect is substantially reduced if there is a capital city in the homeland of the ethnic group.

We also investigate whether the relationship between adverse rainfall shocks and climate is more pronounced in segmentary lineage societies. Estimates of equation (2) of the paper – the equation used to estimate the heterogeneous impact of adverse rainfall shocks – are reported in Appendix Table A.XII. Results are reported using both the log number of deadly conflict incidents and number of conflict deaths as the outcome variables. Columns 1 and 3 report estimates of a version of equation (2) in the paper that does not have the interaction term. Consistent with previous estimates, we find that adverse rainfall shocks tend to be associated with greater conflict (e.g., Miguel, Satyanath and Saiegh, 2004). However, in line with other studies, we also find that this relationship is not fully robust (e.g., Ciccone, 2013, Buhaug, Nordkvelle, Bernauer, Bohmelt, Brzoska, Busby, Ciccone, Fjelde, Gartzke, Gleditsch, Goldstone, Hegre, Holtermann, Koubi, Link, Link, Lujala, O'Loughlin, Raleigh, Scheffran, Schilling, Smith, Theisen, Tol, Urdal and van Uexkull, 2014). In many specifications, the estimated relationship is not statistically different from zero.

The weak positive relationship between adverse rainfall and conflict masks systematic heterogeneity. Allowing for an interaction between adverse rainfall and segmentary lineage organization, we find that the effect of adverse rainfall is much stronger for segmentary lineage groups. For non-segmentary lineage groups, the estimated relationships are not statistically different from zero.[1] The estimated coefficient for the (uninteracted) segmentary lineage indicator variable is positive, sizeable, and statistically significant. This is consistent with other factors, besides adverse rainfall, being a catalyst for conflict—the impact of adverse rainfall is, however, significantly exacerbated by segmentary lineage organization.

Next, we turn to a series of tests of the sensitivity and validity of the RD estimates. Appendix Table A.XIII presents fuzzy RD estimates using the sample of grid cells matched to at least one individual in Rounds 3-6 of the *Afrobarometer* survey. The endogenous variable is the share of respondents in each grid cell who self identify as a member of the segmentary lineage society in the cell's ethnic group pair. Across outcome variables, the fuzzy RD estimates are larger than the baseline reduced form estimates, suggesting that the difference in magnitude between the OLS and RD estimates could be driven by the fact that near the border, below 100% of respondents identify as a member of the group to which their grid cell is assigned.

We also check the robustness of our baseline RD estimates to the use of different estimators and inclusion of a series of different running variables. These estimates are reported in Appendix Table A.XIV. For example, in panels B–C, we report Poisson and negative binomial estimates, and in the remaining panels D–I, we report estimates from regressions that include a wide variety of running variables, including higher degree polynomials, running variables in latitude and longitude, and versions of each in which we estimate a separate coefficient for each set of continuous ethnic groups or ethnic group pair.

Since the RD analysis estimates differences in conflict intensity between regions that are geographically close, it may be particularly sensitive to imprecision in the geocoding of conflict

[1] Given the presence of lagged dependent variables in equation (2), there is potential concern about Nickel bias. If we instead use an Arellano-Bond estimator, we obtain very similar results to what we report here. The coefficient on the interaction term in column 2 of Panel A, for example, is 2.60 and significant at the 5% level. We obtain very similar estimates when we specifications that do not include lags of the dependent variable.

events. To address this potential concern, we re-estimate our baseline RD regression after excluding conflict events coded in the ACLED data as having a low level of geographic precision. Results from this robustness check are reported in Table A.XV and look very similar to the baseline results. A key assumption of the RD analysis is that observable characteristics vary smoothly at the ethnic group boundary. To check this, we estimate our baseline RD specification with a series of geographic and historical grid-cell level variables as the outcome. These results are reported in Appendix Table A.XVI.

In Appendix Table A.XVIII, we examine kinship ties directly. The fact that members of segmentary lineage societies have closer ties to their kin might help explain the obligation to join in conflict that involves lineage members. Using individual-level data from rounds 3–6 of the *Afrobarometer* Survey, we find that members of segmentary lineage societies have a larger gap in trust between relatives and non-relatives (other people they know, fellow countrymen, or non-coethnics). This relationship has been previously documented in by Moscona, Nunn and Robinson (2017).

Next, we investigate a series of other potential mechanisms and differences between segmentary lineage and non-segmentary lineage societies that might drive the baseline result. First, we examine differences in income and prosperity between segmentary lineage and non-segmentary lineage societies. Appendix Table A.XIX reports differences in various proxies for income between segmentary lineage and non-segmentary lineage societies: (i) wealth, using individual level data from Demographic and Health Surveys (DHS), (ii) light density at night, and (iii) educational attainment, also measured using the DHS. We do not find a systematic relationship between segmentary lineage organization and income; if anything, segmentary lineage societies are slightly richer making it unlikely that variation in income is the causal mechanism. We also examine the relationship between segmentary lineage organization and access to a series of public goods using individual-level data from rounds 3–6 of the *Afrobarometer* Surveys. These results are presented in Appendix Table A.XX. Columns 1–6 report the relationship between segmentary lineage organization and indicator variables for the presence of a series of public goods: electricity, clean water, sewage, a school, a health clinic, and a police station. In column 7, the outcome variable is the average of the six indicators, and in column 8, it is the first principal component. We do not uncover any systematic relationship between segmentary lineage organization and access to public goods.

While we find no relationship between segmentary lineage organization and wealth, it's still possible that segmentary lineage societies are more unequal. We investigate this possibility in Appendix Table A.XXI. In columns 1–2, the outcome variable is the (log of the) standard deviation of light density at night and in columns 3–4 it is the ethnic group level wealth Gini coefficient, computed from individual-level wealth information in the DHS (see Appendix Table A.XIX). We find no evidence that segmentary lineage societies are more unequal than non-segmentary lineage societies.

We also investigate whether segmentary lineage societies are more likely to be excluded from national politics or discriminated against by the government. The Ethnic Power Relations (EPR) database determines the extent to which each politically relevant ethnic group has access to state power at the national level. It identifies groups that are "excluded" from state power and further categorize those who are excluded into three categories: (*i*) "Powerless," which means they hold no political power and do not influence decision-making in the national executive level, but they are not actively discriminated against; (*ii*) "Discrimination", which means that the ethnic group is actively and intentionally discriminated against; and (*iii*) "Self-exclusion," which means the ethnic group has intentionally excluded itself from state power by controlling or attempting to control a territory that they consider independent from the nation state (this is very infrequent). Using this information, which is provided for each ethnic group and each year since 1960, we identify the number of years each group was classified as being excluded from power in any way; as being powerless due to discrimination; and as being powerless but not due to discrimination. The latter two categories are are mutually exclusive in the EPR data, so the number of years a group was excluded for any reason is simply the sum of the number of years that the group was powerless without discrimination and the number of years that the group was discriminated against. We do not examine the third category (self-exclusion) individually since there is only one such case in our sample. The estimates are reported in Appendix Table A.XXIII.

We also study representation in national politics using data from Francois, Rainer and Trebbi (2015), which reports the share of all cabinet positions in the national government and the share of the top cabinet positions in national government that are held by individuals from each ethnic group. Their data are available for ten African countries since independence. We use these measures of ethnic representation in the national cabinet, conditioning on the share of each ethnic group in the total population, as an alternative measure of an ethnic group's access to state power.

The estimates are reported in Appendix Table A.XXIV. We find no evidence using either EPR data or Francois et al. (2015) data that segmentary lineage societies are more likely to be excluded from politics.

4. Additional Tables

Summary statistics of all variables, calculated at the ethnicity-level are reported in Appendix Table B.II and summary statistics of variables calculated at the grid-cell-level are reported in Appendix Table B.III.

In Table A.IV, we report baseline OLS estimates using an interpolated proxy for segmentary lineage organization for all African ethnic groups in the *Ethnographic Atlas* using a LASSO procedure. The estimated coefficients from this procedure are reported in online Appendix Table B.IV.

Table B.V reports the results from a set of tests that investigate the potential role of omitted variables in biasing our baseline results. We employ a strategy adapted by Nunn and Wantchekon (2011) from Altonji, Elder and Taber (2005) that allows us to determine how much stronger selection on unobservables would have to be compared to selection on observables in order to fully explain away our result. To perform this test, we calculate the ratio $\hat{\beta_F}/(\hat{\beta_R} - \hat{\beta_F})$, where $\hat{\beta_F}$ is our coefficient of interest from a regression that includes a full set of controls while $\hat{\beta_R}$ is our coefficient of interest from a regression that includes a restricted set of covariates.

In the first three columns of Table B.V, we report the results for each of the twelve outcome variables. The country fixed effects, geographic controls, and historical controls are included in the full set of controls, while the restricted set of controls only includes country fixed effects. Each panel reports a ratio where the fully-controlled regression includes the geographic and historical controls, while the restricted regression includes country fixed effects only. This yields twelve ratios that range from -34.64 to 24.05. In some cases, the coefficient in the fully-controlled model is larger than that in the uncontrolled model, giving a negative ratio. The ratios suggest that the influence of unobservable characteristics would have to be far greater than the influence of observable characteristics to fully account for our findings.

We also use results from Oster (2017) in order to calculate a lower bound for our coefficient of interest (columns 4–6). Oster's result relies on the assumption that observables and unobservables have the same explanatory power in the outcome variable, then the following estimator is a consistent estimator: $\beta^* = \hat{\beta_F} - (\hat{\beta_R} - \hat{\beta_F}) \times \frac{R^2_{max} - R^2_F}{R^2_F - R^2_R}$, where $\hat{\beta_F}$ and $\hat{\beta_R}$ are as defined above, R^2_F is the R^2 from the fully controlled regression, and R^2_R is the R^2 from the regression with restricted controls. R^2_{max} is the R^2 from a regression that includes all observable and unobservable controls. R^2_{max} is unobserved; however, we know that the maximum value for R^2_{max} is one and this value yields the most conservative estimate of β^*. While recent research, such as Gonzalez and Miguel (2015) has shown that Oster's R^2_{max} should be below one, which thereby raises the lower bound for β^*, in this analysis we assume $R^2_{max} = 1$ and rely only on the most conservative lower bound estimate.

We report lower bound estimates corresponding to the fully controlled and restricted regressions in columns 4–6 of Table B.V. All lower bound estimates remain positive and economically significant. These results indicate that it is unlikely that our OLS estimates are biased by the presence of some unobservable factor, and suggest that the relationship that we have identified between segmentary lineage organization and conflict is indeed causal.

In the placebo RD analysis discussed in the paper, we construct principal components to separate ethnic groups into treatment and control categories based on a broad range of historical characteristics. These principal components are used in panels C and D of Table IV. Table B.VI reports the factor loading of both principal components used to construct the treatment variables for the placebo RD estimates. The first principal component (columns 7–9 of Table IV) is constructed from twelve indicator variables for each level of jurisdictional hierarchy and level of historical settlement complexity. The second principal component (columns 10–12 of Table IV) adds to these twelve variables additional ethnic group level historical characteristics.

Table B.II: Summary statistics, ethnicity-level variables.

	(1) Obs.	(2) Mean.	(3) St. Dev	(4) Min	(5) Max
			Ethnicity-Level Variables		
ln (1+Deadly Conflict Incidents):					
All Conflicts	145	2.556	1.798	0	6.685
Civil Conflicts	145	1.848	1.848	0	6.846
Non-Civil Conflicts	145	2.024	1.577	0	5.852
Within-Group Conflicts	145	1.266	1.299	0	5.094
ln (1+Conflict Deaths):					
All Conflicts	145	4.006	2.761	0	11.723
Civil Conflicts	145	3.109	2.817	0	11.688
Non-Civil Conflicts	145	3.046	2.369	0	8.289
Within-Group Conflicts	145	2.196	2.243	0	8.152
ln (1+Months of Deadly Conflict):					
All Conflicts	145	2.158	1.445	0	4.836
Civil Conflicts	145	1.631	1.398	0	4.625
Non-Civil Conflicts	145	1.674	1.307	0	4.543
Within-Group Conflicts	145	1.128	1.121	0	4.025
Geographic Variables:					
ln Land Area	145	9.718	1.145	7.424	12.310
Mean Altitude	145	0.365	0.342	0.002	1.676
ln Distance to National Border	145	4.401	1.099	0.575	6.293
Agricultural Suitability Index	145	0.564	0.170	0.913	0.857
Split Ethnic Group (10%)	145	0.317	0.467	0	1
Absolute Latitude	145	7.700	5.364	0	29
Longitude	145	19.679	15.994	-17	48
Historical Variables:					
Levels of Jurisdictional Hierarchy	141	1.270	0.992	0	4
Settlement Pattern	145	5.821	1.727	0	8
Endogenous Variables:					
Pre-Colonial Conflict Indicator	145	0.083	0.276	0	1
ln(1+Light Density Per Capita)	145	-6.038	0.909	-6.908	-1.679
ln(Pop. Density in 2000)	145	3.744	1.298	-1.133	7.432
Islam Indicator	145	0.200	0.401	0	1

Notes: Columns 1-5 report summary statistics for the variables listed on the left side of the table. All variables listed are calculated at the level of the ethnic group.

Table B.III: Summary statistics, grid-cell level.

	(1) Obs.	(2) Mean.	(3) St. Dev	(4) Min	(5) Max
	Grid-Cell Level Variables (Base Sample, <60 km from Border)				
ln (1+Deadly Conflict Incidents):					
All Conflicts	10739	0.088	0.382	0	5.220
Civil Conflicts	10739	0.059	0.319	0	5.024
Non-Civil Conflicts	10739	0.040	0.231	0	4.585
Within-Group Conflicts	10739	0.020	0.157	0	3.296
ln (1+Conflict Deaths):					
All Conflicts	10739	0.158	0.709	0	8.619
Civil Conflicts	10739	0.103	0.588	0	8.619
Non-Civil Conflicts	10739	0.077	0.460	0	7.910
Within-Group Conflicts	10739	0.042	0.345	0	6.753
ln (1+Months of Deadly Conflict):					
All Conflicts	10739	0.077	0.325	0	4.554
Civil Conflicts	10739	0.051	0.268	0	4.060
Non-Civil Conflicts	10739	0.037	0.208	0	4.111
Within-Group Conflicts	10739	0.019	0.142	0	2.944
Geographic Variables:					
ln Elevation	10739	6.445	0.991	0	8.375
Agricultural Suitability Index	10739	4.033	1.876	0	9
Split Grid Cell	10739	0.050	0.217	0	1
Slope	10739	3.351	4.600	0	47.684
Mean Temperature	10739	24.135	2.748	14.200	30.100
Water Indicator	10739	0.037	0.189	0	1
Land Cultivated	10739	19.189	18.022	0	84.315
Petroleum Indicator	10739	0.030	0.170	0	1
Diamond Indicator	10739	0.190	0.392	0	1
Historical Variables:					
Mission Stations	10739	0.022	0.157	0	3
Railway Indicator	10739	0.015	0.121	0	1
Explorer Route Indicator	10739	0.047	0.211	0	1
Fraction SL, Self Reported	275	0.285	0.381	0	1

Notes: Columns 1-5 report summary statistics for the variables listed on the left side of the table. All variables listed are calculated at the level of the 10km-by-10km grid-cell, and the summary statisics are reported for the sample used in the baseline regression discontinuity analysis, consisting of all grid-cells within 60km of a border.

Table B.IV: LASSO coefficients used for the interpolated segmentary lineage measure.

Included Variables. *Each variable listed below is a quadruple interaction between indicators for a category of each of the following four variables from the Ethnographic Atlas: clan structure (v15), largest patrilineal kingroup (v17), largest matrilineal kinroup (v19), and residence structure (v12).*	LASSO Coefficient
(missing) x (missing) x (missing) x (patrilocal)	-0.445
(missing) x (none) x (single community) x (virilocal)	-0.445
(missing) x (none) x (sibs) x (matrilocal)	0.475
(missing) x (single community) x (none) x (patrilocal)	0.159
(missing) x (sibs) x (none) x (missing)	-0.445
(missing) x (sibs) x (none) x (patrilocal)	-0.224
(missing) x (sibs) x (single community) x (patrilocal)	-0.445
(seg, no local exog.) x (missing) x (missing) x (patrilocal)	-0.445
(seg, no local exog.) x (none) x (none) x (patrilocal)	-0.445
(seg, no local exog.) x (none) x (sibs) x (missing)	-0.445
(seg, no local exog.) x (none) x (sibs) x (avunculocal)	-0.215
(seg, no local exog.) x (none) x (sibs) x (uxorilocal or avunculocal)	-0.445
(seg, no local exog.) x (none) x (sibs) x (matrilocal)	0.245
(seg, no local exog.) x (single community) x (none) x (no common residence)	0.475
(seg, no local exog.) x (single community) x (none) x (patrilocal)	-0.167
(seg, no local exog.) x (single community) x (single community) x (patrilocal)	0.475
(seg, no local exog.) x (single community) x (sibs) x (patrilocal)	0.475
(seg, no local exog.) x (sibs) x (none) x (patrilocal)	-0.032
(seg, no local exog.) x (phratries) x (none) x (patrilocal)	-0.445
(seg, no local exog.) x (moieties) x (none) x (patrilocal)	0.475
(agamous) x (none) x (none) x (virilocal)	-0.462
(agamous) x (none) x (sibs) x (matrilocal)	-0.445
(agamous) x (none) x (sibs) x (patrilocal)	0.475
(agamous) x (single community) x (none) x (neolocal)	-0.445
(agamous) x (single community) x (none) x (patrilocal)	-0.129
(agamous) x (sibs) x (none) x (neolocal)	-0.445
(agamous) x (sibs) x (none) x (patrilocal)	0.105
(agamous) x (sibs) x (none) x (virilocal)	0.475
(exogamous) x (none) x (none) x (ambilocal)	-0.445
(exogamous) x (none) x (none) x (virilocal)	-0.445
(exogamous) x (single community) x (none) x (neolocal)	-0.445
(exogamous) x (sibs) x (none) x (neolocal)	0.475
(exogamous) x (sibs) x (none) x (patrilocal)	0.097
(segmented) x (sibs) x (none) x (patrilocal)	0.475
(clan communities) x (none) x (sibs) x (avunculocal)	0.245
(clan communities) x (single community) x (none) x (patrilocal)	-0.267
(clan communities) x (sibs) x (none) x (missing)	0.475
(clan communities) x (sibs) x (none) x (patrilocal)	0.348
(clan communities) x (sibs) x (none) x (virilocal)	0.475
(clan communities) x (sibs) x (matrilineal exog.) x (patrilocal)	0.492
(clan communities) x (phratries) x (none) x (virilocal)	0.475
(clan communities) x (moieties) x (none) x (patrilocal)	-0.445
Constant	0.485

Notes: This table reports LASSO coefficient estimates from the procedure used to produce the segmentary lineage proxy for all African groups in the *Ethnographic Atlas*. The first column reports the variable, which is an interaction between categories from variable v15, v17, v19, and v12 (listed in that order). The second column reports the estimated coefficient. The LASSO coefficient for interactions not reported is zero.

Table B.V: Assessing the importance of bias from unobservables by controlling for observable characteristics.

(1)	(2)	(3)	(4)	(5)	(6)
Coeff. Ratio Test (Altonji, Elder and Taber, 2005)			Minimum Coeff. Lower Bound (Oster, forthcoming)		
ln (1+Deadly Conflict Incidents)	ln (1+Conflict Deaths)	ln (1+Months of Conflict)	ln (1+Deadly Conflict Incidents)	ln (1+Conflict Deaths)	ln (1+Months of Conflict)
Panel A: All Conflicts					
24.05	7.67	23.83	1.03	1.11	0.82
Panel B: Civil Conflicts					
2.92	4.13	4.55	0.24	0.51	0.35
Panel C: Non-Civil Conflicts					
-11.23	-13.23	-11.37	1.14	1.85	0.95
Panel D: Within-Group Conflicts					
-29.75	17.92	-34.64	0.87	1.07	0.73

Notes : Each cell in columns 1-3 report ratios based on the estimated coefficient for the segmentary lineage indicator from two regressions; one with a more-restricted set of controls, which includes country fixed effects only, and the other with a less-restricted set of controls that includes country fixed effects, our baseline set of geographic controls, and our baseline set of historical controls. If B_R is the coefficient in the restricted set and B_F is the coefficient in the full set, then the ratio is B_F/(B_R-B_F). The controls included in each set are listed on the left side of the table and the dependent variables are listed at the top. In panels A-D, the dependent variable is constructed using all ACLED conflict, civil conflicts, non-civil conflicts, and within-group conflicts respectively. Each cell in columns 4-6 report coefficient lower bounds based on Oster (forthcoming). If we define R2_R as the R2 for the regression with the restricted set of controls and R2_F as the R2 for the regression with the full set of controls, then the minimum coefficient lower bound is: B_F-(B_R-B_F)*((1-R2_F)/(R2_F-R2_R)). Again, the controls in the full and restricted sets are listed on the left side of the table, dependent variables are listed at the top, and in each panel the dependent variable is constructed using a different conflict type.

Table B.VI: Principal component factor loadings for the placebo RD analysis.

	Factor Loadings	
	Specification	
	Columns 7-9	Columns 10-12
Levels of Jurisdictional Hierarchy:		
Zero	0.0406	0.0235
One	-0.6203	-0.2411
Two	0.4705	0.1979
Three	0.2351	0.0649
Settlement Complexity:		
Nomadic or fully migratory	-0.334	-0.4275
Seminomadic	-0.2621	-0.2222
Semisendentary	0.0197	0.0015
Compact but impermanent settlements	0.2207	0.0364
Neighborhoods of dispersed family homesteads	0.2767	0.0848
Separated hamlets, forming a single community	-0.1095	0.1769
Compact and relatively permanent settlements	0.1334	0.0978
Complex settlements	-0.0346	0.0651
Dependence on Agriculture	-	0.5104
Dependence on Husbandry	-	-0.4875
Major City in 1800	-	0.0433
ln Slave exports (/land area)	-	0.2193
ln Pop. Density 1960	-	0.2071
Split by National Border	-	-0.1455
Proportion of Variation Explained:	16.40%	18.90%

Notes: Columns 1 and 2 report the factor loadings for the principal component used to construct the treatment variable in columns of Table 5 respectively. The variables used to construct the principal component are listed on the left side of the table. The first twelve variables are indicators that equal one if an ethnic group has the listed number of levels of jurisdictional hierarchy or historical settlement complexity. The proportion of variation explained by the first principal component used for the analysis is listed at the bottom of each column.

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