

Appendix:
Uncertain Events: A Dynamic Latent Variable Model of
Human Rights Respect and Government Killing with
Binary, Ordered, and Count Outcomes

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Contents

A	UCDP One-sided Violence Dataset	2
B	Other Repression Data Sources	3
	B.1 Standards-Based Repression Variables	4
	B.2 Event-Based Repression Variables	9
C	All Plots for the Democratic Republic of Congo	11

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Introduction to the Appendix

The supplementary material presented in this document provides additional details about the models presented in the paper “Uncertain Events: A Dynamic Latent Variable Model of Human Rights Respect and Government Killing with Binary, Ordered, and Count Outcomes”. The main article makes reference to the materials contained here. The R code necessary to implement the models will be made publicly available here: REDACTED.

A UCDP One-sided Violence Dataset

Best, Low and High fatality estimates from [Eck and Hultman \(2007\)](#) data. The following passage is quoted directly from the most recent code book (UCDP One-sided Violence Dataset v 1.4-2012, 1989-2011).

The general rule for UCDPs estimation of one-sided violence is moderation. All incidents have to be verified in one way or another, and all estimates reported are based on UCDP expertise of each particular conflict. As a general rule, all figures are disaggregated as far as possible and any figures that are not trustworthy are disregarded in the coding process. Due to the great uncertainty of reports from conflict areas, the project provides three estimates concerning battle - related deaths for each year.

(a) Best estimate. The UCDP Best estimate consist of the aggregated most reliable numbers for all incidents of one - sided violence during a year. If different reports provide different estimates, an examination is made as to what source is most reliable. If no such distinction can be made, UCDP as a rule include the lower figure given.

(b) Low estimate. The UCDP Low estimate consists of the aggregated low estimates for all incidents of one - sided violence during a year. If different reports provide different estimates and a higher estimate is considered more reliable, the low estimate is also reported if deemed reasonable.

(c) High estimate. The UCDP High estimate consists of the aggregated high estimates for all incidents of one - sided violence during a year. If different reports provide different estimates and a lower estimate is considered more or equally reliable, the high estimate is also reported if deemed reasonable. If there are incidents when there is some uncertainty about what party have been involved , these may also be included in the high estimate.

B Other Repression Data Sources

Figure 1, Table 1, and Table 2 contain information about the documentary sources used to generate each of the variables that enter the latent variable models presented in this paper.

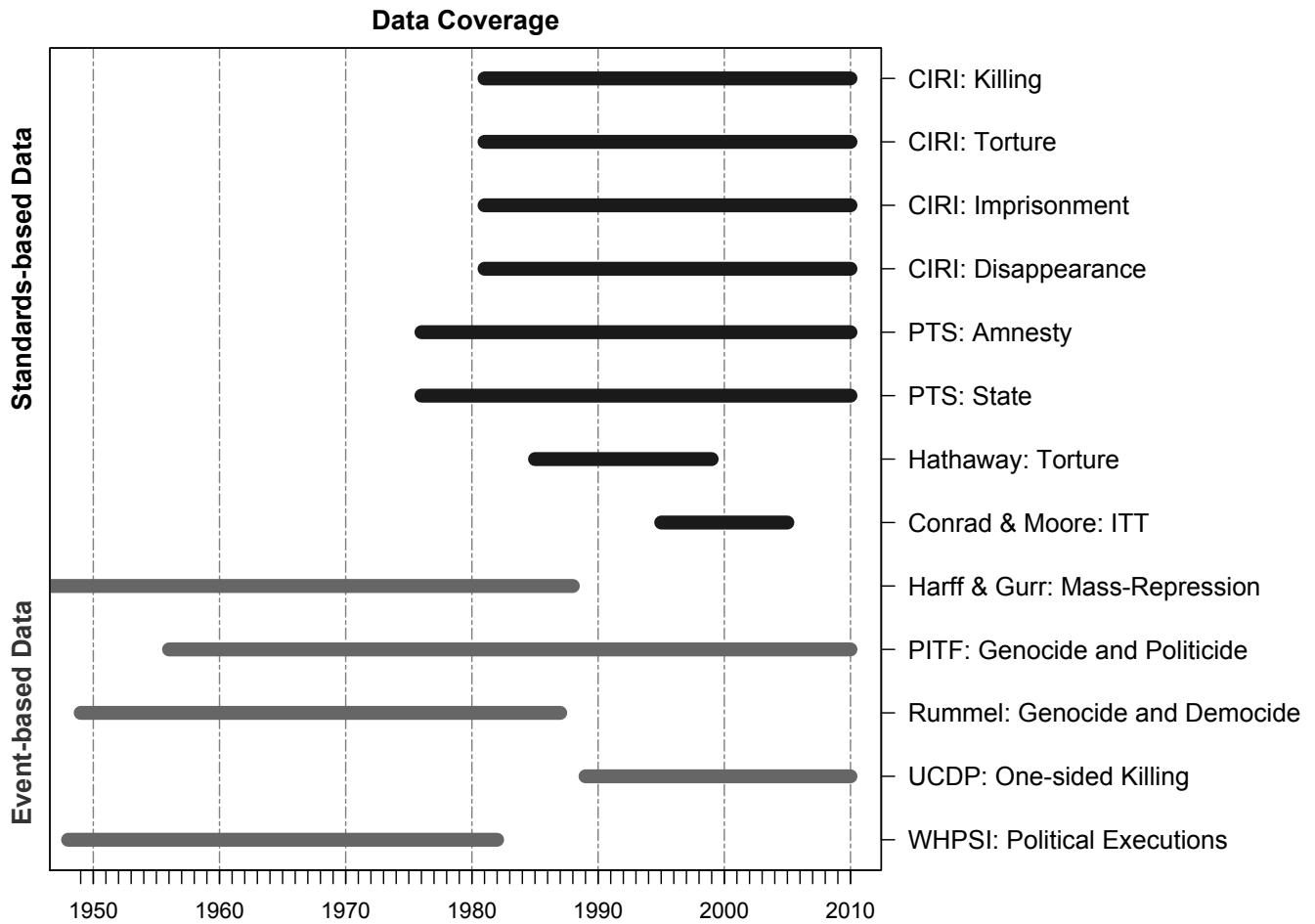


Figure 1: Temporal coverage and data type of repression data sources. See Table 1 and Table 2 for more information. Grey lines are event-based data. Black lines are standards-based measures.

B.1 Standards-Based Repression Variables

The standards-based variables that enter the models are derived from Amnesty International and US State Department reports (Cingranelli and Richards, 1999, 2012a,b; Gibney, Cornett and Wood, 2012; Hathaway, 2002). Another dataset uses “Urgent Action Reports” published throughout the year by Amnesty International to create their index of country-year torture (Conrad and Moore, 2011; Conrad, Haglund and Moore, 2013). I treat this variable as standards-based because the operationalization is based on reports created in a specific historical context just like the other standards-based variables.

CIRI Physical Integrity Variables (1981-2010)

Each CIRI human rights variable measures the level of violation on an ordinal scale where, 2 indicates that the right is not violated, 1 indicates that the right is violated occasionally and 0 indicates that the right is violated frequently. Notice that the high values of the CIRI variables measure the highest level of respect for a specific right, whereas the lowest value on the two PTS indices capture a highest level of respect. The following descriptions of the four individual physical integrity variables and the physical integrity scale are taken directly from the (Cingranelli and Richards, 2012a) code book and discussed at length in (Cingranelli and Richards, 1999):

Extrajudicial Killing The variable measuring political and other extrajudicial killings/arbitrary or unlawful deprivation of life is coded as a 0 when this practice has occurred frequently in a given year; a score of 1 indicates that extrajudicial killings were practiced occasionally; and a score of 2 indicates that such killings did not occur in a given year.

Disappearance The variable measuring disappearance is coded as a 0 when this practice has occurred frequently in a given year; a score of 1 indicates that disappearances occasionally occurred; and a score of 2 indicates that disappearances did not occur in a given year.

Torture The variable measuring torture and other cruel, inhumane, or degrading treatment or punishment is as coded as a 0 when this practice occurred frequently in a given year; a score of 1 indicates that torture was practiced occasionally; and a score of 2 indicates that torture did not occur in a given year.

Political Imprisonment The variable measuring political imprisonment is coded as a 0 when many people were imprisoned because of religious, political, or other beliefs in a given year; a score of 1 indicates that a few people were imprisoned; and a score of 2 indicates that no persons were imprisoned for any of the above reasons in a given year.

The CIRI coding rules attempt to use count based metrics to rate each of the variables on one of the 3 levels (0, 1, and 2). If the reports provide a count for the number of individuals affected by a given rights violation then following cut offs are used:

Level 0: 50 or more occurrences

Level 1 : From 1 to 49 occurrences

Level 2: Zero occurrences

According to the coder guidelines if an estimate of the number of violations is not be available then the following guidelines from the CIRI code book (Cingranelli and Richards, 2012a) are used:

- Instances where violations are described by adjectives such as “gross,” “widespread,” “systematic,” “epidemic,” “extensive,” “wholesale,” routine, regularly, or likewise, are to be coded as a ZERO (have occurred frequently).
- In instances where violations are described by adjectives such as “numerous,” “many,” “various,” or likewise, you will have to use your best judgment from reading through the report to decide whether to assign that country a ONE (have occurred occasionally) or a ZERO (have occurred frequently). Look for language indicating a pattern of abuses; often, these cases merit a ZERO.

Hathaway Torture Scale Coding (1985-1999)

Hathaway (2002) creates a 5-point ordered scale for torture violations. Unlike either the PTS or CIRI variables, the Hathaway (2002) data relies exclusively on content from the US State Department reports.

The reports are coded as follows:

- *Level 1:* There are no allegations or instances of torture in this year. There are no allegations or instances of beatings in this year; or there are only isolated reports of beatings by individual police officers or guards all of whom were disciplined when caught.
- *Level 2:* At least one of the following is true: There are only unsubstantiated and likely untrue allegations of torture; there are “isolated” instances of torture for which the government has provided redress; there are allegations or indications of beatings, mistreatment or harsh/rough treatment; there are some incidents of abuse of prisoners or detainees; or abuse or rough treatment occurs “sometimes” or “occasionally.” Any reported beatings put a country into at least this category regardless of government systems in place to provide redress (except in the limited circumstances noted above).

- *Level 3*: At least one of the following is true: There are “some” or “occasional” allegations or incidents of torture (even “isolated” incidents unless they have been redressed or are unsubstantiated (see above)); there are “reports,” “allegations,” or “cases” of torture without reference to frequency; beatings are “common” (or “not uncommon”); there are “isolated” incidents of beatings to death or summary executions (this includes unexplained deaths suspected to be attributed to brutality) or there are beatings to death or summary executions without reference to frequency; there is severe maltreatment of prisoners; there are “numerous” reports of beatings; persons are “often” subjected to beatings; there is “regular” brutality; or psychological punishment is used.
- *Level 4*: At least one of the following is true: Torture is “common”; there are “several” reports of torture; there are “many” or “numerous” allegations of torture; torture is “practiced” (without reference to frequency); there is government apathy or ineffective prevention of torture; psychological punishment is “frequently” or “often” used; there are “frequent” beatings or rough handling; mistreatment or beating is “routine”; there are “some” or “occasional” incidents of beatings to death; or there are “several” reports of beatings to death.
- *Level 5*: At least one of the following is true: Torture is “prevalent” or “widespread”; there is “repeated” and “methodical” torture; there are “many” incidents of torture; torture is “routine” or standard practice; torture is “frequent”; there are “common,” “frequent,” or “many” beatings to death or summary executions; or there are “widespread” beatings to death ([Hathaway, 2002](#)).

ITT Level of Torture (1995-2005)

[Conrad and Moore \(2011\)](#) have recently released the Ill-treatment and Torture (ITT) project codes the Level of Torture (LoT) using a similar ordinal scale as the ordinal scale developed by ([Hathaway, 2002](#)). The variable measures the intensity of government ill-treatment and torture as reported by Amnesty International urgent action reports . The variable captures country-wide allegations of torture that occur throughout the year that used one of the following key words obtained from the documents below. See also the additional discussion of this data by [Conrad, Haglund and Moore \(2013\)](#).

- *Level 0*: None
- *Level 1*: Infrequent
- *Level 2*: Some(times)
- *Level 3*: Frequent
- *Level 4*: Widespread
- *Level 5*: Systematic

The variable measures Amnesty International allegations of the frequency of violations of the practices prohibited by the Convention of Torture throughout a given country during a particular year. Country-year observations with no allegations are coded 0.

Political Terror Scale Coding (1976-2010)

The Political Terror Scale (PTS) was originally coded by [Carleton and Stohl \(1985\)](#), [Gibney and Stohl \(1988\)](#), [Gibney and Dalton \(1996\)](#) and is now made available by [Gibney, Cornett and Wood \(2012\)](#). The PTS data are two standards-based, 5-point ordinal scales that are respectively measured from the content of the country reports published annually by the US State Department and Amnesty International respectively. See [Gibney and Dalton \(1996\)](#), [Poe and Sirirangsi \(1993\)](#), and [Wood and Gibney \(2010\)](#) for additional discussion of the development of these two indices.

- *Level 1:* Countries under a secure rule of law, people are not imprisoned for their view, and torture is rare or exceptional. Political murders are extremely rare.
- *Level 2:* There is a limited amount of imprisonment for nonviolent political activity. However, few persons are affected, torture and beatings are exceptional. Political murder is rare.
- *Level 3:* There is extensive political imprisonment, or a recent history of such imprisonment. Execution or other political murders and brutality may be common. Unlimited detention, with or without a trial, for political views is accepted.
- *Level 4:* The practices of level 3 are expanded to larger numbers. Murders, disappearances, and torture are a common part of life. In spite of its generality, on this level terror affects those who interest themselves in politics or ideas.
- *Level 5:* The terrors of level 4 have been expanded to the whole population. The leaders of these societies place no limits on the means or thoroughness with which they pursue personal or ideological goals ([Gastil, 1980](#)).

Table 1: Standards-Based Repression Data Sources

Dataset Name and Variable Description	Dataset Citation and Primary Source Information
CIRI Physical Integrity Data, 1981-2010 - political imprisonment (ordered scale, 0-2) - torture (ordered scale, 0-2) - extrajudicial killing (ordered scale, 0-2) - disappearance (ordered scale, 0-2)	Cingranelli and Richards (1999, 2012a,b) Amnesty International Reports ¹ and State Department Reports ² <i>Information in Amnesty reports takes precedence over information in State Department reports</i>
Hathaway Torture Data, 1985-1999 - torture (ordered scale, 1-5)	Hathaway (2002) State Department Reports ¹
Ill-Treatment and Torture (ITT), 1995-2005 - torture (ordered scale, 0-5)	Conrad and Moore (2011) , Conrad, Haglund and Moore (2013) , Amnesty International (2006) Annual Reports ¹ , press releases ¹ , and Urgent Action Alerts ¹
PTS Political Terror Scale, 1976-2010 - Amnesty International scale (ordered scale, 1-5) - State Department scale (ordered scale, 1-5)	Gibney, Cornett and Wood (2012) , Gibney and Dalton (1996) Amnesty International Reports ¹ State Department Reports ¹

1. Primary Source; 2. Secondary Source

B.2 Event-Based Repression Variables

The event-based binary are variables drawn from [Harff and Gurr \(1988\)](#), [Harff \(2003\)](#), [Rummel \(1994, 1995\)](#), [Eck and Hultman \(2007\)](#), [Taylor and Jodice \(1983\)](#). With the exception of the one-sided government killing data ([Eck and Hultman, 2007](#)), all of the variables described here are coded 1 if an event described by the different data sources occurred and 0 otherwise. The definitions of genocide, politicide, and massive repression variables are each designed to capture instances of large scale aggregated mass killings of individuals. These variables are focused on the extreme end of the repression spectrum. The measurement of one sided government killing captures instances in which more than 25 individuals (non-combatants) are killed, though this variable excludes extrajudicial killings that occur inside a prison and combatant deaths that occur during civil conflicts ([Eck and Hultman, 2007](#)). Extrajudicial killing more generally is captured by both the political execution data ([Taylor and Jodice, 1983](#)) in addition to several of the variables derived from the human rights reports described above ([Cingranelli and Richards, 2012a,b](#); [Gibney, Cornett and Wood, 2012](#)). For more information on these sources see the original citations and also [Fariss \(2014\)](#).

Table 2: Event-Based Repression Data Sources

Dataset Name and Variable Description	Dataset Citation and Primary Source Information
Harff and Gurr Dataset, 1946-1988 - massive repressive events (1 if country-year experienced event 0 otherwise)	Harff and Gurr (1988) historical sources (see article references) ¹
Political Instability Task Force (PITF), 1956-2010 - genocide and politicide (1 if country-year experienced event 0 otherwise)	Harff (2003) , Marshall, Gurr and Harff (2009) historical sources (see article references) ¹ State Department Reports ² Amnesty International Reports ²
Rummel Dataset, 1949-1987 - genocide and democide (1 if country-year experienced event 0 otherwise) (3 death count estimates: best, low, high)	Rummel (1994, 1995) , Wayman and Tago (2010) New York Times ¹ , New International Yearbook ² , Facts on File ² , Britannica Book of the Year ² , Deadline Data on World Affairs ² , Kessing's Contemporary Archives ²
UCDP One-sided Violence Dataset, 1989-2010 - government killing (event count estimate) (1 if country-year experienced event 0 otherwise) (3 death count estimates: best, low, high)	Eck and Hultman (2007) , Sundberg (2009) Reuters News ¹ , BBC World Monitoring ¹ Agence France Presse ¹ , Xinhua News Agency ¹ , Dow Jones International News ¹ , UN Reports ² , Amnesty International Reports ² , Human Rights Watch Reports ² , local level NGO reports (not listed) ²
World Handbook of Political and Social Indicators WHPSI, 1948-1982 - political executions (event count estimate) (1 if country-year experienced event 0 otherwise)	Taylor and Jodice (1983) New York Times ¹ , Middle East Journal ² , Asian Recorder ² , Archiv der Genenwart ² African Diary ² , Current Digest of Soviet Press ²

1. Primary Source; 2. Secondary Source

C All Plots for the Democratic Republic of Congo

Figure 2 (1989-1992), Figure 3 (1993-1996), Figure 4 (1997-2000), Figure 5 (2001-2004), Figure 7 (2005-2008), and Figure 7 (2009-2010) each contain plots that display distributions of the number of one-sided government killings for the Democratic Republic of Congo in each year. The plots contains the simulated distribution of potential values, the median prediction from the model, and the original UCDP counts (Best, Low, and High counts).

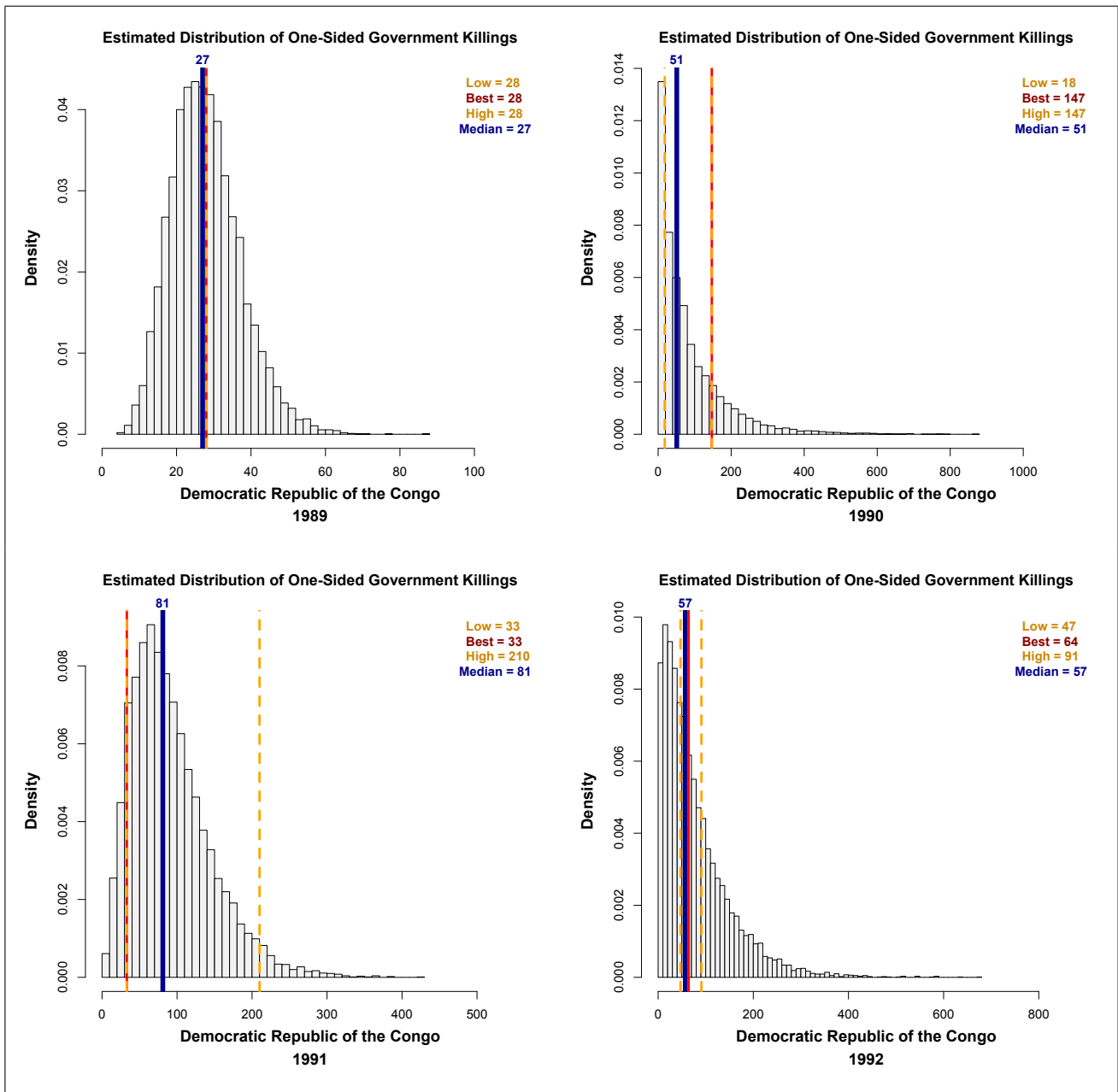


Figure 2: Country-year distribution of the number of one-sided government killings that occur each year (1989-1992). The distributions each contain the median prediction from the model and the original observed UCDP estimates counts (Best, Low, and High counts respectively).

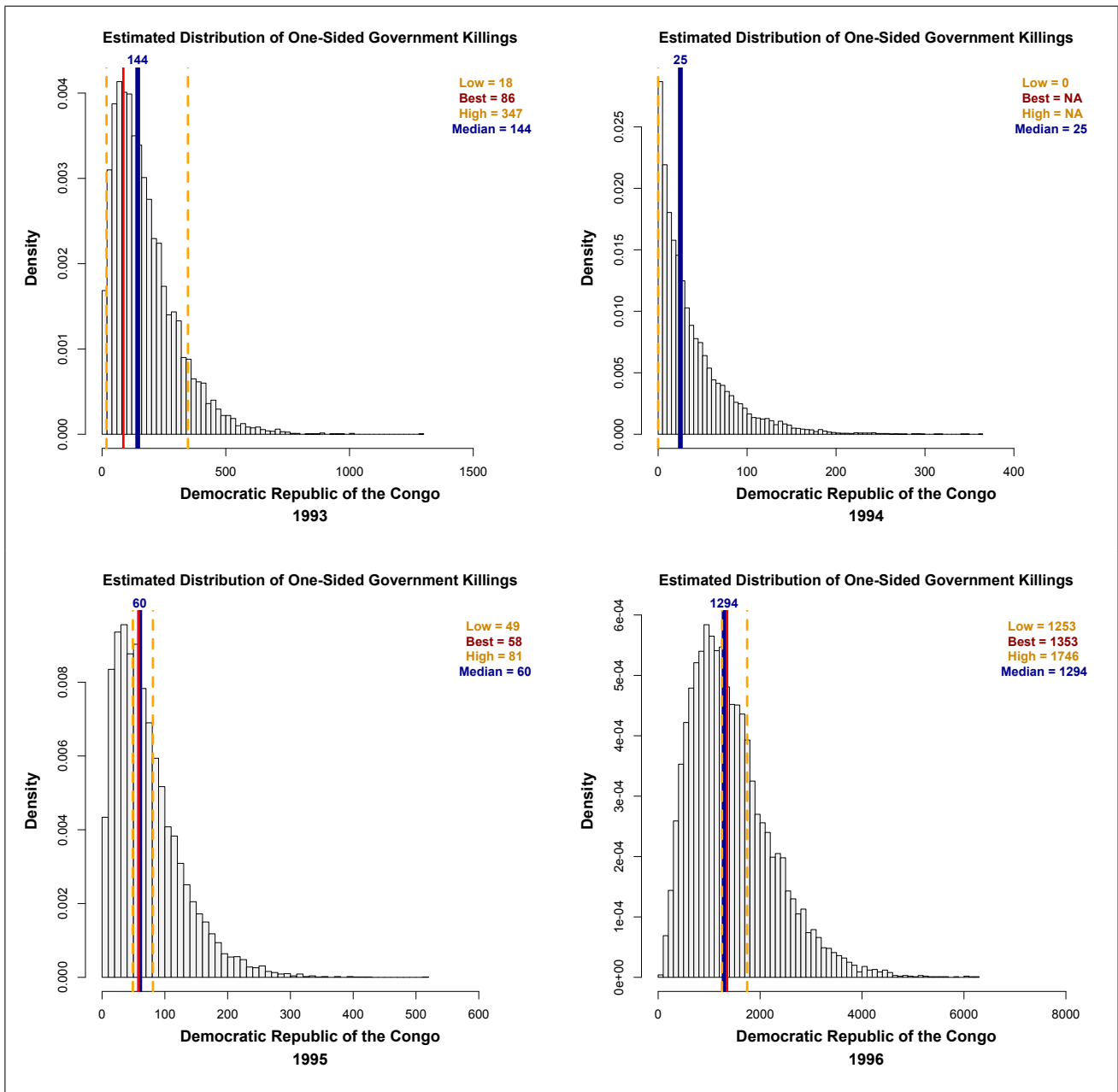


Figure 3: Country-year distribution of the number of one-sided government killings that occur each year (1993-1996). The distributions each contain the median prediction from the model and the original observed UCDP estimates counts (Best, Low, and High counts respectively).

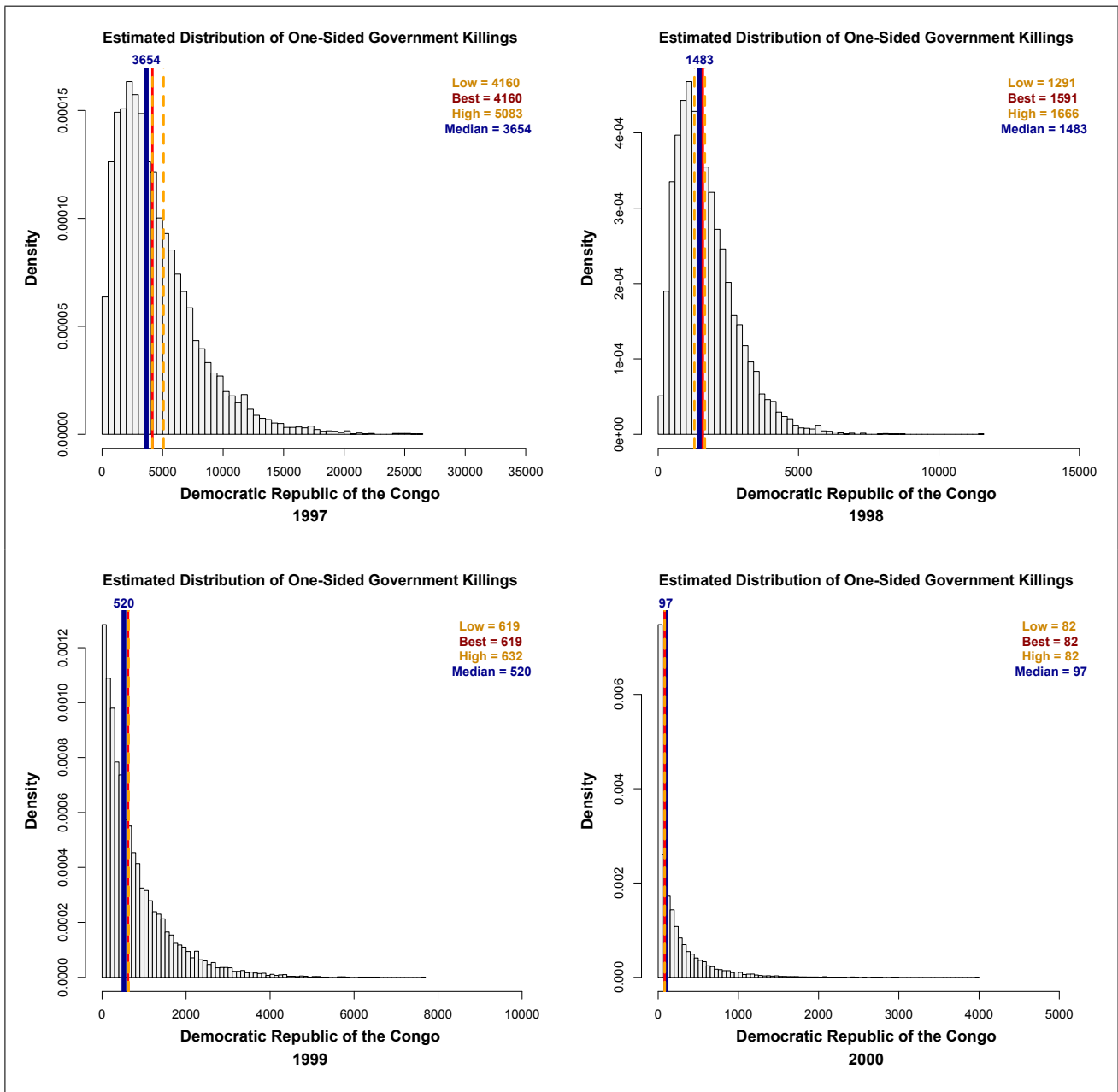


Figure 4: Country-year distribution of the number of one-sided government killings that occur each year (1997-2000). The distributions each contain the median prediction from the model and the original observed UCDP estimates counts (Best, Low, and High counts respectively).

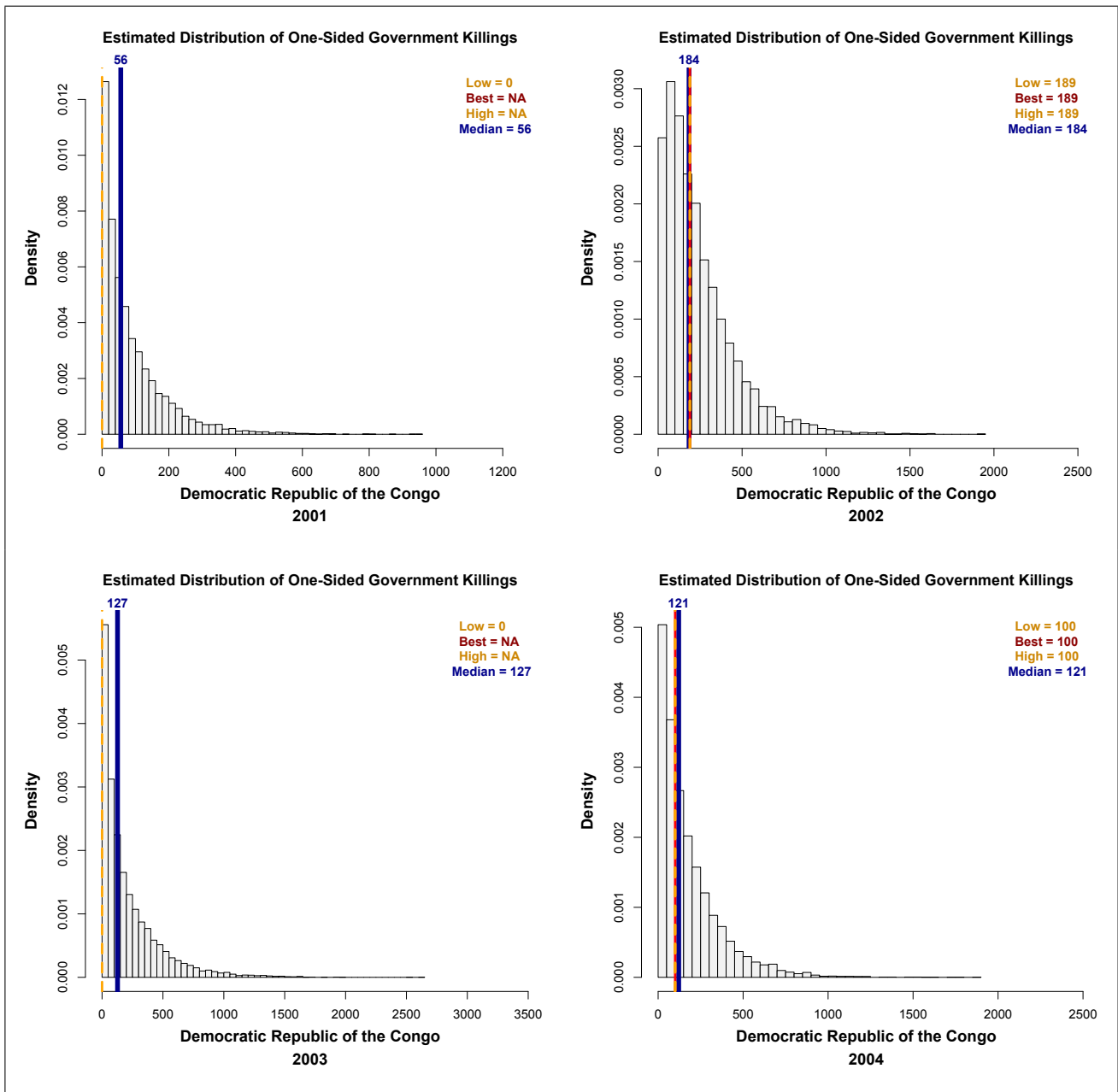


Figure 5: Country-year distribution of the number of one-sided government killings that occur each year (2001-2004). The distributions each contain the median prediction from the model and the original observed UCDP estimates counts (Best, Low, and High counts respectively).

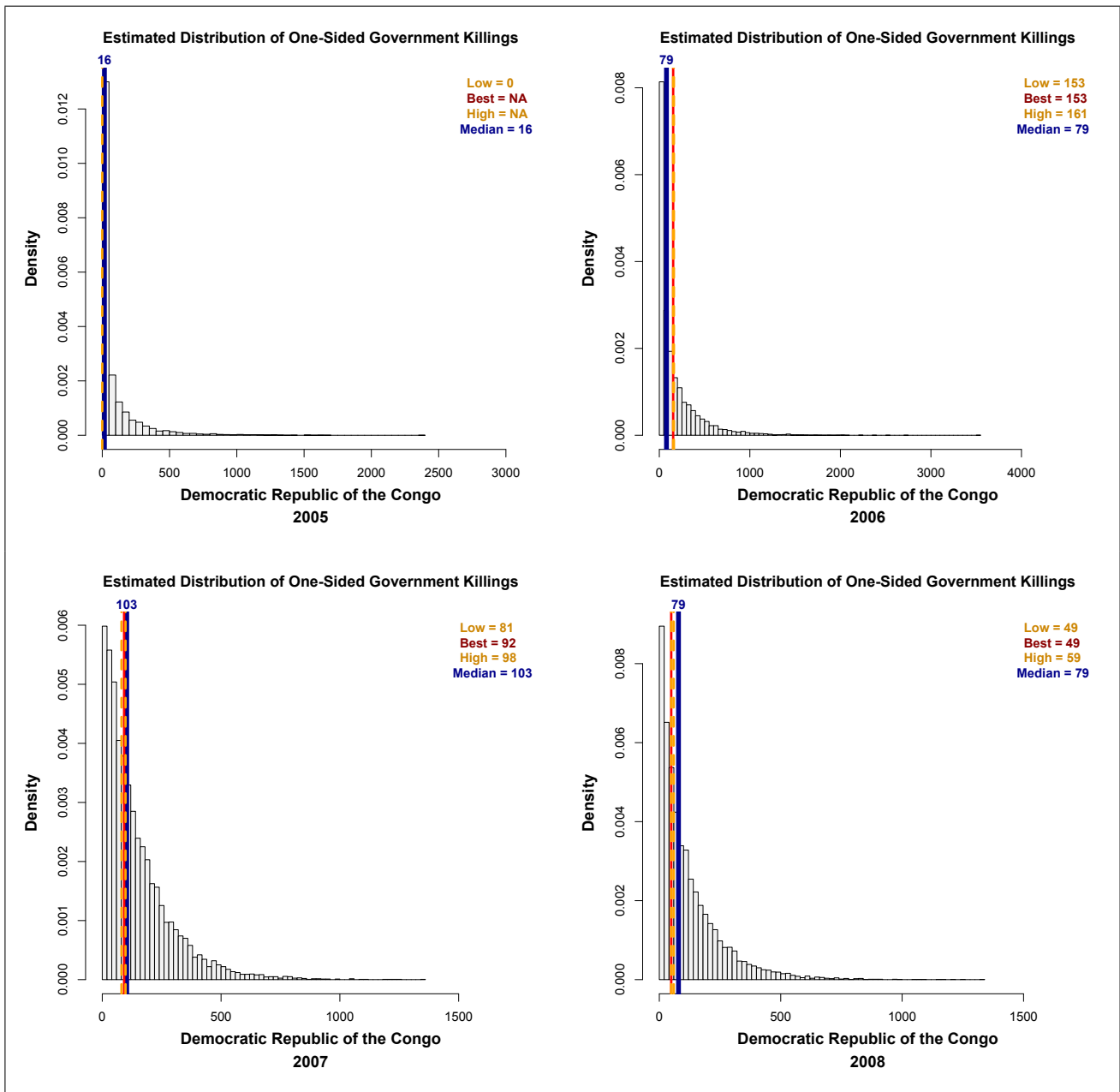


Figure 6: Country-year distribution of the number of one-sided government killings that occur each year (2005-2008). The distributions each contain the median prediction from the model and the original observed UCDP estimates counts (Best, Low, and High counts respectively).

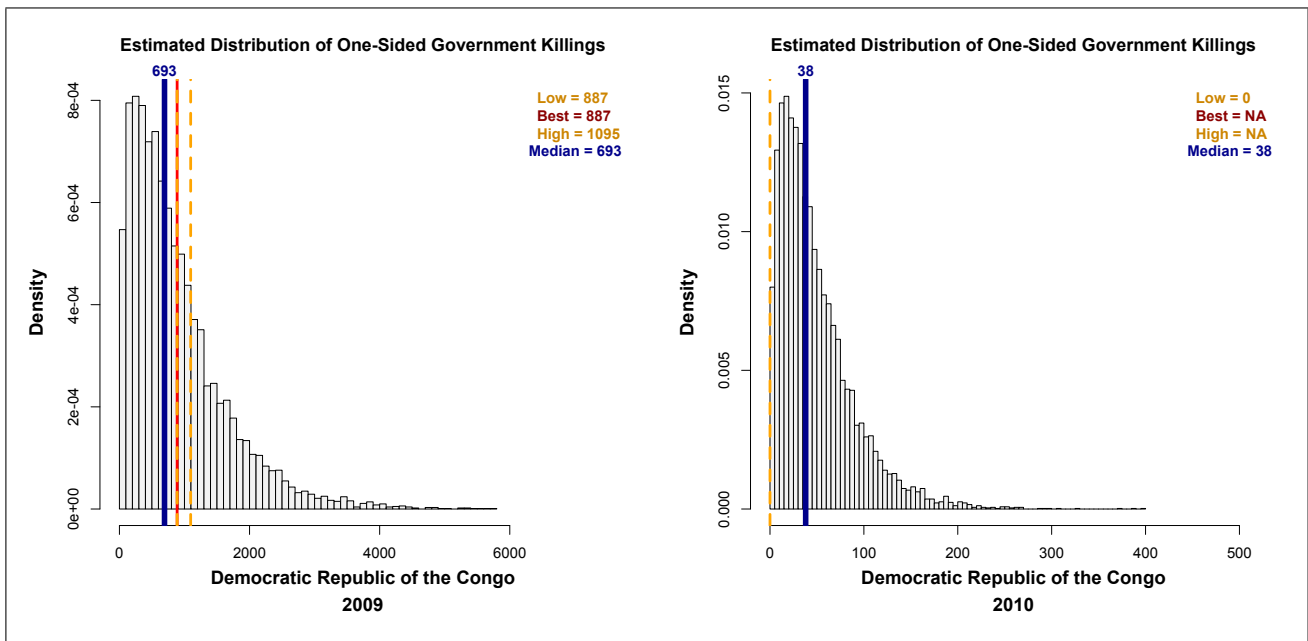


Figure 7: Country-year distribution of the number of one-sided government killings that occur each year (2009-2010). The distributions each contain the median prediction from the model and the original observed UCDP estimates counts (Best, Low, and High counts respectively).

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