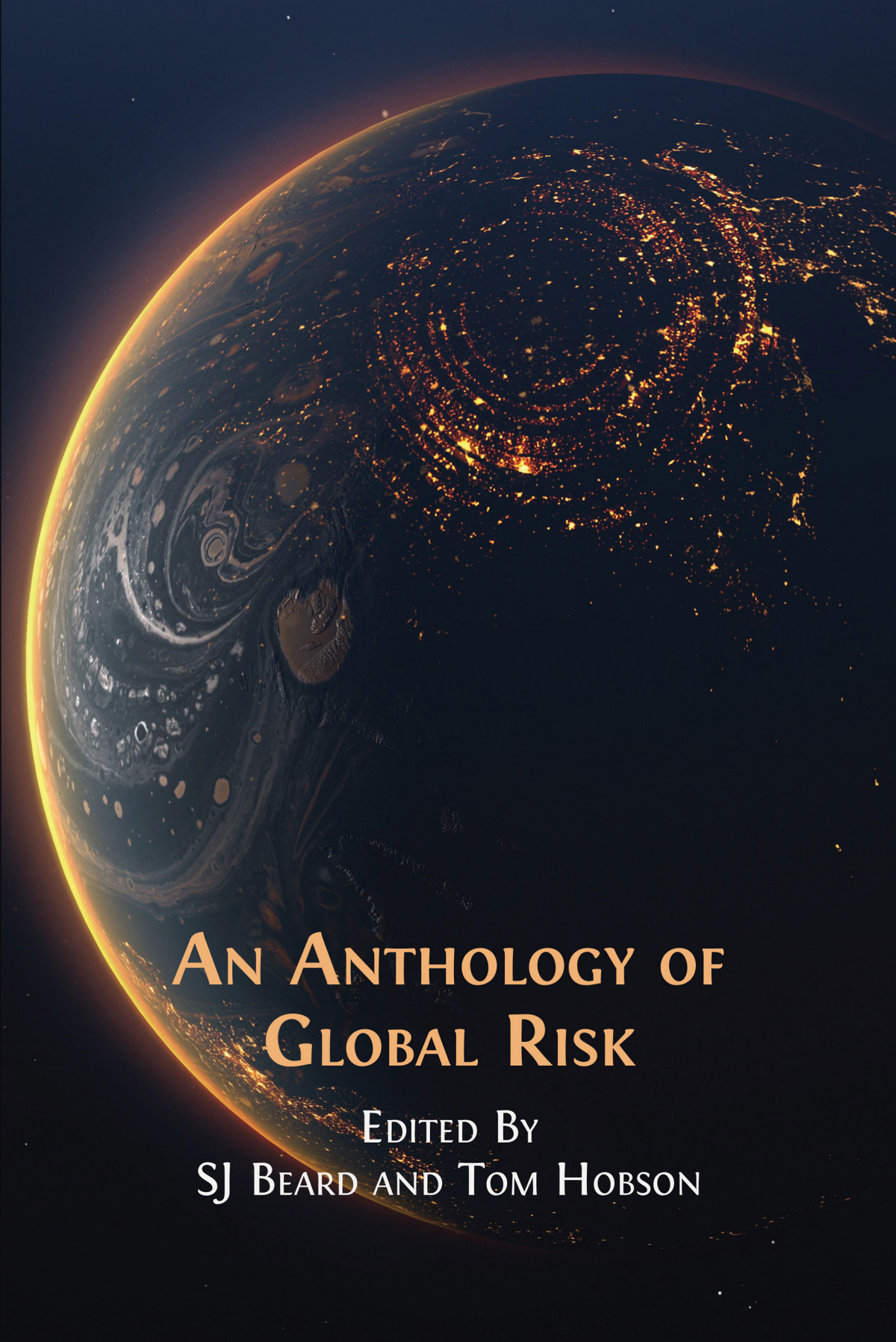

An Anthology of Global Risk

Edited By

SJ Beard and Tom Hobson

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10. The Mortality of States (MOROS) Dataset

Luke Kemp

Highlights:

- Having better data on states and their lifespans can help us understand both the phenomenon of collapse and the nature of entities that dominate global risk.
- This chapter documents the creation of a database of state lifespans, where a state is defined as "a set of centralised institutions that coercively extract resources from, and impose rules on, a territorially circumscribed population" and their lifespan is defined by "rough, critical dates in which significant changes to state form, function, and/or sovereignty occurred".
- The database was synthesised from a variety of primary data sources verified and expanded with a wider literature review.
- Significant interpretation was required to conceptualise states and their lifespans, but efforts were made to make this consistent and objective, while recognising that it is ultimately a qualitative overview of expert opinion.
- In future it is hoped to use expert elicitation and structured literature reviews to improve the database, alongside finding better ways to code for the continuity of states and adding details about the consequences and reasons for state termination.

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This chapter lays out a work-in-progress developmental methodology to measure the longevity of states. Arguing that the state, within the international, is an under-theorised object in Global Catastrophic Risk Studies, the chapter proposes the value of a standardised dataset for enhancing how we understand the role of states in GCR production and mitigation. Further reflections on dataset creation and modelling can be read in Chapters 9 and 20, while an alternative approach to studying state collapse can be found in Chapter 13.

1. Background

Our world is dominated by political states. Collapse is, at heart, the fall of a state and global risks are largely produced by a small number of powerful states and state-backed corporations.[1] Despite this, states are dramatically understudied in the realm of Global Catastrophic Risks.

Having better data on states and their ends can help fill this gap. Currently there are few resources which provide an overview of the lifespans of different states as well as the theories on why some were fragile and others resilient. Instead, there is a patchwork of different datasets, ranging from data collected by Rein Taagepera which summarise the lifespan of a selection of empires,[2] the Seshat database of historical polities,[3] and the Correlates of War Project.[4] Each of these is limited in some way. The data from Taagepera is decades old and only covers a few dozen empires (focused mainly on Eurasia); the Seshat database is not explicitly focused on state termination and crisis, while the Correlate of War Project only covers states after 1815, a small slice of history.

Unsurprisingly, we know little about the lifespan of states or societies. While indispensable background to thinking about global risk, there have only been two studies. In the largest piece to date, Arbesman analysed 42 empires (covering the period 3000 BCE to 600 CE) finding an ageless distribution: the risk of termination was constant, and an empire was just as likely to end at age 20 as age 200. Another focusing on 22 Chinese Dynasties (221 BCE – 1912 CE) found a power-law distribution leading the authors to suggest that it was organised by self-organised criticality. Both projects are limited. The first overlooks empires after 600 CE and

does not cover all empires during its period of focus. The latter focuses just on Chinese empires during a small time slice.

In a short piece I wrote for *BBC Future* in 2019, I gathered a larger dataset, building off the work of Arbesman.[5] While bigger, it was still incomplete. This piece highlights a new, more comprehensive and systematic way of analysing past state terminations: the Mortality of States (MOROS) dataset.

2. Overview

The Mortality of States Index (MOROS) provides an overview of the lifespan of different states. It documents state formation and end dates for over 440 different states, covering roughly 5,000 years from 3100 BCE (Egyptian Dynasties I and II) to 2021. We define the state as a set of centralised institutions that coercively extract resources from, and impose rules on, a territorially circumscribed population. This is a necessarily broad definition. There was significant variety in how pre-modern states governed, as well as their level of administration, centralisation, and coercion. It is not an on/off switch: statehood exists on a spectrum.[6]

The idea of the state is not without detractors. There are critiques including the sheer diversity of states, and that the idea of a state is an inappropriate false projection of modern polities onto ancient cases.[7] These are not compelling arguments and are usually aimed at a strawman definition: Weber's outdated idea that the state is a monopoly on violence.[8] Social scientists have crafted sufficiently wide definitions (like the one used earlier) which can capture both Pharaonic Egypt and the modern US. Nonetheless, there is general consensus across political science and archaeology that, despite significant variety, states provide a real and useful political category. While there are difficulties in drawing precise boundaries it is a commonly used category in the social sciences.[9]

States are far more easily measured than more amorphous concepts such as society and civilisation. There are few accepted definitions of "civilisation" or "society", and determining a beginning and end date is even more pernicious. States represent a more easily defined, measured, and concrete historical unit.

The dates for both state beginnings and ends should be seen as rough, critical dates in which significant changes to state form, function, and/or sovereignty occurred. They are often indicative of processes that may have taken decades to unfold. For instance, 1177 is used as rough dating for the collapse of the Bronze Age state network, even though the process unfurled over decades.[10]

3. Methods

The entries have been gathered from a range of different materials. I worked with Oscar Rousham (see "Acknowledgements") to pull together the first dataset. The initial, primary sources were:

- Three different surveys of historical empires and large polities by Taagepera;[11]
- The Seshat Database;[12]
- The four-volume 2016 *Encyclopedia of Empire*[13] and;
- The Correlates of War Project.[14]

We used these primary sources to generate the first dataset. We compared entries to eliminate duplicates. Seshat encompasses not only states, but broader cultural periods that are distinguished by changes in material culture. Hence, entries from Seshat were only included when they represented a distinct and established state.

Each of the primary sources focuses on overlapping, similar units, although with differing definitions. Most sources lack a distinct measurement of statehood, and hence a guide to coding for state formation, continuity, and termination. The sole exception is the Correlates of War Project which uses both political recognition from great powers and a population size of at least half a million as proxies for state sovereignty. While more specific, the arbitrary population threshold is not appropriate for pre-modern states with often significantly lower populations, and recognition by neighbours would inappropriately exclude many ancient (especially "pristine") states.

We then drew on a wider literature search to both verify the majority of existing entries and to create an additional 22. Most of these were from speciality sources for Chinese dynasties[15] and Korean kingdoms[16]

which were less covered by primary sources. We also consulted books focused on societal collapse, although these were either unsuitable or already included.[17]

Where we have found competing suggestions on state formations and termination dates, we input both the lowest and highest credible estimates.

During this construction phase we excluded 30 polities. Entries were excluded for one of two reasons: a) it was unclear whether the polity would qualify as a state, and/or b) the formation and termination dates were highly uncertain (spanning decades) and/or contested. These are Benin Edo, the Brunei Sultanate, Chavin, Da Viet, Elam, Indus Valley Civilisation, Hurrian Kingdoms of Urkesh, Jene Jano, Kanem Bornu, the Maya, Minonan Crete, the Moche, Mutapa, Ndebele, Ngoni, Papal States, Rapa Nui, Republic of Pisa, Shona, Srivijaya Empire, Teutonic Order, Tui-Tonga, Tukolor Order, Venetian Empire, Vishnukundina Dynasty, Wahabi Empire, Western Satrap, Xianbei, Yap Empire, and Zapotec. We expect that many of these could be clarified and included in a future version of MOROS.

We applied four criteria to assess statehood:

- The presence of a state apparatus that was formally (and even legally) capable of imposing rules.
- Institutionalised authority that could enact the functions of the state without relying on the charisma of the ruler.
- Continuous rule over a territory extending beyond a single city.
- The level of expert (dis)agreement.

The dates in MOROS do not represent any quantitative thresholds. Instead, they represent rough agreement by experts as to when a state can be said to have existed and ended based on interpretation of an array of sources and factors. It is a qualitative overview of common expert opinion on political periodisation. This poses problems. Different experts, and different fields can implicitly deploy varying interpretations of what signifies the end of a polity or lineage. This is difficult to detect since experts frequently do not explicitly define state formation and

termination. Nonetheless, this approach remains a credible way of determining state formation and termination.

Note that the dates provided in MOROS say little about the exact nature of the state formation and end. An empire in the dataset could have undergone a full collapse of political, economic, and societal institutions, or just undergone a fundamental change in political form (such as the movement of Rome from Republic to Empire). It also covers a simpler change in ruling elites, such as dynastic shifts in China that were incurred by internal warlords or coups (which we have identified and marked within MOROS). We hope to use expert elicitation and systematic literature reviews in the future to provide deeper information on the exact details of each entry, including what the termination entailed, a stricter definition of state formation and termination, the purported causes for collapse/transformation, and the evidence underpinning different theories.

MOROS is a work in progress. Further work is needed to ensure the estimates, are robust, comparable, and provide appropriate depth in analysis. It is not entirely comprehensive of either all states throughout human history or for all types of polities. It excludes city-states, non-state polities, and more amorphous units such as "civilisations". Nonetheless, it is — to the best of our knowledge — the largest dataset of state lifespans in existence.

4. Next Steps

MOROS is a provisional tool. There are many promising ways to expand and refine it. The first and most pressing is to simply find better ways to code for the continuity of states. The current dataset simply depicts the most accepted historical chronologies, although these do not have a common definition for state termination and formation. Coding the data with more strict definitions (such as a prolonged loss of sovereignty) would be a more robust and consistent approach.

A second path is to look beyond simple dates towards the consequences, and the reasons for termination. Separating genuine cases of collapse from simple elite replacement would make this a far more useful tool, as would detailing the proximate and ultimate reasons for termination. Pairing MOROS with expert elicitation and a literature review are two methods to include reasons and consequences into MOROS.

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