

TSE M1 – Semester 1

September 2018

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Evolution of Economic Behavior

Week 3



Between 1960 and 2015 annual rate of of multiple homicides of strangers in the USA rose by

- A) > 2 times
- B) > 6 times
- C) > 10 times
- D) > 15 times

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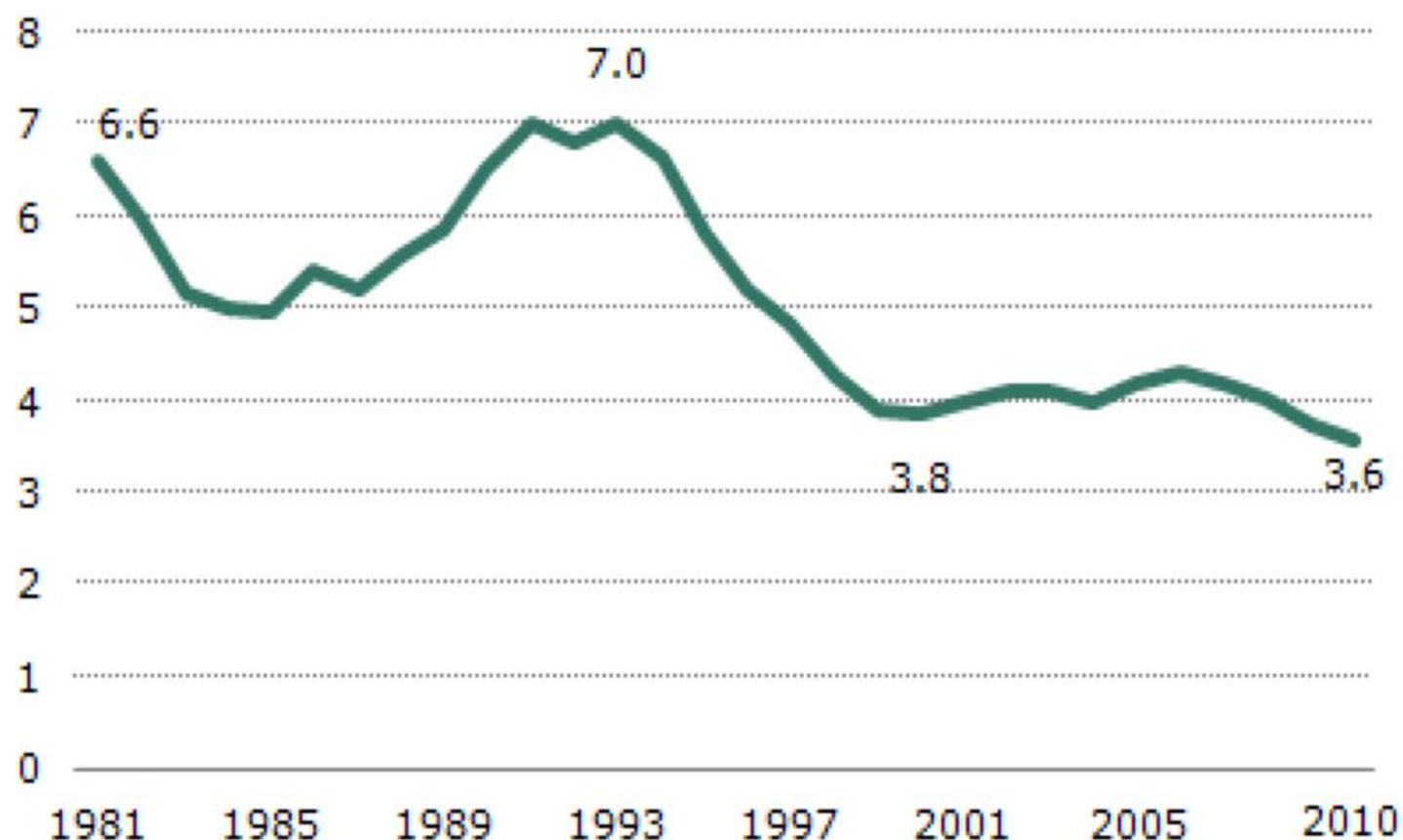
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- B) > 6 times
- C) > 10 times
- D) > 15 times



Rate of Firearm Homicide Deaths, 1981-2010

Per 100,000 people

But.....



Note: Data labels shown for 1981, 1993, 2000 and 2010.

Source: CDC's National Center for Injury Prevention and Control Web-based Injury Statistics Query and Reporting System (WISQARS)

On average the risk of a violent death in the world in 2015 compared with the risk of a violent death for hunter-gatherers in the late Paleolithic era is

- A) 12 times higher
- B) 2 times higher
- C) about the same
- C) 2 times lower
- D) 12 times lower

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What is difficult to explain about human cooperation?

- Although the benefits of cooperation in human societies are large, the costs of being cheated are also very large
 - These include not just loss of resources but loss of life
 - Rates of violent death in prehistoric populations were very high
 - This was partly because humans have interacted with non-relatives on a large scale, since before the development of agriculture and settled populations
 - As we'll see later, since Hamilton's work in biology we have come to understand that cooperation between relatives is easy to understand, cooperation between non-relatives is harder, with strangers harder still
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How far we've come: a historical perspective on risk in human societies

- The Forty-ninth World Health Assembly (1996, in Resolution WHA49.25), noted “with great concern the dramatic worldwide increase in the incidence of intentional injuries affecting people of all ages and both sexes, but especially women and children”
- “The twentieth century will be remembered as a century marked by violence” - Nelson Mandela, preface to *World Report on Violence and Health*



...provoking speculative explanations?

- “On Sunday former House Speaker Newt Gingrich blamed 40 years of liberalism for an increasingly violent and vicious society.” – ABC News interview, April 23rd 2007



A historical perspective on risk in human society

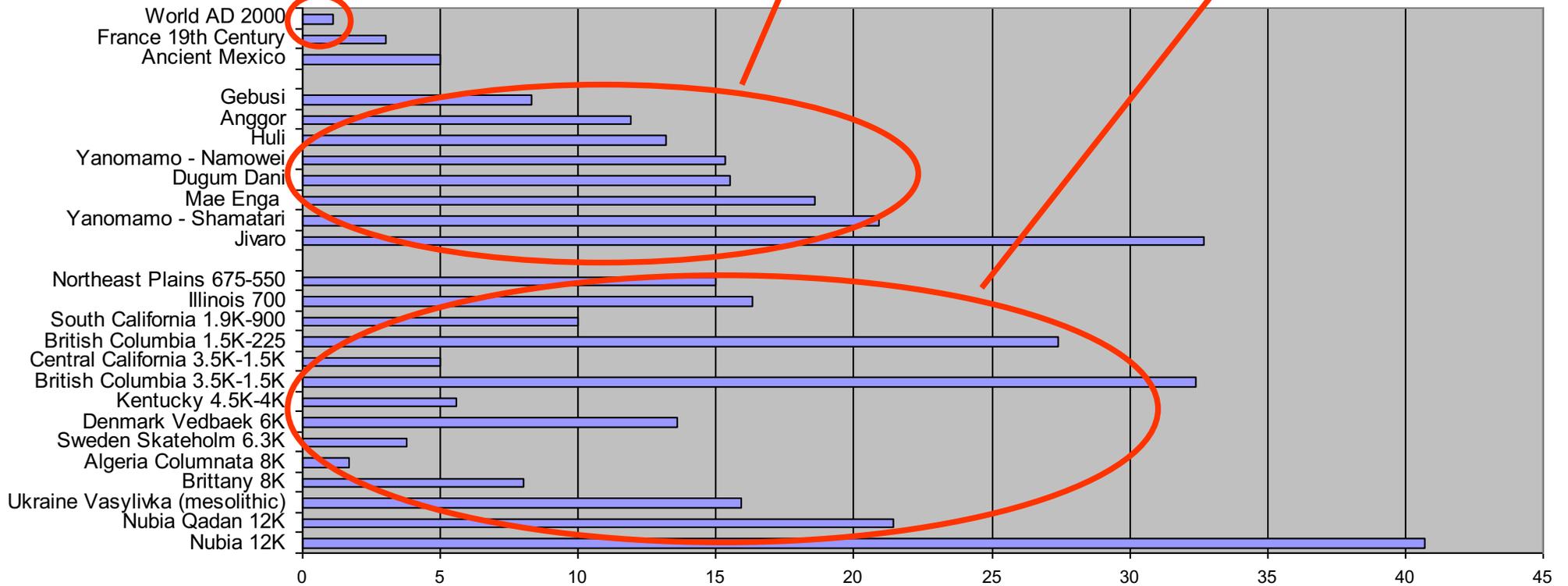
- There were 57.0 million deaths worldwide in 2002; of these 172,000 (0.3%) were in war and 559,000 (1.0%) in other forms of violence
 - Compare this with 873,000 suicides (1.5%) and 1,192,000 (2.1%) in road accidents
 - Even in Africa the rates were 0.8% war, 1.3% other violence, 0.3% suicide, 1.9% road accidents (compare 19.6% AIDS and 10.7% malaria)
 - For the 20th century as a whole (including two world wars), war and violence caused around 3.7% of all deaths
 - In hunter gatherer societies violence is estimated (Bowles 2009) to have caused 14% of deaths – more than ten times today's rate!
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Today

Ethnographic evidence

Archaeological evidence

Percentage of Deaths Due to Warfare various studies (source: Keeley 1996)



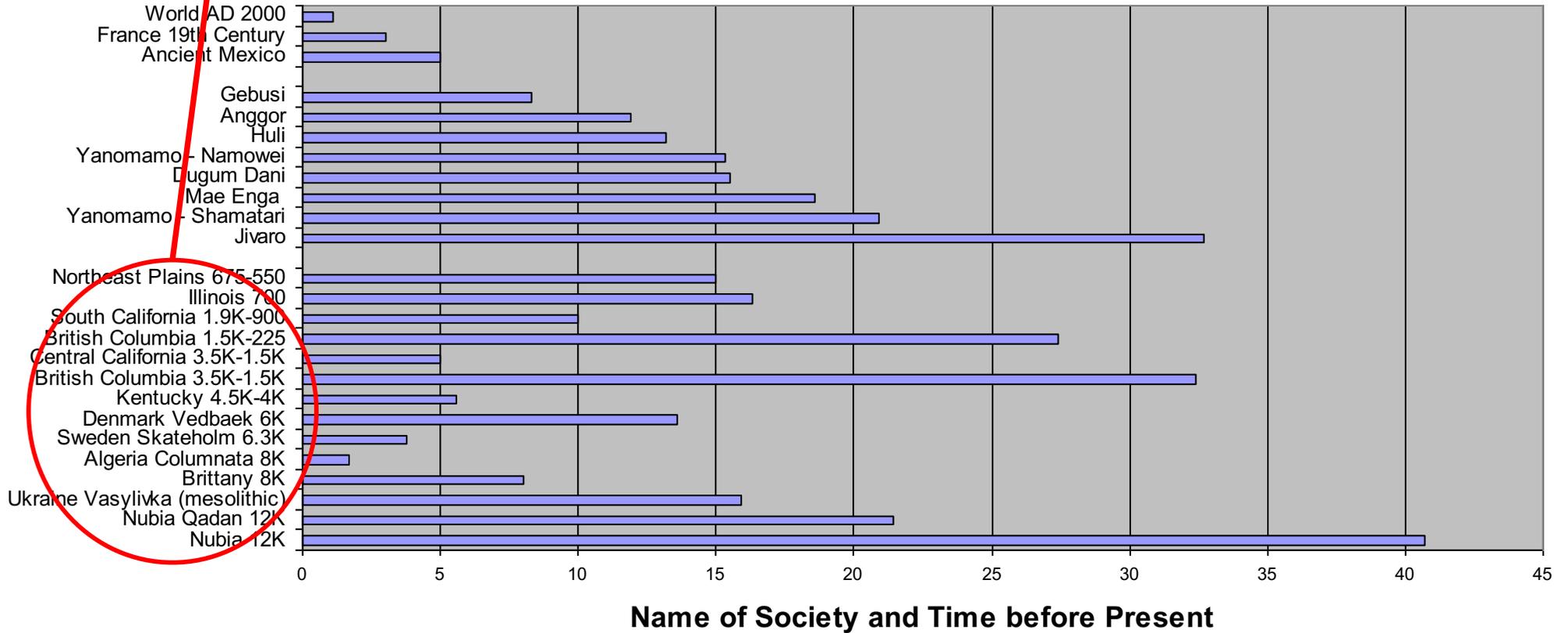
Name of Society and Time before Present





Prehistoric societies based on archaeological records

Percentage of Deaths Due to Warfare
various studies (source: Keeley 1996)





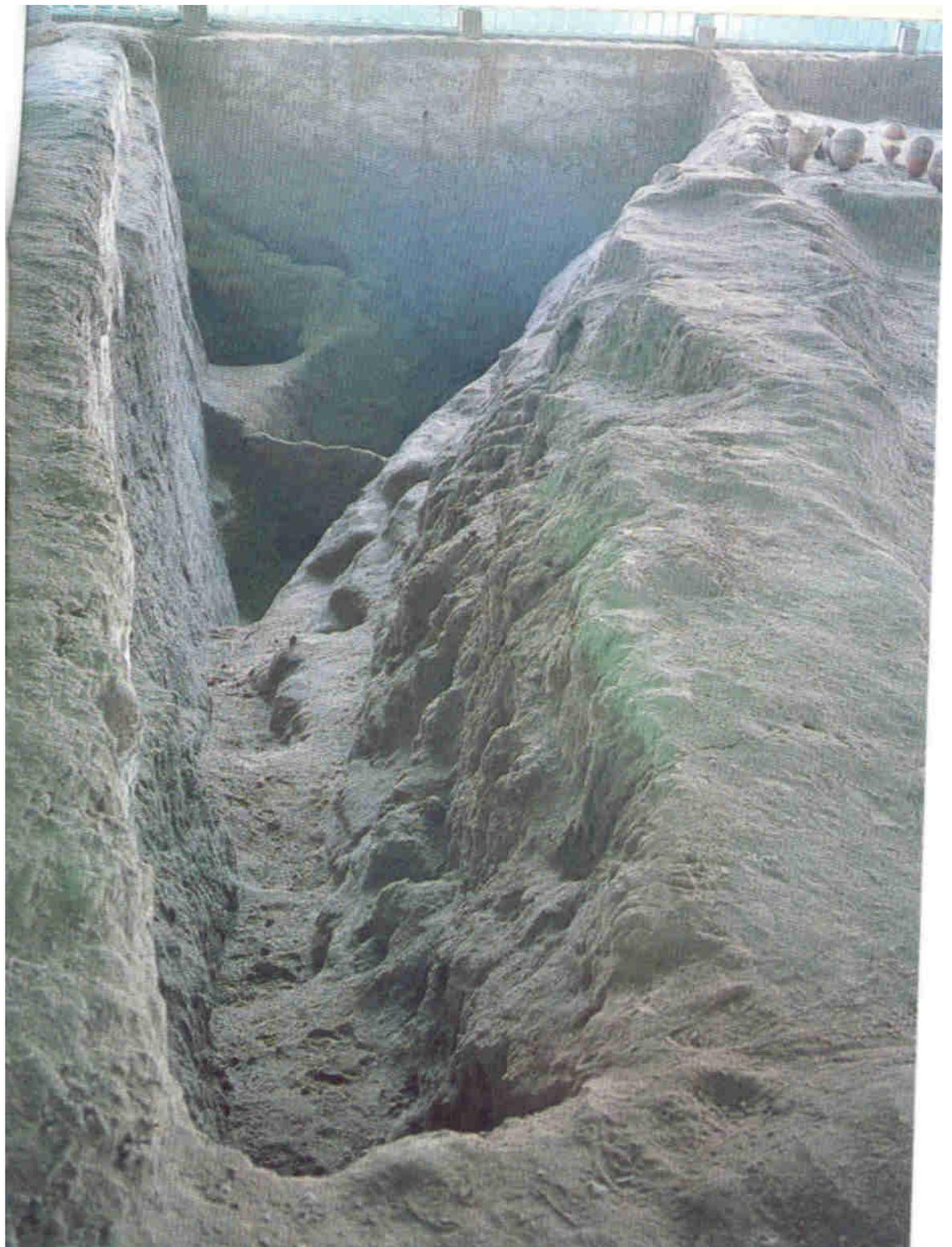
A COMPUTER-ASSISTED RECONSTRUCTION of a Neanderthal skull from St. Cesaire, France, shows that the young adult suffered a blow to the head, probably from a machetelike knife or sword, in an act of violence.

Date c.36,000 years BCE
See Zollikofer et.al.(2002)



Cahokia point embedded in human sacrum
Schild site, Illinois; date 600-900 AD

This ditch, at Banpo neolithic village, near Xian in central China, is 300 meters long, 5-6 meters deep and 6-8 meters wide at the top. Digging it required moving 10,000 cubic meters of earth – not a casual undertaking for people living on limited calorie supplies





A model reconstruction of the ditch at Banpo,
built c. 6000 years ago



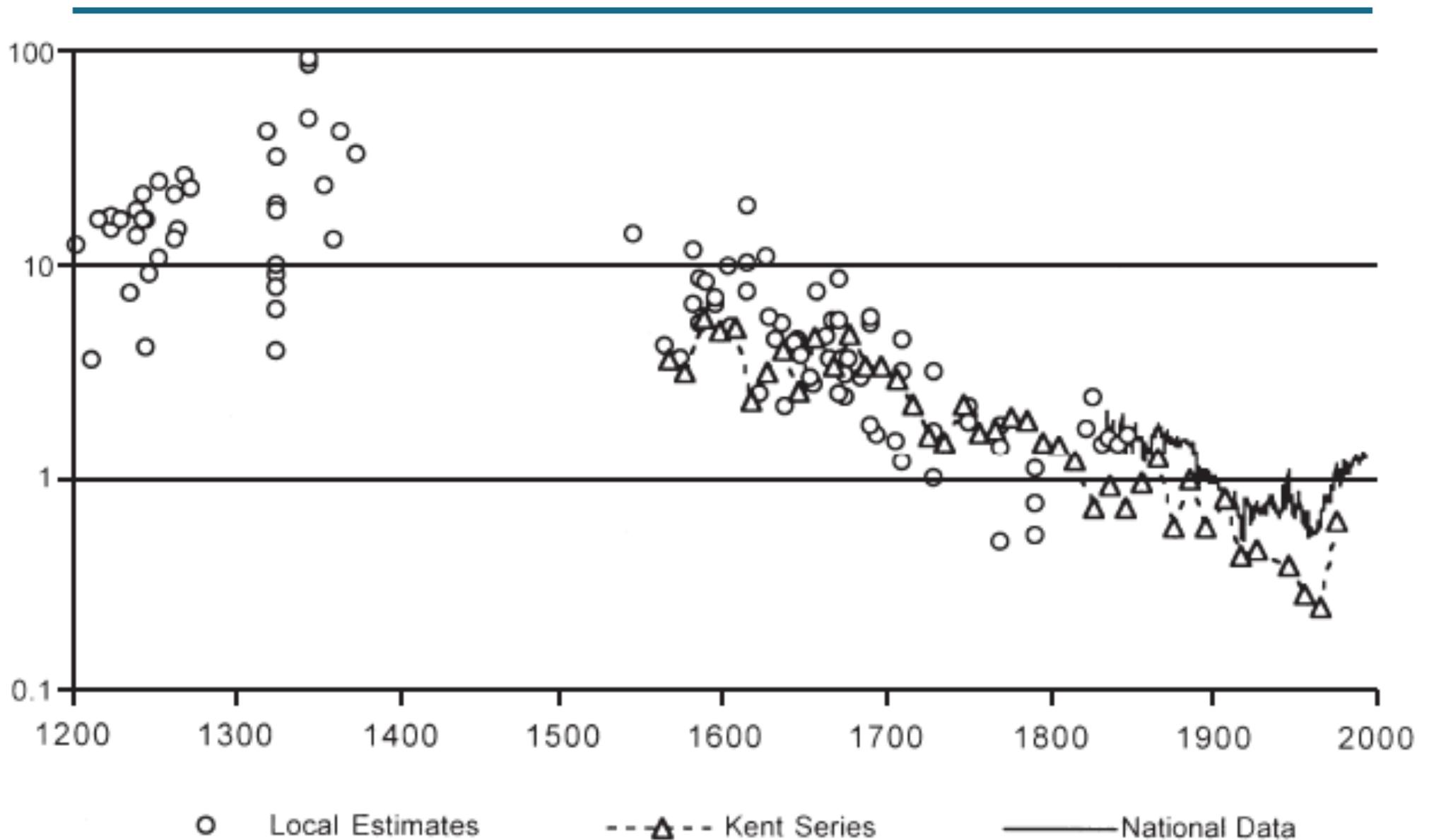
What do we know about the pattern of violence over the centuries?

- In historical times the violence has declined gradually and relatively continuously since the middle ages – no earlier evidence available

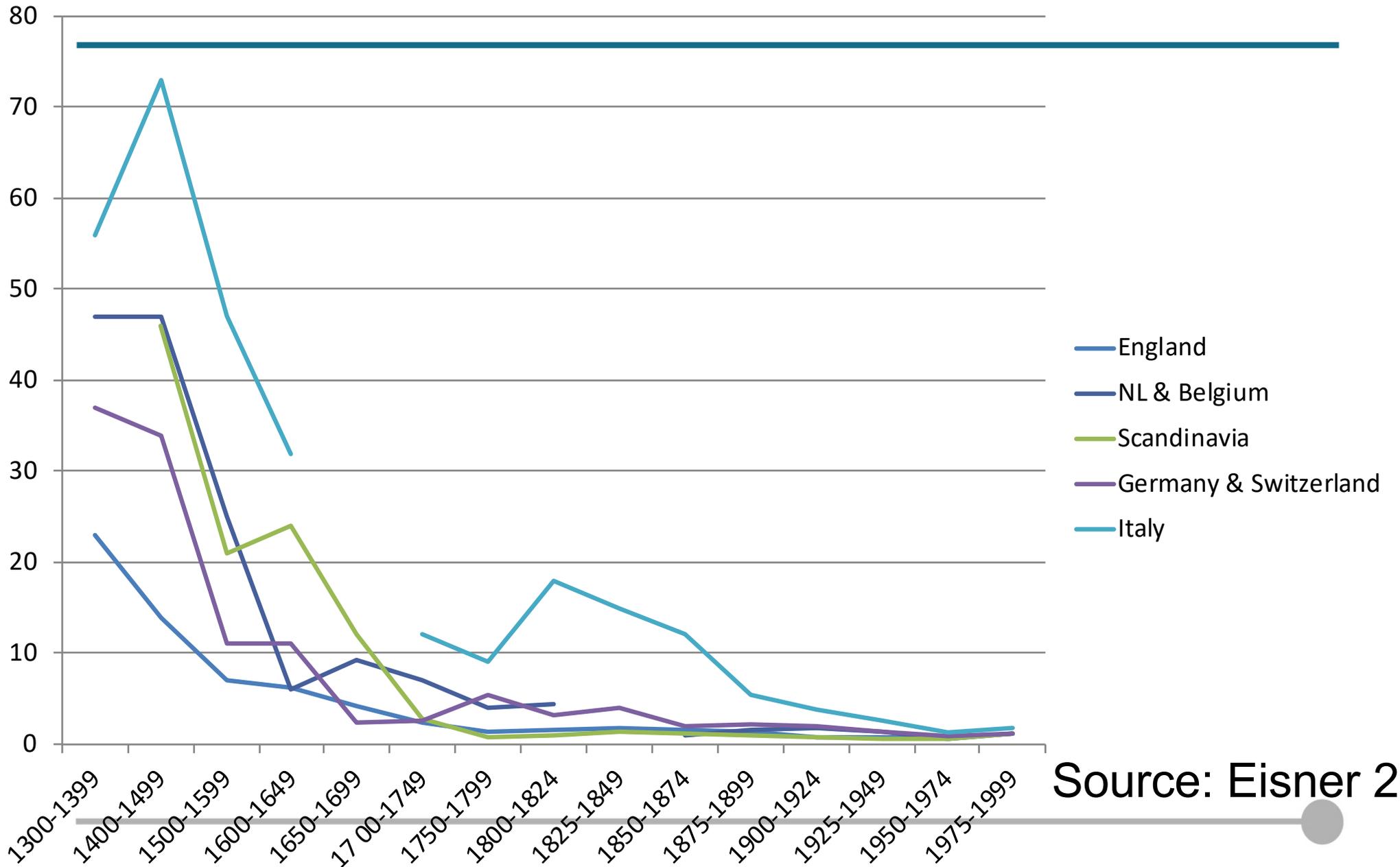


Eight centuries of English homicide rates

Source: Eisner 2001



Seven centuries of European homicide rates



Source: Eisner 2

What's the explanation? The accepted view

- Norbert Elias, *Über den Prozeß der Zivilisation* (1939) developed an answer which is broadly accepted by historians and social scientists today
- The elements:
 - Growing influence of institutions (courts, armies, firms) on individual behaviour
 - Extension of ideals of behaviour (self-control, manners, prudence, etc) from higher to lower classes of society



What's the explanation? The accepted view

- Gradual replacement in the determination of behaviour of
 - honour by prudence
 - kinship by impartiality
 - emotion by reason
 - revenge by justice
- Others (eg Azar Gat, *War in Human Civilization*, 2006) add the large benefits from peace in the post-Malthusian world
- This view is not wrong – but it is incomplete!

An alternative view from behavioral economics and neuroscience

- Reason has not *replaced* emotion but has *harnessed* it
 - Purely cognitive approaches to the enforcement of trust cannot work (the reliability of the reprisal mechanisms depends on emotional components)
 - In particular, trust is more effective in the presence of strong reciprocity
 - But effectively designed institutions can make a little reciprocity go a long way
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