

Health By Wealth: Computational tools and population level data uncover substantial inequalities in health over the very long run

Naomi Muggleton, Aaron Reeves, **Charles Rahal**, Alexandra Rottenkolber, Linda Li

Leverhulme Centre for Demographic Science

European Population Conference, June 5th, 2026



Historical evidence arrives as snapshots

Liverpool, 1840

- Chadwick studied Liverpool deaths.
- Professionals: average age 35.
- Tradesmen: average age 22.
- Labourers: average age 15.
- Mortality tracked class position.

Whitehall studies

- Civil servants followed prospectively.
- Lower rank, shorter lives.
- Mortality rose down hierarchy.
- Gradient persisted after retirement.
- Risk factors explained part.

These are powerful comparisons, but not linked individual histories.

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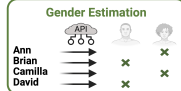
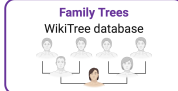
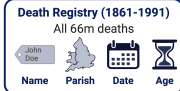
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Probate Records (1858-1995)

All wills and administrations

Deceased
person's wishes
for distributing
their assets.Legal process
for distributing
assets when
there is no will.

Wills

Administrations

Death Registry (1861-1991)

All 66m deaths

John
Doe

Name

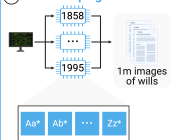
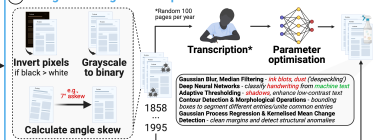
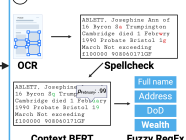
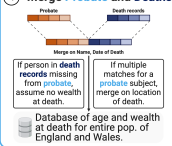
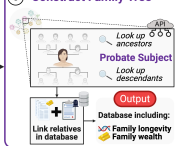
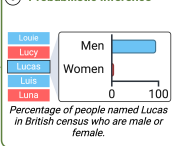
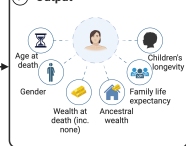
Parish

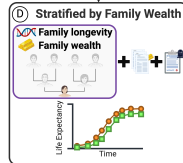
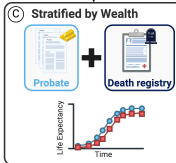
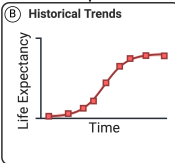
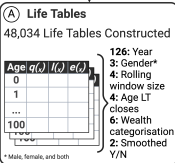
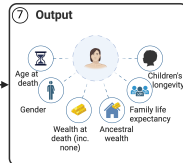
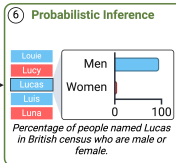
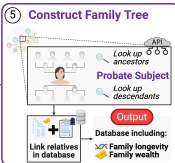
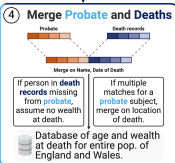
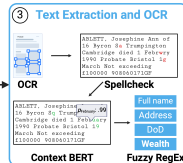
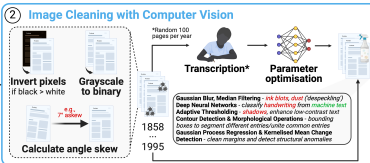
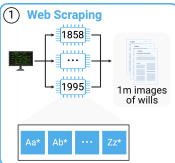
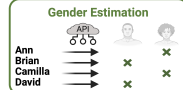
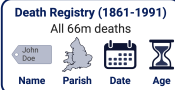
Date

Age

Family Trees

WikiTree database

**Gender Estimation****1 Web Scraping****2 Image Cleaning with Computer Vision****3 Text Extraction and OCR****4 Merge Probate and Deaths****5 Construct Family Tree****6 Probabilistic Inference****7 Output**





DICKENS { Charles otherwise
Charles John
Huffham Esq.

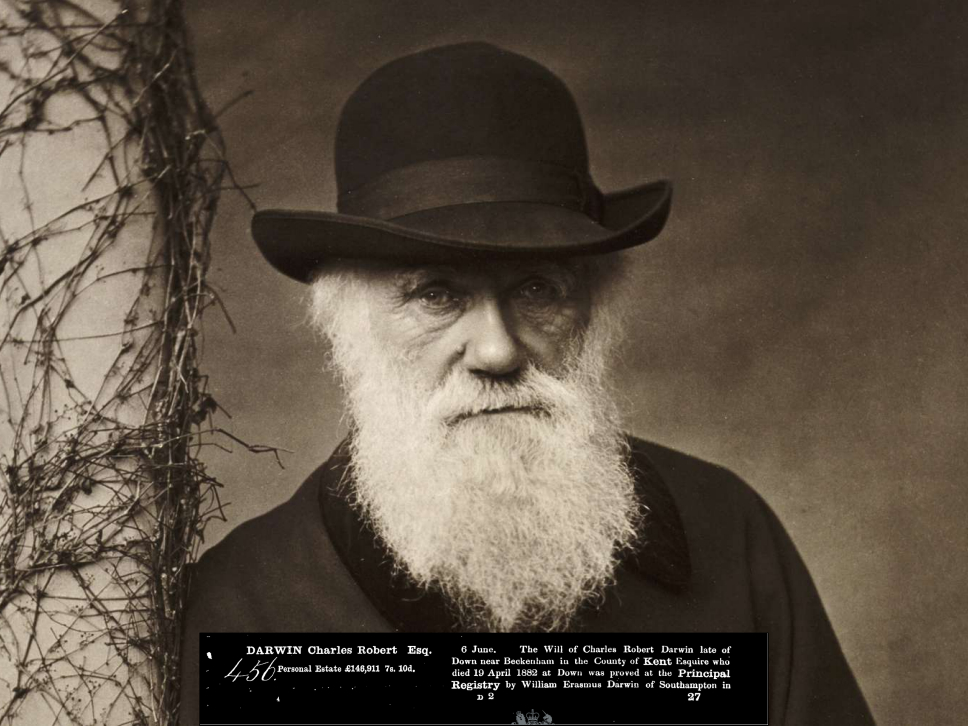
468

Effects under £80,000.

19 July.

The Will

with a Codicil of Charles otherwise Charles John Huffham Dickens late of Gads Hill Place near Rochester in the County of Kent Esquire deceased who died 9 June 1870 at Gads Hill Place aforesaid was proved at the Principal Registry by the oaths of Georgina Hogarth of Gads Hill Place aforesaid Spinster and John Forster of Palace Gate House Kensington in the County of Middlesex Esquire the Executors.



DARWIN Charles Robert Esq.

450

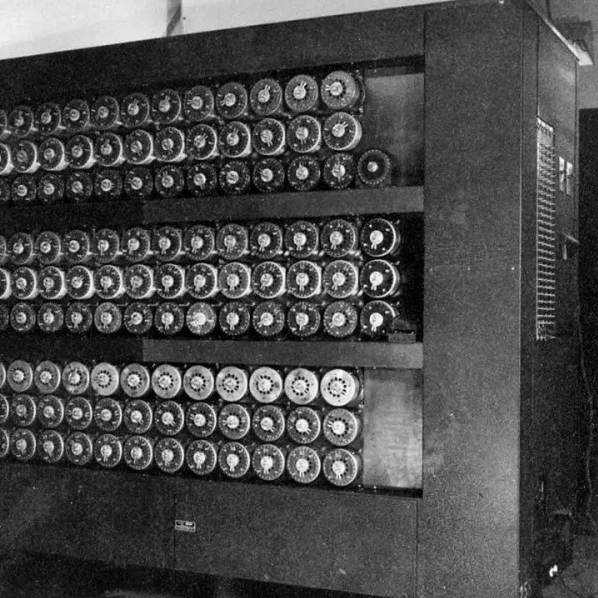
Personal Estate £146,911 7s. 10d.

6 June. The Will of Charles Robert Darwin late of Down near Beckenham in the County of Kent Esquire who died 19 April 1882 at Down was proved at the Principal Registry by William Erasmus Darwin of Southampton in

D 2

27





TURING Alan Mathison of Hollymeade Adlington-road Wilmslow
Cheshire died 8 June 1954 Probate **Manchester** 20 September
to Philip Nicholas Furbank librarian. Effects £4603 5s. 4d.



CHURCHILL the right honourable sir **Winston Leonard Spencer K.G. O.M. C.H.** of Chartwell Manor Westerham Kent and 28 Hyde Park Gate London S.W.7 died 24 January 1965 at 28 Hyde Park Gate Probate London 9 February to dame Clementine Ogilvy Spencer Churchill G.B.E.; widow Mary Soames married woman and John Rupert Colville C.B. C.V.O. banker. E304044.

Collecting probate meant scraping at national scale

Stage	Step
1.	Set up 138 virtual machines (EC2, AWS) - one for each year.
2.	Sent requests ¹ at a rate of – on average – one request every 10 seconds (plus or minus noise). ²
3.	Use wildcard search to rattle through all surnames between Aa* and Zz*.
4.	Save image in AWS S3 bucket for processing.

Result: 1 million pages of probate records (or, stacked horizontally...)

¹With friendly user agent message providing contact details.

²This is well within normal traffic for server and abides by robots.txt guidelines.

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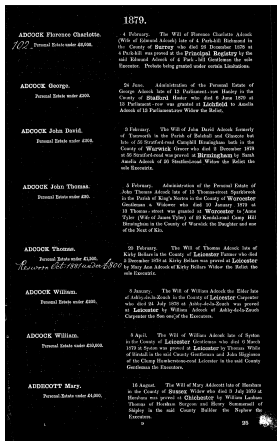
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Computer vision turns scans into usable records



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2. From greyscale to binary (black-white)
3. Calculate angle of pixels and deskew
4. Blob removal (e.g., ink blots)
5. Margin detection using Gaussian Process Regression
6. Remove handwriting; keep typewriting
7. Speckle removal (e.g., dust)
8. Bounding boxes around each entry
9. Resize page based on optimal extraction^a

^aHuge thanks to RAs who created training set per year!

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	1879.
ADCOCK Florence Charlotte. 102. Personal Estate under £2500.	4 February. The Will of Florence Charlotte ADCOCK (Wife of Leonard ADCOCK) late of 4 Parkhill Rowland in the County of Surrey who died 25 November 1878 at 4 Parkhill was proved at the Principal Registry by the said Leonard ADCOCK of 4 Parkhill Godstone the sole Executor. Probate being granted under certain Limitations.
ADCOCK George. Personal Estate under £250.	26 June. Administration of the Personal Estate of George ADCOCK late of 12 Palladium Court Haverly in the County of Stafford Haverly who died 6 June 1878 at 12 Palladium Court was granted at Lichfield to Anna ADCOCK of 12 Palladium Court Widow the Sole.
ADCOCK John David. Personal Estate under £250.	9 February. The Will of John David ADCOCK formerly of Tynemouth in the Parish of Belfield and Gosport late late of 26 Stratford Road Camploll Birmingham late in the County of Warwick Greener who died 8 December 1878 at 26 Stratford Road was proved at Birmingham by Sarah ADCOCK ADCOCK of 20 Stratford Road Widow the Sole the sole Executrix.
ADCOCK John Thomas. Personal Estate under £25.	5 February. Administration of the Personal Estate of John Thomas ADCOCK late of 15 Thomas Street Spitalfields in the Parish of King's Square in the County of Worcester Gentleman a Widower who died 30 January 1873 at 15 Thomas Street was granted at Worcester to Anna Tyler (Wife of James Tyler) of 10 Knabbsland Green Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. Personal Estate under £250. <i>Received 666-1887 under £2500</i>	28 February. The Will of Thomas ADCOCK late of Killy Bellan in the County of Leitrim Farmer who died 2 December 1874 at Killy Bellan was proved at Leicester by Mary Ann ADCOCK of Killy Bellan Widow the Sole the sole Executrix.
ADCOCK William. Personal Estate under £250.	5 January. The Will of William ADCOCK the Elder late of Ashby-de-la-Zouch in the County of Leicestershire Carpenter who died 24 July 1873 at Ashby-de-la-Zouch was proved at Leicester by William ADCOCK of Ashby-de-la-Zouch Carpenter the Son one of the Executors.
ADCOCK William. Personal Estate under £25000.	5 April. The Will of William ADCOCK late of Syston in the County of Leicestershire Gentleman who died 9 March 1873 at Syston was proved at Leicester by Thomas White of Stratford in the said County Gentleman and John Hargreaves of the Chapp Hawthornwood Leicester in the said County Gentleman the Executors.
AIDSCOTT Mary. Personal Estate under £1200.	16 August. The Will of Mary AIDSCOTT late of Borden in the County of Surrey Widow who died 2 July 1870 at Borden was proved at Chichester by William Ludlow Thomas of Bordon Regent and Henry Stannard of Stigley in the said County Beller the Executors.

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ADCOCK Florence Charlotte. Personal Estate under £6,000.	4 February. The Will of Florence Charlotte ADCOCK (Wife of Edward ADCOCK) late of 4 Parkhill Boulevard in the County of Surrey who died 20 December 1939 at 4 Parkhill was proved at the Principal Registry by the said Edward ADCOCK of 4 Park Hill Gardens the sole Executor. Probate being granted under certain Limitations.
ADCOCK George. Personal Estate under £100.	26 June. Administration of the Personal Estate of George ADCOCK late of 11 Parliament-street Haverly in the County of Staffordshire who died 4 June 1920 at 11 Parliament-street was granted at Lichfield to Amelia ADCOCK of 20 Stratford-road Widow the Relict the sole Executrix.
ADCOCK John David. Personal Estate under £100.	3 February. The Will of John David ADCOCK formerly of Tamworth in the Parish of Balsall and Gloucesters late late of 20 Stratford-road Churchill Birmingham both in the County of Warwickshire who died 2 December 1933 at 20 Stratford-road was proved at Birmingham by Sarah Amelia ADCOCK of 20 Stratford-road Widow the Relict the sole Executrix.
ADCOCK John Thomas. Personal Estate under £25.	5 February. Administration of the Personal Estate of John Thomas ADCOCK late of 13 Thame-street Spitalfields in the Parish of King's Norton in the County of Worcester Gloucestershire a Widower who died 10 January 1930 at 13 Thame-street was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. Personal Estate under £1,000. <i>Residuary £60,198/10/- under £100</i>	30 February. The Will of Thomas ADCOCK late of Kirby Bellus in the County of Leicestershire Farmer who died 8 December 1934 at Kirby Bellus was proved at Leicester by Mary Anna ADCOCK of Kirby Bellus Widow the Relict the sole Executrix.
ADCOCK William. Personal Estate under £100.	4 January. The Will of William ADCOCK the Elder late of Ashby-de-la-Zouch in the County of Leicestershire Carpenter who died 24 July 1933 at Ashby-de-la-Zouch was proved at Leicester by William ADCOCK of Ashby-de-la-Zouch Carpenter the Son and of the Executors.
ADCOCK William. Personal Estate under £10,000.	8 April. The Will of William ADCOCK late of Syden in the County of Leicestershire Gentleman who died 12 March 1919 at Syden was proved at Leicester by Thomas White of Stroud in the said County Gentlemen and John Hughes of the Chapp Hamlet Leicestershire in the said County Gentlemen the Executors.
ADBOOTT Mary. Personal Estate under £1,000.	10 August. The Will of Mary ADBOOTT late of Haxham in the County of Bedfordshire Widow who died 2 July 1913 at Haxham was proved at Hitchin by William Ludlow Thomas of Haxham Esquire and Henry Mansel of Stimpay in the said County Barrister the Relict the Executors.

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ADCOCK George. Personal Estate under £100.	21 June. Administration of the Personal Estate of George ADCOCK late of 11 Parliament-street Haxley in the County of Staffordshire who died 4 June 1920 at 11 Parliament-street was granted at Lichfield to Amelia ADCOCK of 20 Parkmans-lane Widow the Heiress.
ADCOCK John David. Personal Estate under £100.	3 February. The Will of John David ADCOCK formerly of Tamworth in the Parish of Balsall and Gloucestre last late of 20 Stratford-road Churchill Birmingham last in the County of Warwickshire who died 2 December 1920 at 20 Stratford-road was proved at Birmingham by Sarah Amelia ADCOCK of 20 Stratford-road Widow the Heiress the sole Executrix.
ADCOCK John Thomas. Personal Estate under £25.	5 February. Administration of the Personal Estate of John Thomas ADCOCK late of 13 Thomsen-street Spetchley in the Parish of King's Norton in the County of Worcester Gloucestershire a Widower who died 10 January 1920 at 13 Thomsen-street was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. Personal Estate under £1,000. Residuary Estate under £1,000.	30 February. The Will of Thomas ADCOCK late of Kirby Bellus in the County of Leicestershire Farmer who died 8 December 1920 at Kirby Bellus was proved at Leicester by Mary Anna ADCOCK of Kirby Bellus Widow the Heiress the sole Executrix.
ADCOCK William. Personal Estate under £100.	4 January. The Will of William ADCOCK the Elder late of Ashby-de-la-Zouch in the County of Leicestershire Carpenter who died 24 July 1920 at Ashby-de-la-Zouch was proved at Leicester by William ADCOCK of Ashby-de-la-Zouch Carpenter the Son and one of the Executors.
ADCOCK William. Personal Estate under £10,000.	8 April. The Will of William ADCOCK late of Syden in the County of Leicestershire Gentleman who died 12 March 1920 at Syden was proved at Leicester by Thomas White of Bressall in the said County Gentlemen and John Hughes of the Clung Hamlet Leicestershire in the said County Gentlemen the Executors.
ADBOOTT Mary. Personal Estate under £1,000.	10 August. The Will of Mary ADBOOTT late of Haxham in the County of Bedfordshire Widow who died 2 July 1920 at Haxham was proved at Hitchin by William Ludlow Thomas of Haxham Esquire and Henry Mansel of Stimpay in the said County Barrister the Executors.

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ADCOCK George. Personal Estate under £100.	21 June. Administration of the Personal Estate of George ADCOCK late of 11 Parliament-street Haverly in the County of Staffordshire who died 4 June 1920 at 11 Parliament-street was granted at Lichfield to Amelia ADCOCK of 23 Parkmansmore Widow the Heiress.
ADCOCK John David. Personal Estate under £100.	3 February. The Will of John David ADCOCK formerly of Tamworth in the Parish of Balsall and Gloucestre last late of 20 Stratford-road Churchill Birmingham last in the County of Warwickshire who died 2 December 1933 at 20 Stratford-road was proved at Birmingham by Sarah Amelia ADCOCK of 69 Stratford-road Widow the Heiress the sole Executrix.
ADCOCK John Thomas. Personal Estate under £25.	5 February. Administration of the Personal Estate of John Thomas ADCOCK late of 13 Thomsenstreet Spitalfields in the Parish of King's Norton in the County of Worcester Gloucestershire a Widower who died 10 January 1930 at 13 Thomsen-street was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Rindford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. Personal Estate under £1,000. Residuary Estate under £1,000.	30 February. The Will of Thomas ADCOCK late of Kirby Bellus in the County of Leicestershire who died 6 December 1933 at Kirby Bellus was proved at Leicester by Mary Anna ADCOCK of Kirby Bellus Widow the Heiress the sole Executrix.
ADCOCK William. Personal Estate under £100.	4 January. The Will of William ADCOCK the Elder late of Ashby-de-la-Zouch in the County of Leicestershire who died 24 July 1923 at Ashby-de-la-Zouch was proved at Leicester by William ADCOCK of Ashby-de-la-Zouch Carpenter the Son and of the Executors.
ADCOCK William. Personal Estate under £10,000.	8 April. The Will of William ADCOCK late of Syden in the County of Leicestershire Gloucestershire who died 12 March 1929 at Syden was proved at Leicester by Thomas White of Stroud in the said County Gloucestershire and John Hughes of the Chapp Hamlet near Leicestershire in the said County Gloucestershire the Executors.
ADBOOTT Mary. Personal Estate under £1,000.	10 August. The Will of Mary ADBOOTT late of Haverham in the County of Sussex who died 2 July 1913 at Haverham was proved at Chichester by William Ludlow Thomas of Haverham Esquire and Henry Mansel-Pleydell of Sturley in the said County Rutland the Executors.

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ADCOCK George. <i>Personal Estate under £100.</i>	21 June. Administration of the Personal Estate of George Adcock late of 11 Parliament-street Haxley in the County of Staffordshire who died 4 June 1929 at 11 Parliament-street was granted at Lichfield to Amelia Adcock of 23 Parkmansmore Widow the Heiress.
ADCOCK John David. <i>Personal Estate under £100.</i>	3 February. The Will of John David Adcock formerly of Tamworth in the Parish of Balsall and Glanville last late of 20 Stratford-road Churchill Birmingham last in the County of Warwickshire who died 2 December 1933 at 20 Stratford-road was proved at Birmingham by Sarah Amelia Adcock of 69 Stratford-road Widow the Heiress the sole Executrix.
ADCOCK John Thomas. <i>Personal Estate under £25.</i>	5 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Thomsenstreet Sparkbrook in the Parish of King's Norton in the County of Worcester Gloucestershire a Widower who died 12 January 1939 at 13 Thomsen-street was granted at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. <i>Personal Estate under £1,000. <i>Residence 666-1187-1187-1187-1187</i></i>	30 February. The Will of Thomas Adcock late of Kirby Bellars in the County of Leicestershire Farmer who died 2 December 1934 at Kirby Bellars was proved at Leicester by Mary Anna Adcock of Kirby Bellars Widow the Heiress the sole Executrix.
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ADCOCK William. <i>Personal Estate under £10,000.</i>	8 April. The Will of William Adcock late of Syden in the County of Leicestershire Gentleman who died 12 March 1939 at Syden was proved at Leicester by Thomas White of Stroud in the said County Gloucestershire and John Hughes of the Clung Hamlet Leicestershire in the said County Gloucestershire the Executors.
ADBOOTT Mary. <i>Personal Estate under £1,000.</i>	10 August. The Will of Mary Adboott late of Haxham in the County of Bedfordshire Widow who died 2 July 1933 at Haxham was proved at Leicester by William Ludlow Thomas of Haxham Esquire and Henry Mansfield of Shipley in the said County Bedfordshire the Executors.

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	1879.
ADCOCK Florence Charlotte. Personal Estate under £6,000.	4 February. The Will of Florence Charlotte Adcock (Wife of Edward Adcock) late of 4 Parkhill Belmont in the County of Surrey who died 20 December 1920 at 4 Parkhill was proved at the Principal Registry by the said Edward Adcock of 4 Park Hill Gardens the sole Executor. Probate being granted under certain Limitations.
ADCOCK George. Personal Estate under £100.	26 June. Administration of the Personal Estate of George Adcock late of 11 Parliament-street Haverly in the County of Staffordshire who died 4 June 1920 at 11 Parliament-street was granted at Lichfield to Anna Adcock of 20 Parkmans-Row Widow the Heiress.
ADCOCK John David. Personal Estate under £100.	3 February. The Will of John David Adcock formerly of Teworth in the Parish of Rotherham and Gloucester but late of 20 Stratford-road Chesham Bovingdon both in the County of Warwickshire who died 2 December 1920 at 20 Stratford-road was proved at Birmingham by Sarah Anna Adcock of 20 Stratford-road Widow the Heiress the sole Executrix.
ADCOCK John Thomas. Personal Estate under £25.	5 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Thamestreet Spitalfields in the Parish of King's Norton in the County of Worcester Gloucester a Widower who died 10 January 1920 at 13 Thamestreet was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Bovingdon in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. Personal Estate under £1,000.	30 February. The Will of Thomas Adcock late of Kirby Bellon in the County of Leicestershire Farmer who died 5 December 1920 at Kirby Bellon was proved at Leicester by Mary Ann Adcock of Kirby Bellon Widow the Heiress the sole Executrix.
ADCOCK William. Personal Estate under £100.	4 January. The Will of William Adcock the Elder late of Ashby-de-la-Zouch in the County of Leicestershire Carpenter who died 24 July 1920 at Ashby-de-la-Zouch was proved at Leicester by William Adcock of Ashby-de-la-Zouch Carpenter the Son and one of the Executors.
ADCOCK William. Personal Estate under £10,000.	8 April. The Will of William Adcock late of Syden in the County of Leicestershire Gentleman who died 12 March 1920 at Syden was proved at Leicester by Thomas White of Bressingham in the said County Gentleman and John Hughes of the Chappell Hamlet Leicestershire in the said County Gentleman the Executors.
ADBOOTT Mary. Personal Estate under £1,000.	10 August. The Will of Mary Adboott late of Haxham in the County of Bedfordshire Widow who died 2 July 1920 at Haxham was proved at Chichester by William Ludlow Thomas of Haxham Esquire and Henry Mansfield of Shipley in the said County Bailiff the Executors the Executors.

1. Invert colours if black pixels > white pixels
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8. Bounding boxes around each entry
9. Resize page based on optimal extraction^a

^a Huge thanks to RAs who created training set per year!

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1879.

ADCOCK Florence Charlotte.
Personal Estate under £6,000.

4 February. The Will of Florence Charlotte Adcock (Wife of Edward Adcock) late of 4 Parkhill Mansions in the County of Surrey who died 20 December 1920 at 4 Parkhill was proved at the Principal Registry by the said Edward Adcock of 4 Park Hill Gardens the sole Executor. Probate being granted under certain Limitations.

ADCOCK George.
Personal Estate under £100.

21 June. Administration of the Personal Estate of George Adcock late of 11 Parliament-street Haxley in the County of Staffordshire who died 4 June 1920 at 11 Parliament-street was granted at Lichfield to Anna Adcock of 20 Parliament-street Widow the Relict the sole Executrix.

ADCOCK John David.
Personal Estate under £100.

9 February. The Will of John David Adcock formerly of Tamworth in the Parish of Balsall and Gloucestre last late of 20 Stratford-road Churchill Birmingham last in the County of Warwickshire who died 2 December 1920 at 20 Stratford-road was proved at Birmingham by Sarah Anna Adcock of 69 Stratford-road Widow the Relict the sole Executrix.

ADCOCK John Thomas.
Personal Estate under £25.

5 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Thomsen-street Spetchworth in the Parish of King's Norton in the County of Worcester Gloucestershire a Widower who died 10 January 1920 at 13 Thomsen-street was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.

ADCOCK Thomas.
Personal Estate under £1,000.

30 February. The Will of Thomas Adcock late of Kirby Bellon in the County of Leicestershire Farmer who died 5 December 1920 at Kirby Bellon was proved at Leicester by Mary Ann Adcock of Kirby Bellon Widow the Relict the sole Executrix.

ADCOCK William.
Personal Estate under £200.

4 January. The Will of William Adcock late of Esher late of Ashby-de-la-Zouch in the County of Leicestershire Carpenter who died 24 July 1920 at Ashby-de-la-Zouch was proved at Leicester by William Adcock of Ashby-de-la-Zouch Carpenter the Son and one of the Executors.

ADCOCK William.
Personal Estate under £10,000.

8 April. The Will of William Adcock late of Syden in the County of Leicestershire Gentleman who died 12 March 1920 at Syden was proved at Leicester by Thomas White of Stroud in the said County Gentleman and John Hughes of the Clung Hamlet Leicestershire in the said County Gentleman the Executors.

ADBOOTT Mary.
Personal Estate under £1,000.

10 August. The Will of Mary Adboott late of Haxham in the County of Bedfordshire Widow who died 3 July 1920 at Haxham was proved at Hitchin by William Ludlow Thomas of Haxham Esquire and Henry Somersall of Stimpay in the said County Barrister the Executors.

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1879.

ADCOCK Florence Charlotte.
Personal Estate under £6,500.

4 February. The Will of Florence Charlotte Adcock (Wife of Edward Adcock) late of 4 Parkhill Belmont in the County of Surrey who died 20 December 1878 at 4 Parkhill was proved at the Principal Registry by the said Edward Adcock of 4 Park Hill Gardens the sole Executor. Probate being granted under certain Limitations.

ADCOCK George.
Personal Estate under £100.

21 Jan. Administration of the Personal Estate of George Adcock late of 11 Parliament-street Haxley in the County of Staffordshire who died 4 June 1879 at 11 Parliament-street was granted at Lichfield in the County of Staffordshire to the said Haxley the sole Executor.

ADCOCK John David.
Personal Estate under £100.

9 February. The Will of John David Adcock formerly of Tamworth in the Parish of Balsall and Glanville late late of 20 Street-end Chapel Birmingham both in the County of Warwickshire who died 2 December 1878 at 20 Street-end was proved at Birmingham by Sarah Ann Adcock of 68 Stratford-road the sole Executor.

ADCOCK John Thomas.
Personal Estate under £25.

5 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Thame-street Spetchley in the Parish of King's Norton in the County of Worcester Gloucestershire who died 10 January 1879 at 13 Thame-street was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the next of Kin.

ADCOCK Thomas.
Personal Estate under £100.

10 February. The Will of Thomas Adcock late of Kirby Bellon in the County of Leicestershire who died 5 December 1878 at Kirby Bellon was proved at Leicester by Mary Ann Adcock of Kirby Bellon the sole Executor.

ADCOCK William.
Personal Estate under £100.

4 January. The Will of William Adcock late of Esher late of Ashby-de-la-Zouch in the County of Leicestershire who died 24 July 1878 at Ashby-de-la-Zouch was proved at Leicester by William Adcock of Ashby-de-la-Zouch Carpenter the Son one of the Executors.

ADCOCK William.
Personal Estate under £100.

8 April. The Will of William Adcock late of Syden in the County of Leicestershire who died 12 March 1879 at Syden was proved at Leicester by Thomas White of Brims in the said County Gentlemen and John Hughes of the Chapel Hamlet Leicestershire in the said County Gentlemen the Executors.

ADBOOTT Mary.
Personal Estate under £1,000.

10 August. The Will of Mary Adboott late of Haslem in the County of Berks who died 2 July 1878 at Haslem was proved at Chichester by William Ludlow Thomas of Haslem Rector and Henry Somersall of Stopley in the said County Rector the Executors.

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	1879.
ADCOCK Florence Charlotte Personal Estate under £6,000.	1 February. The Will of Florence Charlotte Adcock (Wife of Edward Adcock) late of 4 Parkhill Boulevard in the County of Surrey who died 24 December 1933 at 4 Parkhill was proved at the Principal Registry by the said Edward Adcock of 4 Parkhill Executors the sole Executors. Probate being granted under certain Limitations.
ADCOCK George. Personal Estate under £100.	21 June. Administration of the Personal Estate of George Adcock late of 11 Parliament-street Hanley in the County of Stafford Bachelor who died 4 June 1935 at 11 Parliament-street was granted to Litchfield in Assets Adcock of 39 Parliament-street Widow the Executor.
ADCOCK John David. Personal Estate under £100.	1 February. The Will of John David Adcock formerly of 57 Tottenham in the Parish of St. Paul and Glenside late late of 20 Shrewsbury-road Churchill Birmingham born in the County of Warwick Gloucester died 2 December 1935 at 20 Shrewsbury-road was proved at Birmingham by Sarah Anna Adcock of 68 Stratford-road Widow the Executor the sole Executors.
ADCOCK John Thomas. Personal Estate under £50.	2 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Unnamet-road Spetchworth in the Parish of King's Norton in the County of Worcester Gentleman a Widower who died 10 January 1935 at 13 Thomas-street was proved at Worcester by Anne Thale (Wife of James Thale) of 22 Kestrel-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Joint-Executors.
ADCOCK Thomas. Personal Estate under £1,000.	10 February. The Will of Thomas Adcock late of 10 Parkhill in the County of Leicester Partner who died 3 December 1935 at 3127 Bellas was proved at Leicester by Mary Ann Adcock of Kirby-Bellars Widow the Executor the sole Executors.
ADCOCK William. Personal Estate under £100.	1 January. The Will of William Adcock the Elder late of Ashby-de-la-Zouch in the County of Leicestershire Gentleman who died 24 July 1935 at Ashby-de-la-Zouch was proved at Leicester by William Adcock of Ashby-de-la-Zouch Carpenter the Son and one of the Executors.
ADCOCK William. Personal Estate under £10,000.	14 April. The Will of William Adcock late of Boston in the County of Leicestershire Gentleman who died 18 March 1935 at Boston was proved at Leicestershire by Thomas White of Boston in the said County the Executor and John Whigham of the Clump Humberston-road Leicestershire in the said County the Executors the Executors.
ADBOOYTT Mary. Personal Estate under £1,000.	10 August. The Will of Mary Adbooytt late of Haslemere in the County of Surrey Widow who died 4 July 1932 at Haslemere was proved at Chichester by William Leachman of Haslemere Solicitor and Henry Somerset of Bishop's in the said County the Executors the Executors.

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1879.	
ADCOCK Florence Charlotte. Personal Estate under £1,000.	4 February. The Will of Florence Charlotte Adcock (Wife of Edward Adcock) late of 4 Parkhill Mansions in the County of Surrey who died 24 December 1878 at 4 Parkhill Mansions in the County of Surrey by the said Edward Adcock of 4 Parkhill Mansions her sole Executor. Probate being granted under certain Licenses.
ADCOCK George. Personal Estate under £100.	21 June. Administration of the Personal Estate of George Adcock late of 11 Parliament-street in the County of Staffordshire who died 4 June 1878 at 11 Parliament-street was granted to Litchfield. In Adcock Adcock of 30 Parliament-street Widow the Heir.
ADCOCK John David. Personal Estate under £100.	1 February. The Will of John David Adcock formerly of Tottenham in the Parish of St. John and Glanton late one of 20 Street-lane and Chapel Birmingham born in the County of Warwick (Glasgow) died 2 December 1878 at 20 Street-lane was proved at Birmingham by Sarah Anna Adcock of 68 Stratford-road Widow the Heir. The sole Executrix.
ADCOCK John Thomas. Personal Estate under £50.	2 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Unwin-street Spokenish in the Parish of King's Norton in the County of Worcester Gentleman who died 10 January 1878 at 13 Unwin-street was proved at Worcester by Anne-Phoebe Wilkin (Daughter) of 22 Redcross Camp Hill Birmingham in the County of Warwick the Daughter and one of the Next of Kin.
ADCOCK Thomas. Personal Estate under £1,000.	10 February. The Will of Thomas Adcock late of 14 Parkhill Mansions in the County of Leicestershire formerly of 31 Southgate (195) at 31 City Hall was proved at Leicester by Mary Ann Adcock of 14 Parkhill Mansions Widow the Heir. The sole Executrix.
ADCOCK William. Personal Estate under £100.	1 January. The Will of William Adcock late of 14 Parkhill Mansions in the County of Leicestershire formerly of 31 Southgate (195) at 31 City Hall was proved at Leicester by Mary Ann Adcock of 14 Parkhill Mansions Widow the Heir. The sole Executrix.
ADCOCK William. Personal Estate under £100.	14 April. The Will of William Adcock late of 14 Parkhill Mansions in the County of Leicestershire formerly of 31 Southgate (195) at 31 City Hall was proved at Leicester by Mary Ann Adcock of 14 Parkhill Mansions Widow the Heir. The sole Executrix.
ADBOOY Mary. Personal Estate under £1,000.	10 August. The Will of Mary Adbooy late of 14 Parkhill Mansions in the County of Leicestershire formerly of 31 Southgate (195) at 31 City Hall was proved at Leicester by Mary Ann Adcock of 14 Parkhill Mansions Widow the Heir. The sole Executrix.

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1879.

ADCOCK Florence Charlotte. Personal Estate under £6,500.	4 February. The Will of Florence Charlotte Adcock (Wife of Edward Adcock) late of 4 Parkhill Belmont in the County of Surrey who died 20 December 1878 at 4 Parkhill was proved at the Principal Registry by the said Edward Adcock of 4 Parkhill Court Gardens the sole Executor. Probate being granted under certain Licences.
ADCOCK George. Personal Estate under £100.	26 Jan. Administration of the Personal Estate of George Adcock late of 11 Parliament-street Hanley in the County of Staffordshire who died 4 June 1878 at 11 Parliament-street was granted at Litchfield to Anna Adcock of 23 Parkmansmore Widow the Heir.
ADCOCK John David. Personal Estate under £100.	9 February. The Will of John David Adcock formerly of Tamworth in the Parish of Balolali and Gloucester last late of 20 Street-end Chapel Broomfield both in the County of Warwickshire who died 2 December 1873 at 20 Street-end was proved at Birmingham by Sarah Anna Adcock of 69 Stratford-road Widow the Heir the sole Executrix.
ADCOCK John Thomas. Personal Estate under £25.	5 February. Administration of the Personal Estate of John Thomas Adcock late of 13 Thomsen-street Spitalfields in the Parish of King's Norton in the County of Worcester Gloucestershire who died 10 January 1879 at 13 Thomsen-street was proved at Worcester to Anne Taylor (Wife of James Taylor) of 22 Radford-road Camp Hill Birmingham in the County of Warwick the Daughter and one of the Joint Exors.
ADCOCK Thomas. Personal Estate under £100.	10 February. The Will of Thomas Adcock late of Kirby Bellon in the County of Leicestershire Farmer who died 5 December 1878 at Kirby Bellon was proved at Leicester by Mary Ann Adcock of Kirby Bellon Widow the Heir the sole Executrix.
ADCOCK William. Personal Estate under £200.	4 January. The Will of William Adcock the Elder late of Ashby-de-la-Zouch in the County of Leicestershire Carpenter who died 24 July 1873 at Ashby-de-la-Zouch was proved at Leicester by William Adcock of Ashby-de-la-Zouch Carpenter the Son one of the Executors.
ADCOCK William. Personal Estate under £10,000.	9 April. The Will of William Adcock late of Syden in the County of Leicestershire Gentleman who died 12 March 1879 at Syden was proved at Leicester by Thomas White of Bressat in the said County Gentleman and John Hughes of the Chapel Hamlet Leicestershire in the said County Gentleman the Executors.
ADDSOOTY Mary. Personal Estate under £1,000.	10 August. The Will of Mary Addsooty late of Haslem in the County of Berks Widow who died 3 July 1873 at Haslem was proved at Chichester by William Ludlow Thomas of Haslem Berks and Henry Somerset of Stokely in the said County Berks the Heirs the Executors.

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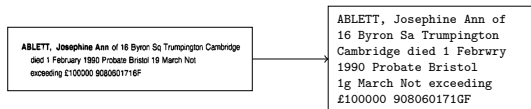
^aHuge thanks to RAs who created training set per year!

OCR and rules extract names, dates, places, wealth

ABLETT, Josephine Ann of 16 Byron Sq Trumpington Cambridge
died 1 February 1990 Probate Bristol 19 March Not
exceeding £100000 9080801716F

Amazon Web Services. (2023). *Amazon Textract* (Version 1.4.5). URL: aws.amazon.com/textract/
OCRFixr development team. (2023). *OCRFixr* (Version 1.5.1) [Python package]. URL: pypi.org/project/OCRFixr/
FuzzyWuzzy development team. (2020). *fuzzywuzzy* (Version 0.18.0) [Python package]. URL: pypi.org/project/fuzzywuzzy/

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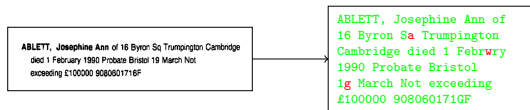


Amazon Web Services. (2023). *Amazon Textract* (Version 1.4.5). URL: aws.amazon.com/textract/

OCRFixr development team. (2023). *OCRFixr* (Version 1.5.1) [Python package]. URL: pypi.org/project/OCRFixr/

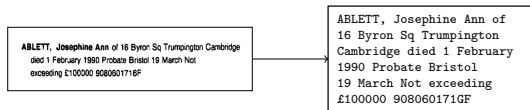
FuzzyWuzzy development team. (2020). *fuzzywuzzy* (Version 0.18.0) [Python package]. URL: pypi.org/project/fuzzywuzzy/

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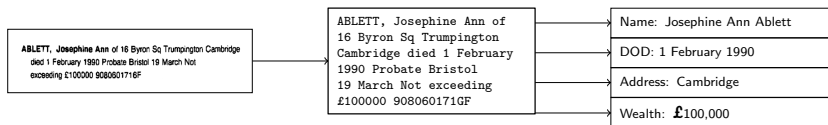
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FuzzyWuzzy development team. (2020). *fuzzywuzzy* (Version 0.18.0) [Python package]. URL: pypi.org/project/fuzzywuzzy/

Entry Information

Surname	Given Name	Age	District	Volume	Page	Transcriber
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Deaths Jun 1919

BURROWS Mary A. 95 Ipswich 4a 907 jscoleman

Surname: Burrows

Given name: Mary A.

Age at death: 95

District: Ipswich

County: Suffolk

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
acock	john	<NA>	bristol	03-01-1940	543
acomb	thomas	nicholson	york	22-03-1940	585

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
acock	john	<NA>	bristol	03-01-1940	543
acomb	thomas	nicholson	york	22-03-1940	585

deaths-q1y1940.q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
acock	john	<NA>	bristol	85
acomb	thomas	nicholson	york	28
...	...	...	...	...

deaths-q1y1939.q4

surname	name	middlename	location	age
acland	arthur	charles	cheltenham	61
...	...	...	...	...

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
acock	john	<NA>	bristol	03-01-1940	543
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deaths-qi1940.q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
acock	john	<NA>	bristol	85
acomb	thomas	nicholson	york	28
...	...	...	...	...

deaths-qi1939.q4

surname	name	middlename	location	age
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...	...	...	...	...

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
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deaths_q1y1940.q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
acock	john	<NA>	bristol	85
acomb	thomas	nicholson	york	28
...	...	...	...	...

deaths_q1y1939.q4

surname	name	middlename	location	age
acland	arthur	charles	cheltenham	61
...	...	...	...	...

output

surname	name	dod	wealth	age
ackroyd	william	02-03-1940	5895	73
acock	john	03-01-1940	543	85
acland	arthur	26-11-1939	3025	61
...	...	...	...	...

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
acock	john	<NA>	bristol	03-01-1940	543
acomb	thomas	nicholson	york	22-03-1940	585

deaths-qiy1940-q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
ackroyd	william	<NA>	middlesex	5
ackroyd	william	scott	dorset	37
ackroyd	william	herbert	york	28

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
acock	john	<NA>	bristol	03-01-1940	543
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deaths-qiy1940-q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
ackroyd	william	<NA>	middlesex	5
ackroyd	william	scott	dorset	37
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ackroyd	william	herbert	middlesex	73
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deaths-qiy1940-q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
ackroyd	william	<NA>	middlesex	5
ackroyd	william	scott	dorset	37
ackroyd	william	herbert	york	28

The key link is wealth record to death record

probate

surname	name	middlename	location	dod	wealth
ackroyd	william	herbert	ruislip	02-03-1940	5898
acland	arthur	charles	cheltenham	26-11-1939	3025
acock	john	<NA>	bristol	03-01-1940	543
acomb	thomas	nicholson	york	22-03-1940	585

deaths-qiy1940.q1

surname	name	middlename	location	age
ackroyd	william	herbert	middlesex	73
ackroyd	william	<NA>	middlesex	5
ackroyd	william	scott	dorset	37
ackroyd	william	herbert	york	28

output

surname	name	dod	wealth	age
ackroyd	william	02-03-1940	5895	73

Life tables turn linked deaths into survival estimates

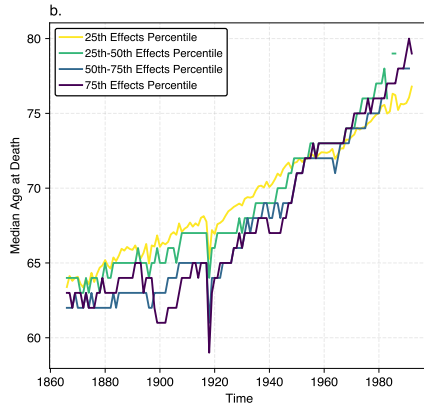
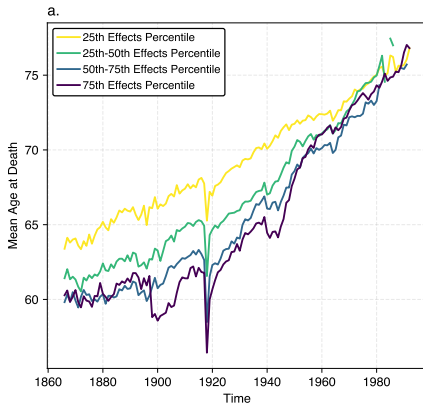
We stress-test results across cohorts, wealth groups, matching rules, and smoothing choices.

- We estimate 9,720 life-table specifications.
- We use single-year ages, not abridged life tables.
- Sparse late-age deaths can make unsmoothed life tables fail.
- `pclm` smoothing handles sparse cells where needed.
- Python 3.12 code will be released with the pre-print:

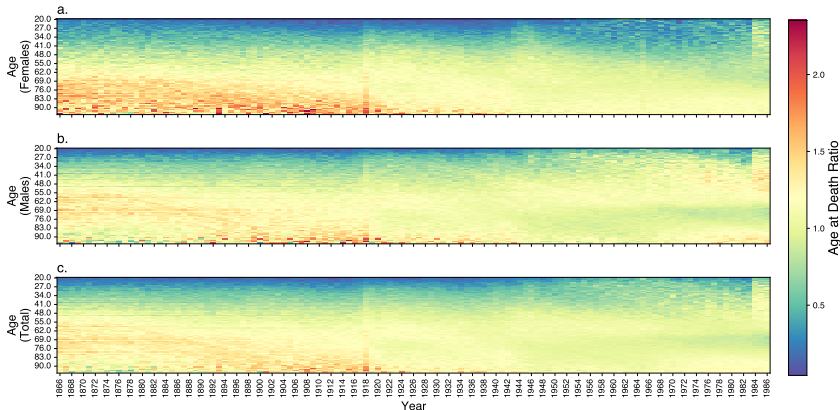
`github.com/reeves-projects/health-wealth`

Riffe, T. et al. (2019). DemoTools: An R package of tools for aggregate demographic analysis. [R package]. URL: <https://github.com/timriffe/DemoTools/>

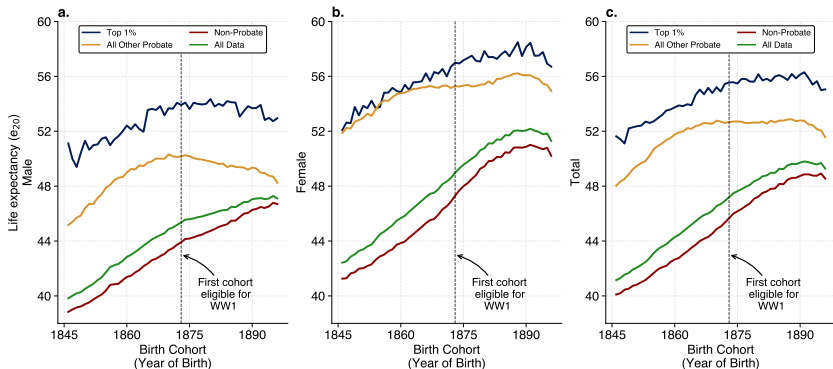
Simple Age at Death



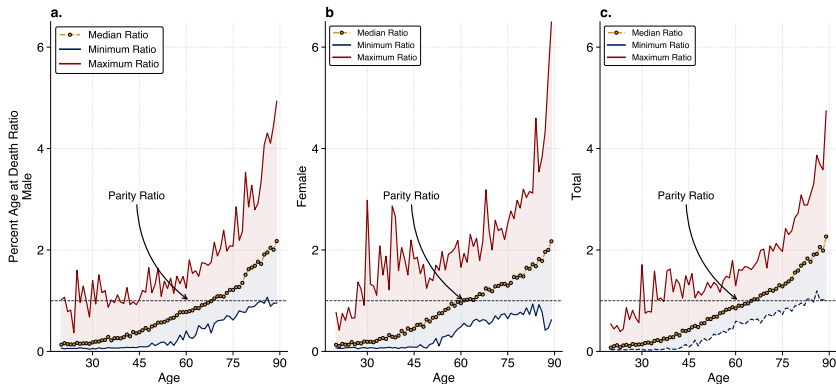
Probate and non-probate deaths differ by age



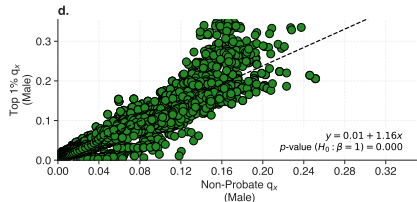
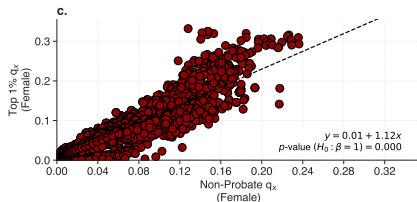
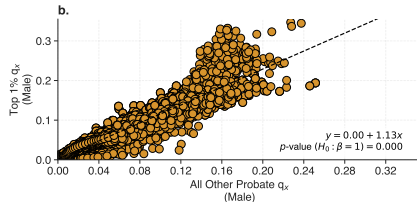
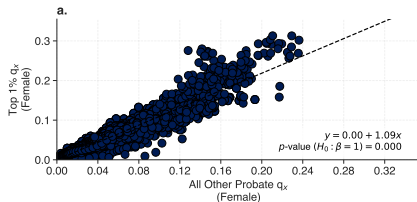
We estimate cohort life expectancy by wealth



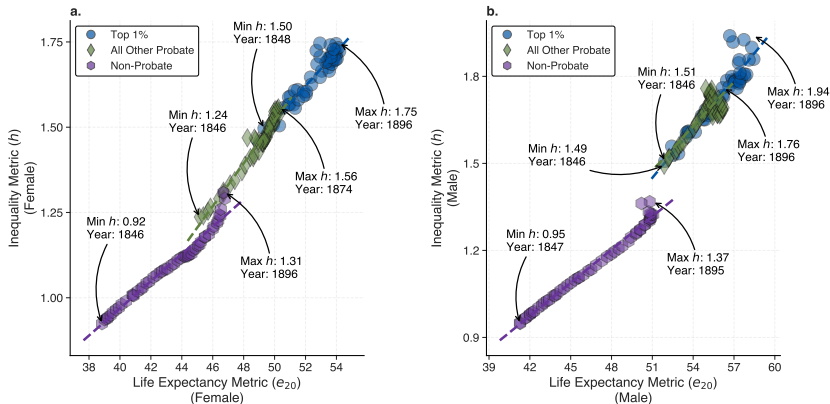
The wealthiest deaths are shifted to older ages



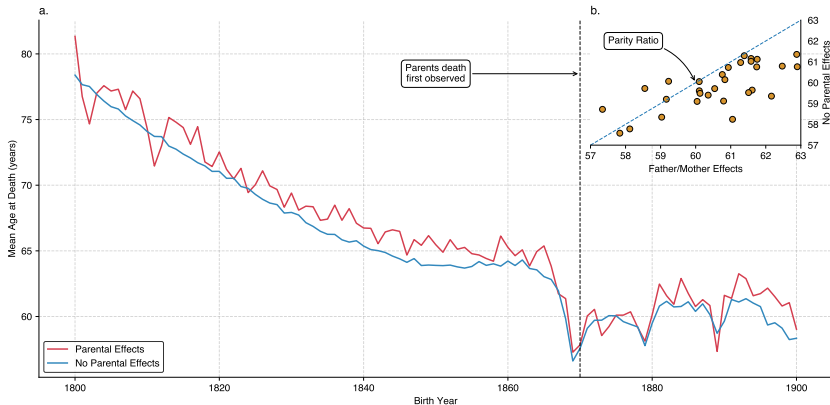
Survival probabilities expose where gaps emerge



Lifespan inequality changes with wealth



Parental wealth links genealogy to mortality



Thanks to all the wonderful collaborators!

