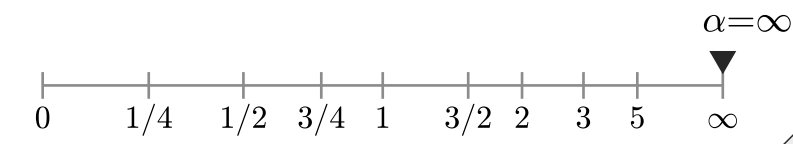


Ω_1 : Baby girl names in 1880

Ω_2 : Baby girl names in 1930

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

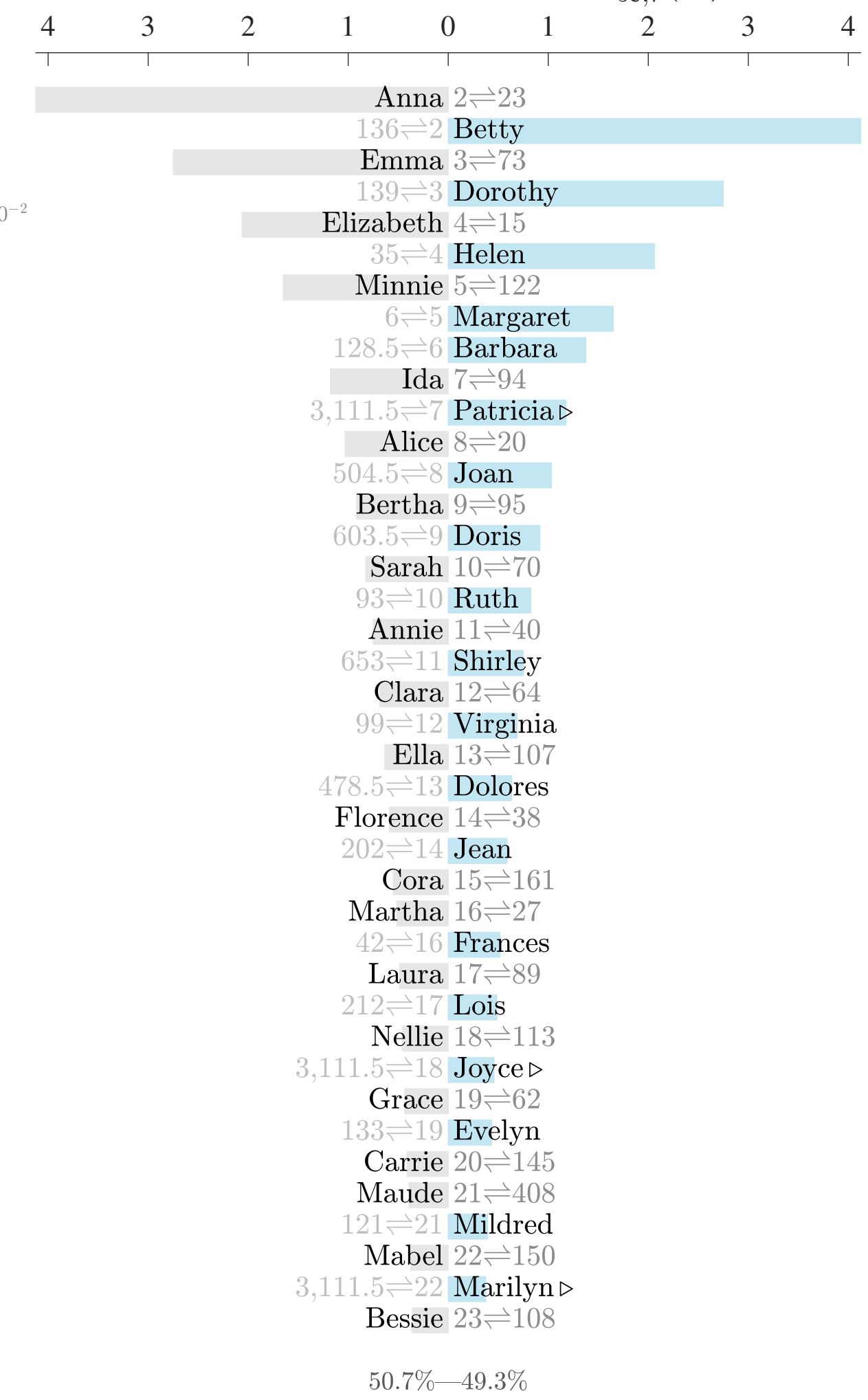
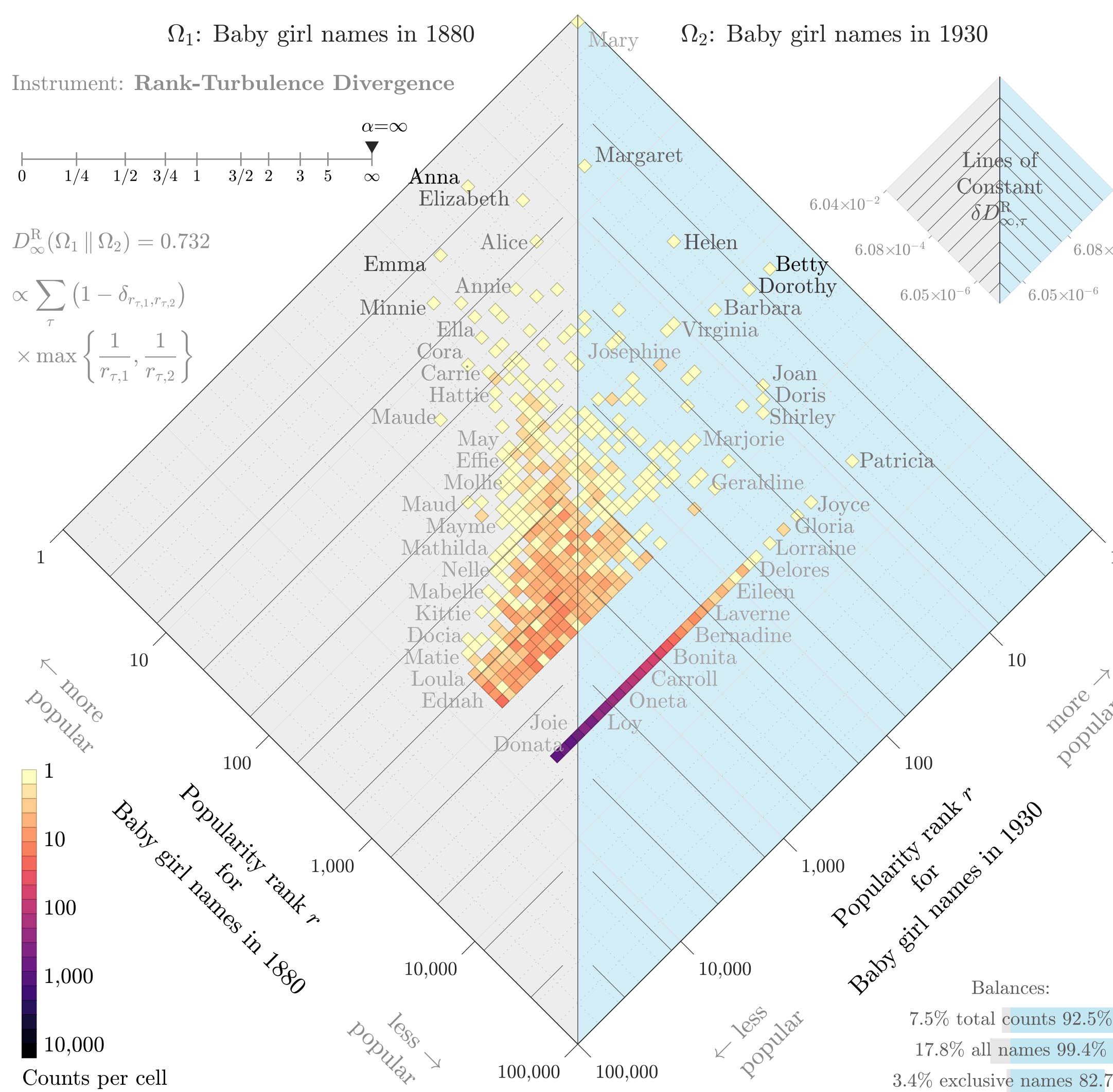
Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.732$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



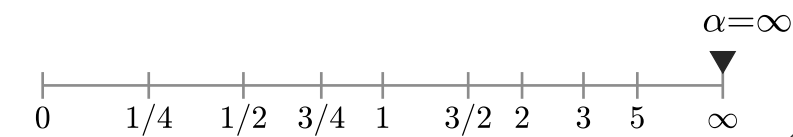
Balances:
 7.5% total counts 92.5%
 17.8% all names 99.4%
 3.4% exclusive names 82.7%

Ω_1 : Baby girl names in 1885

Ω_2 : Baby girl names in 1935

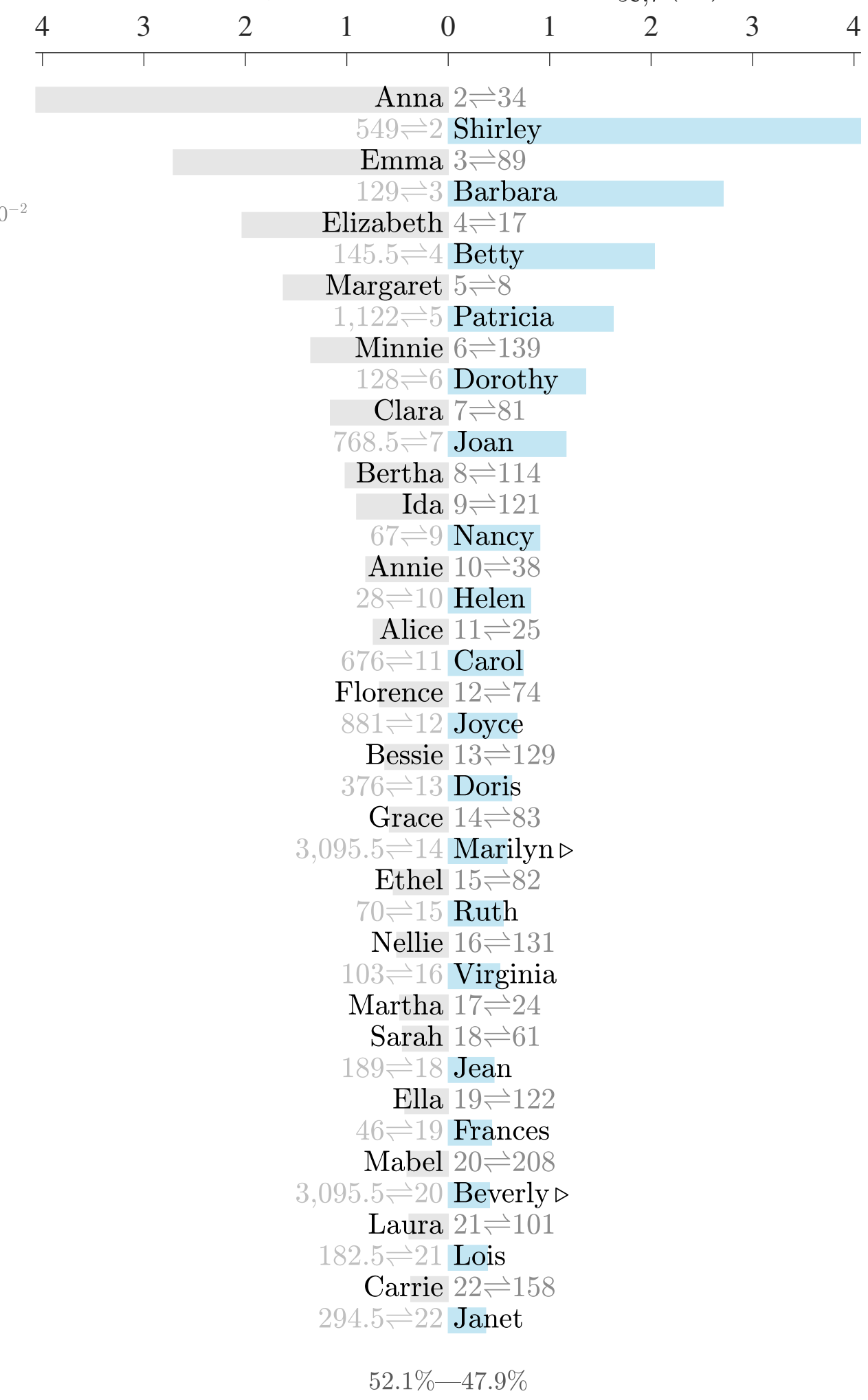
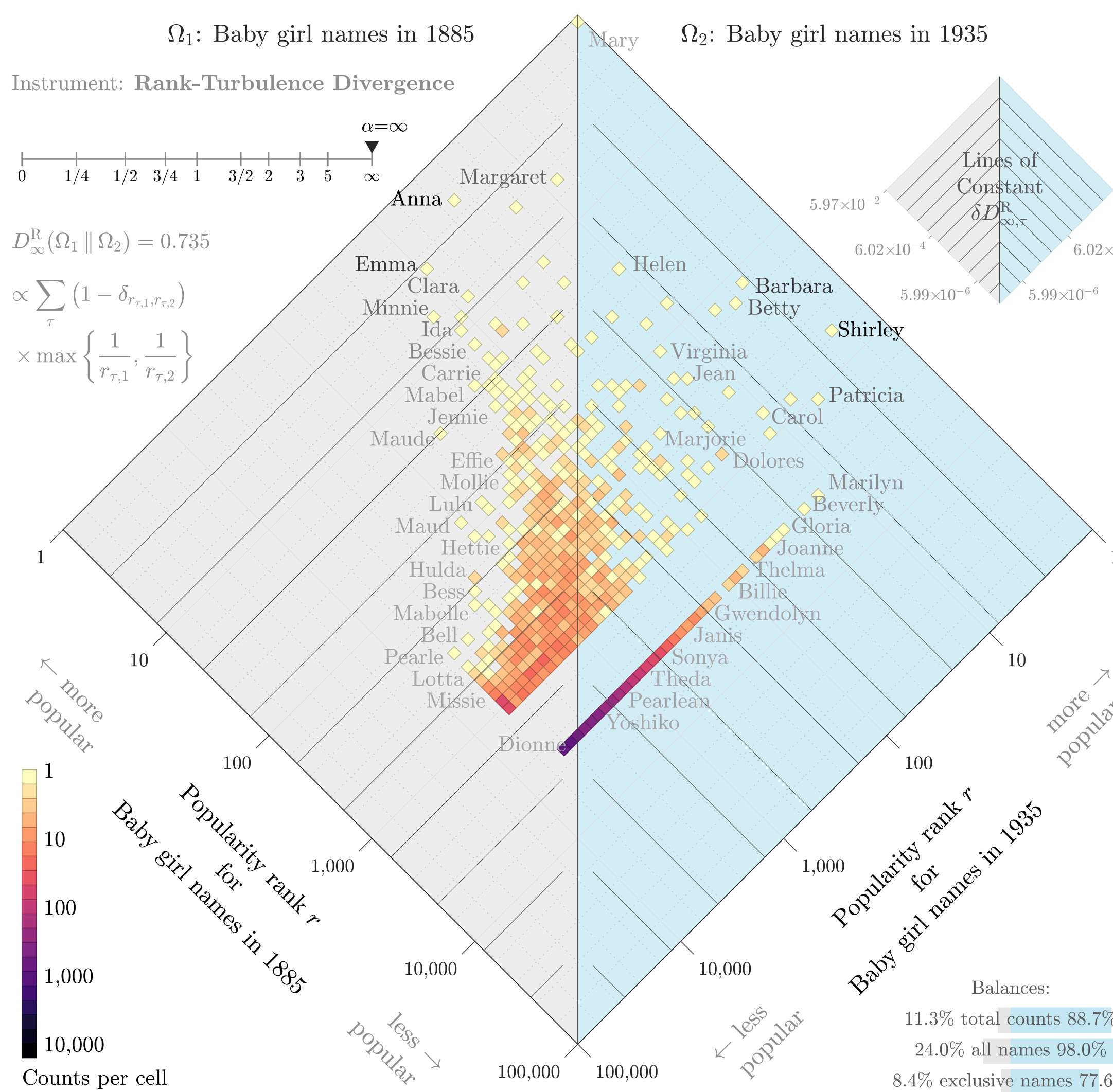
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.735$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



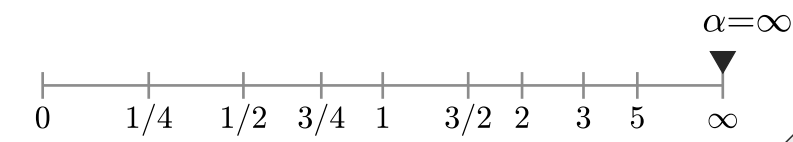
Balances:
 11.3% total counts 88.7%
 24.0% all names 98.0%
 8.4% exclusive names 77.6%

Ω_1 : Baby girl names in 1890

Ω_2 : Baby girl names in 1940

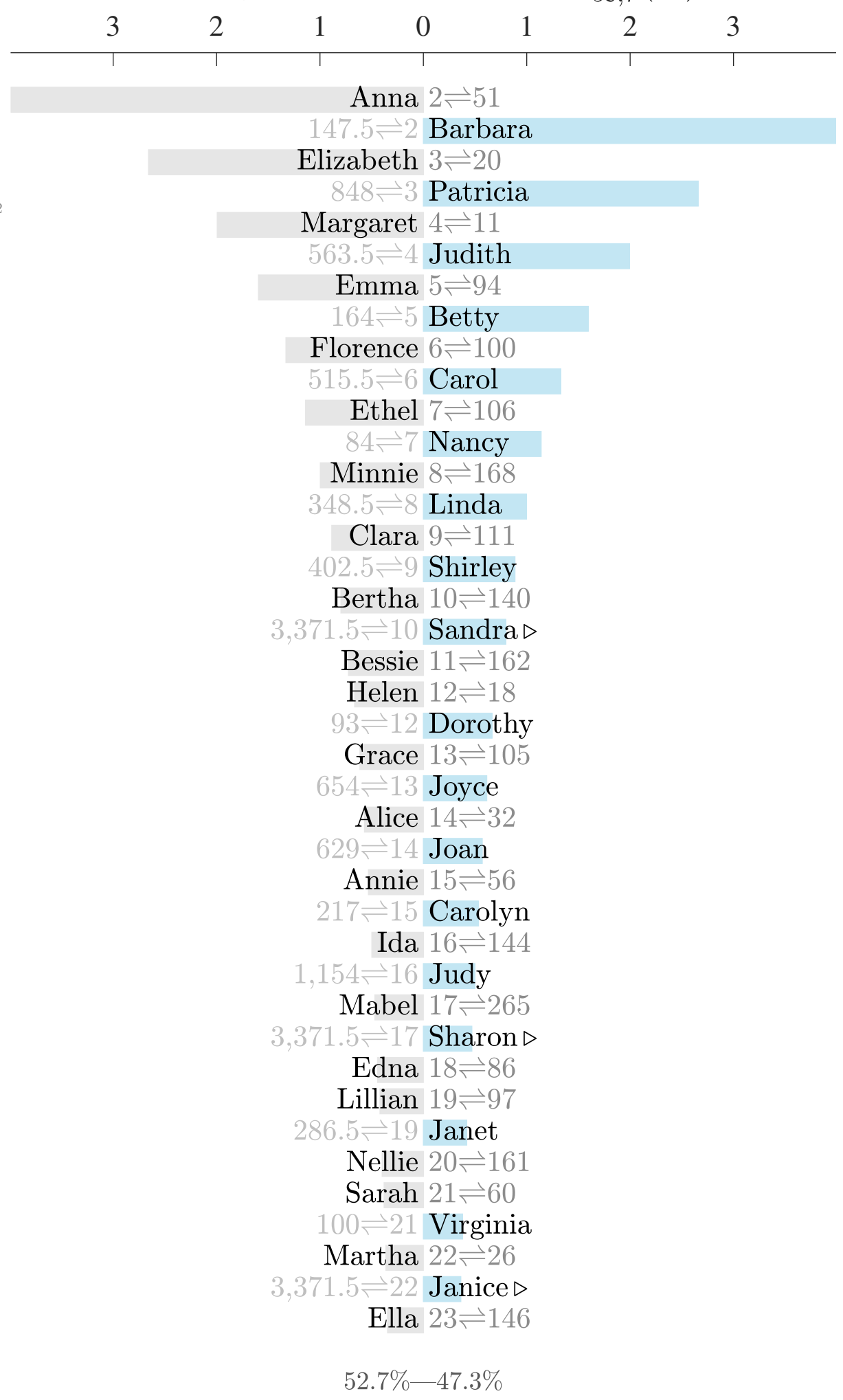
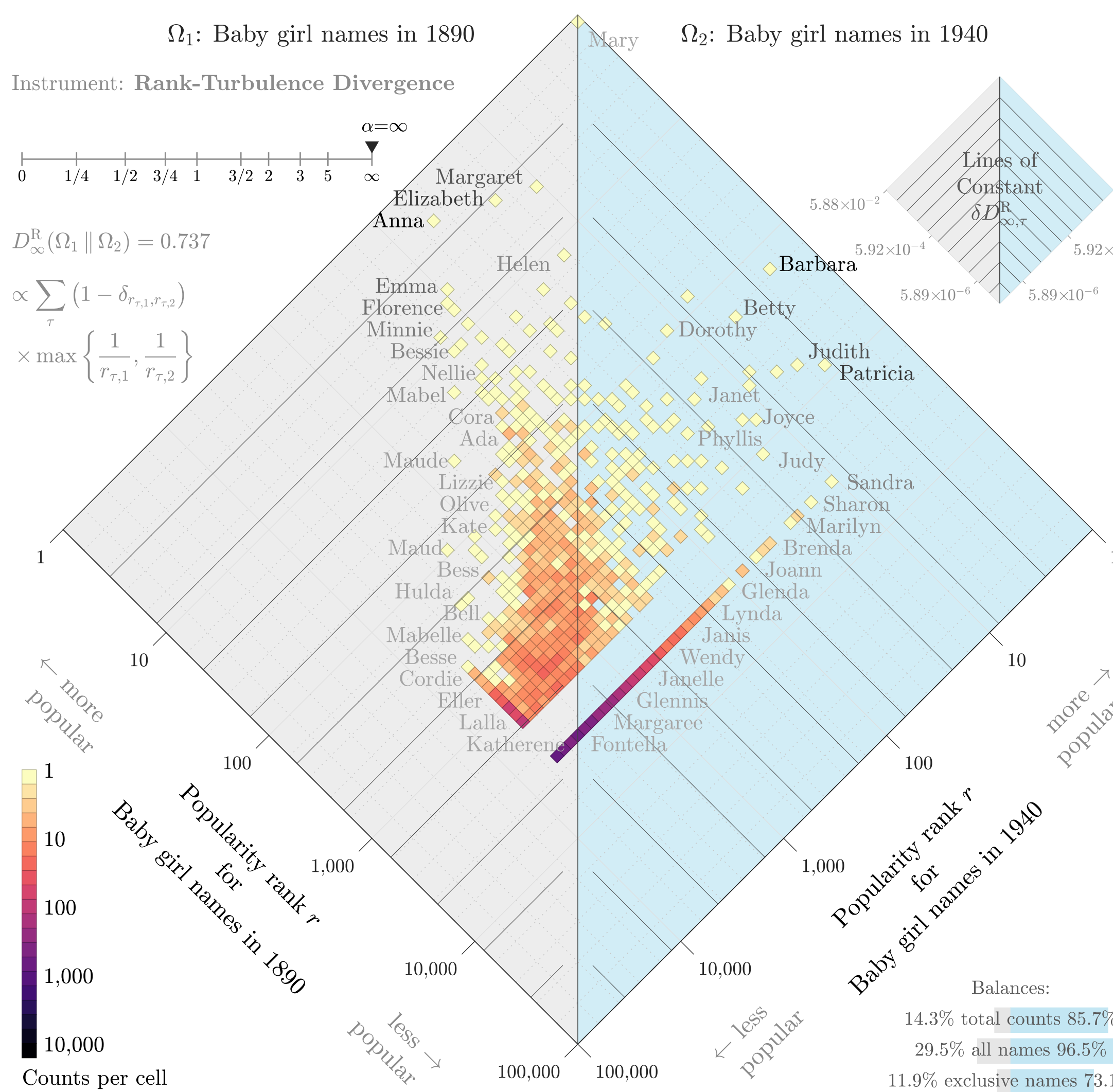
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.737$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Balances:
 14.3% total counts 85.7%
 29.5% all names 96.5%
 11.9% exclusive names 73.1%

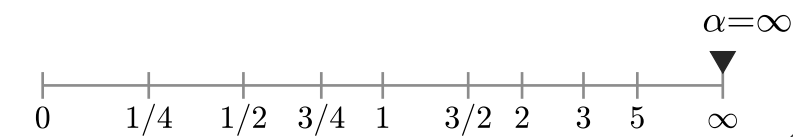
52.7%—47.3%

Ω_1 : Baby girl names in 1895

Ω_2 : Baby girl names in 1945

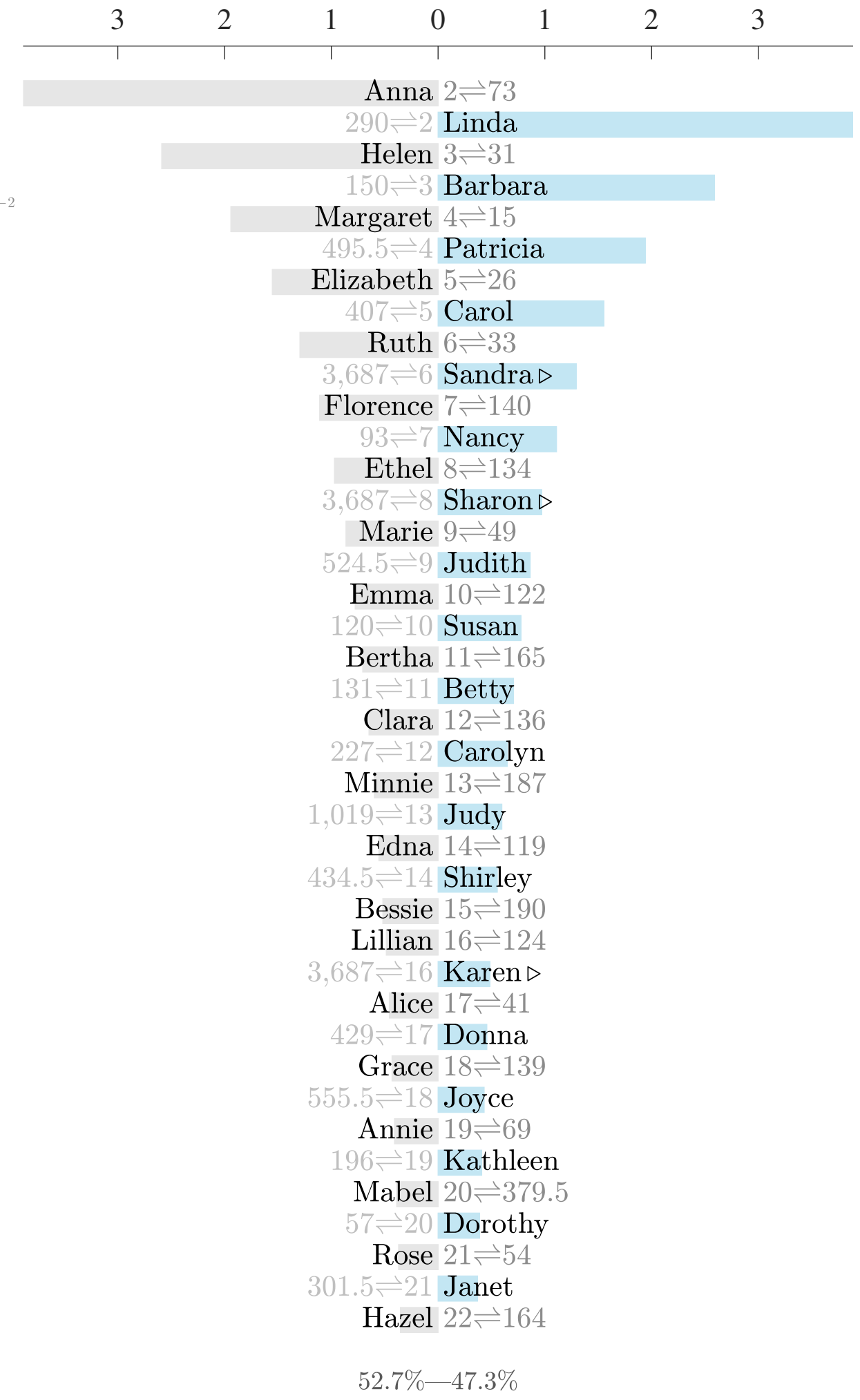
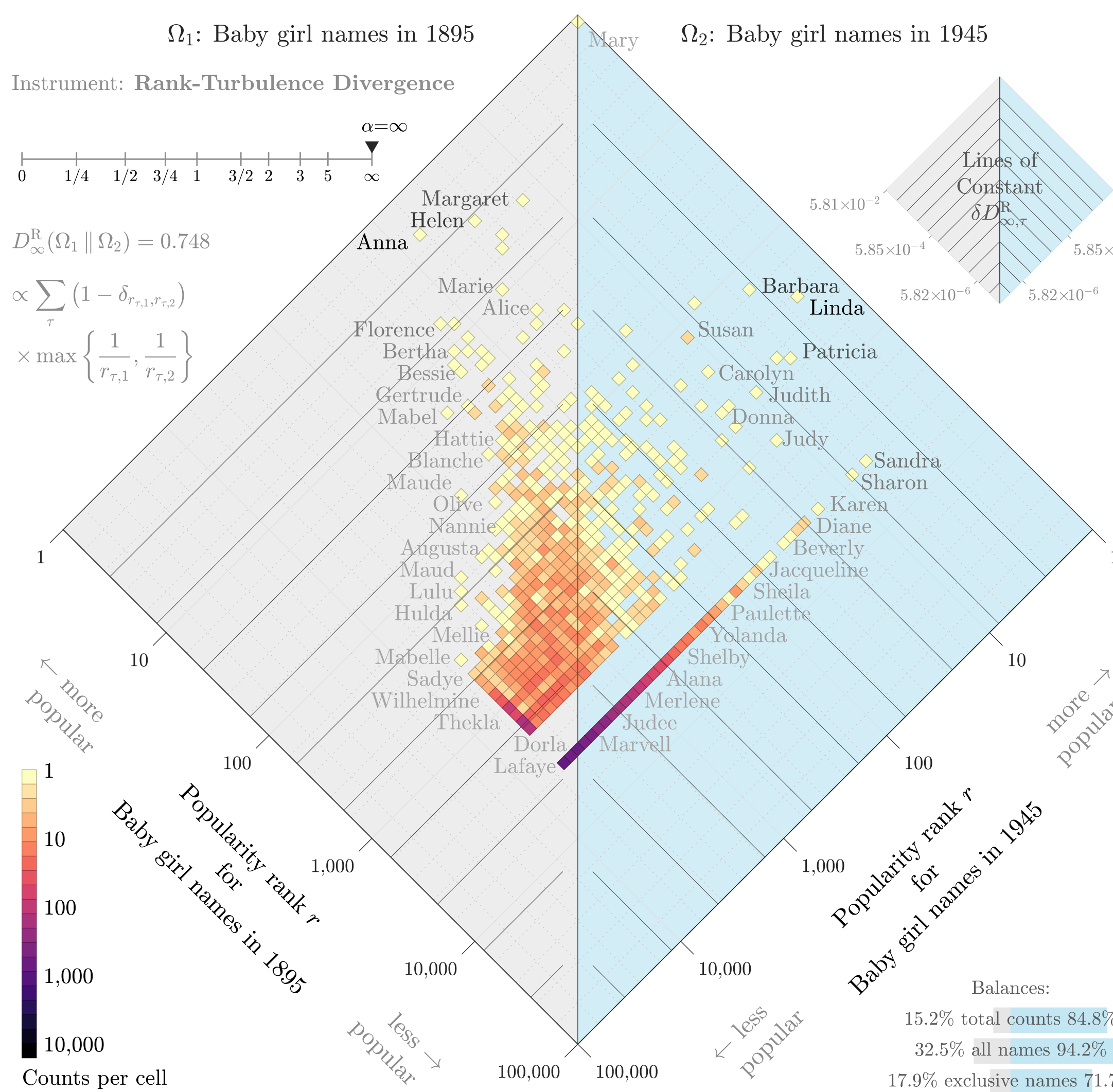
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.748$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$

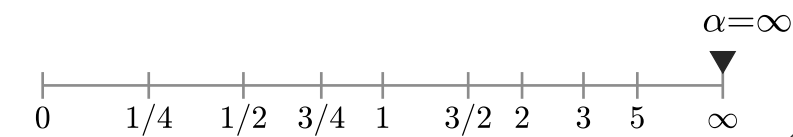


Ω_1 : Baby girl names in 1900

Ω_2 : Baby girl names in 1950

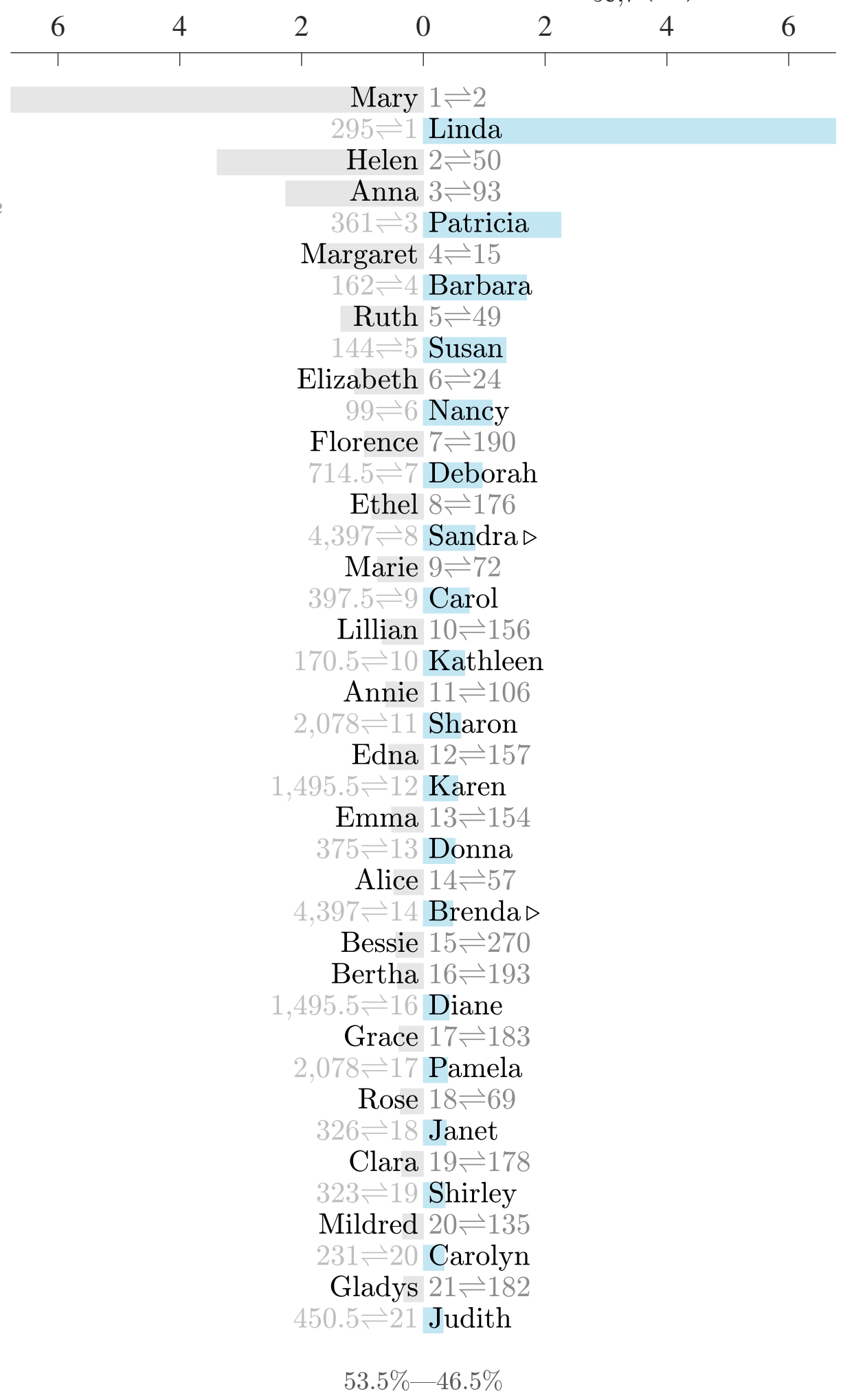
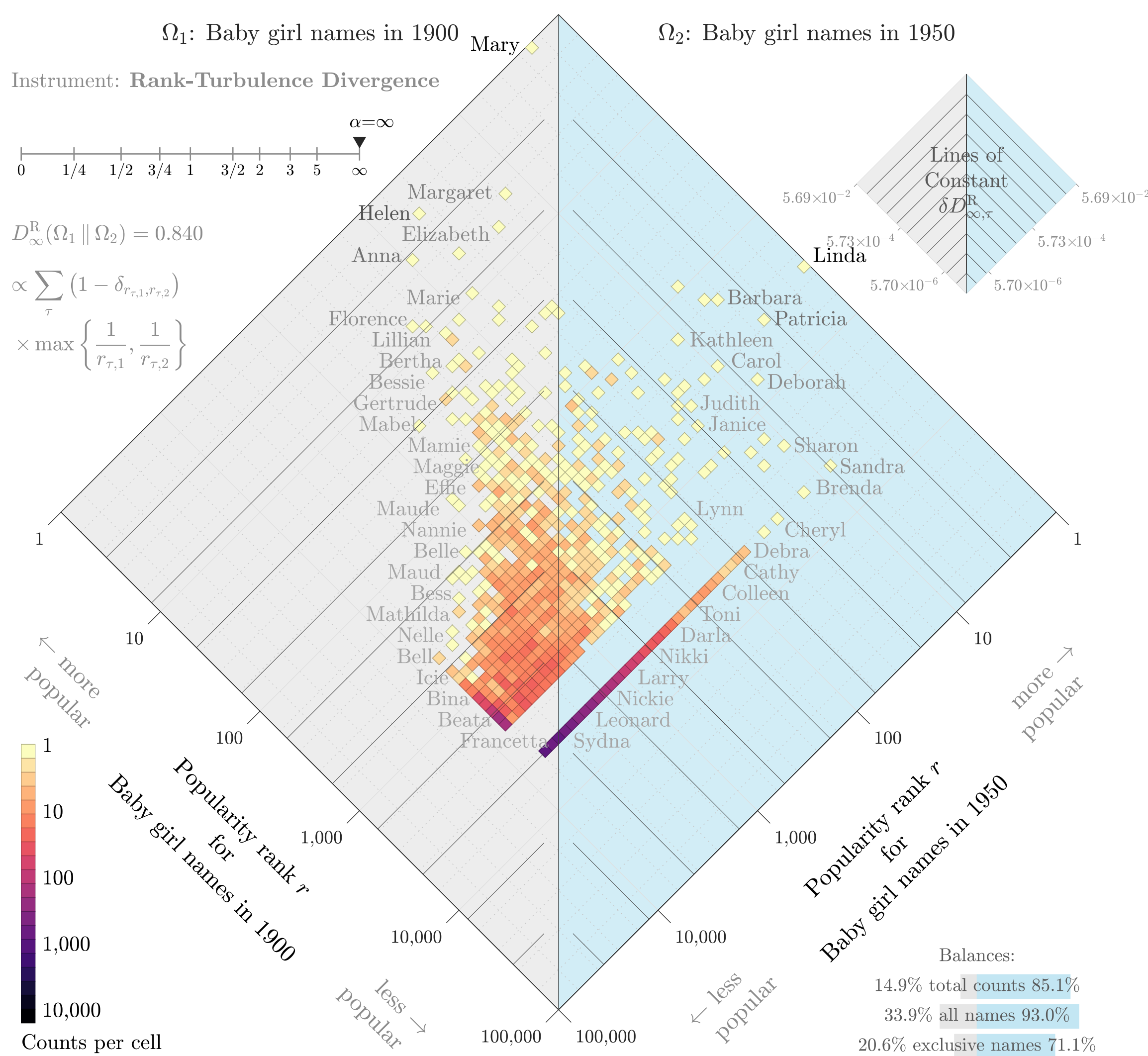
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.840$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Balances:
 14.9% total counts 85.1%
 33.9% all names 93.0%
 20.6% exclusive names 71.1%

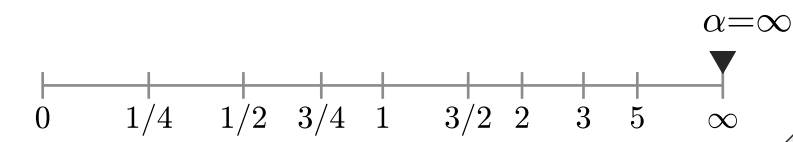
53.5%—46.5%

Ω_1 : Baby girl names in 1905

Ω_2 : Baby girl names in 1955

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

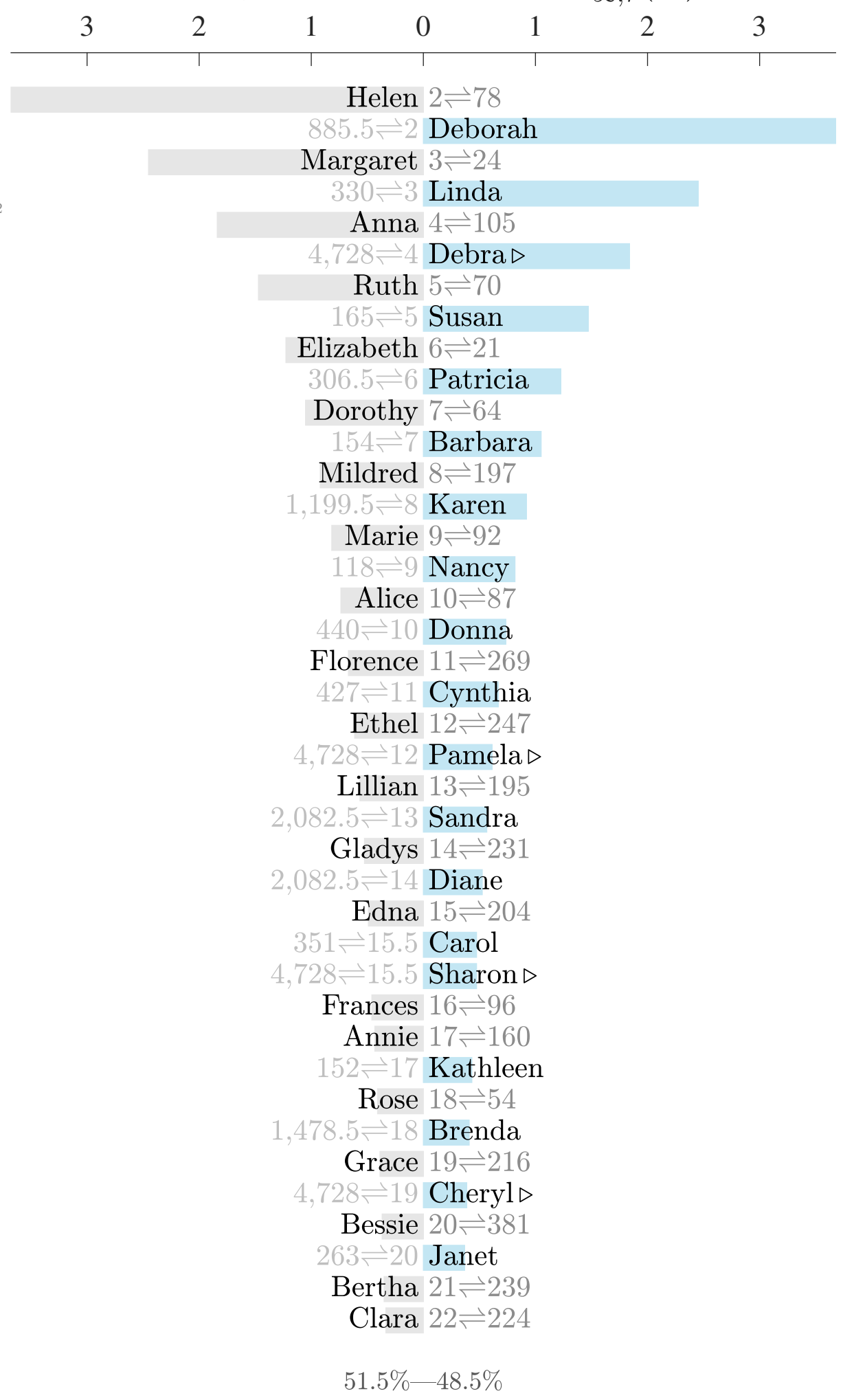
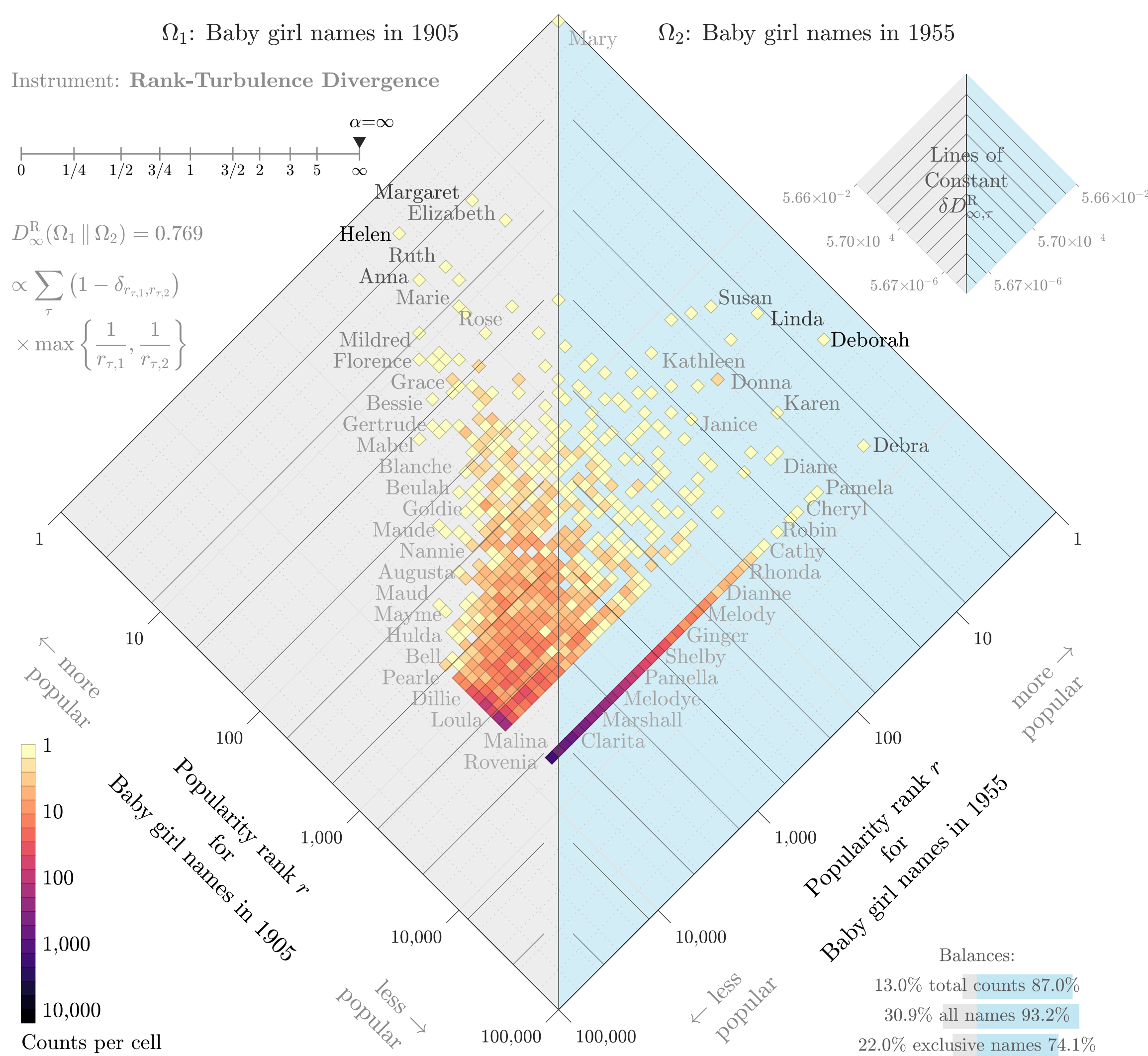
Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.769$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



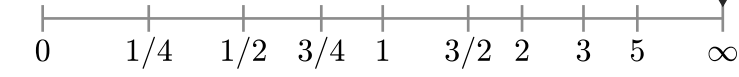
Ω_1 : Baby girl names in 1910

Ω_2 : Baby girl names in 1960

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence

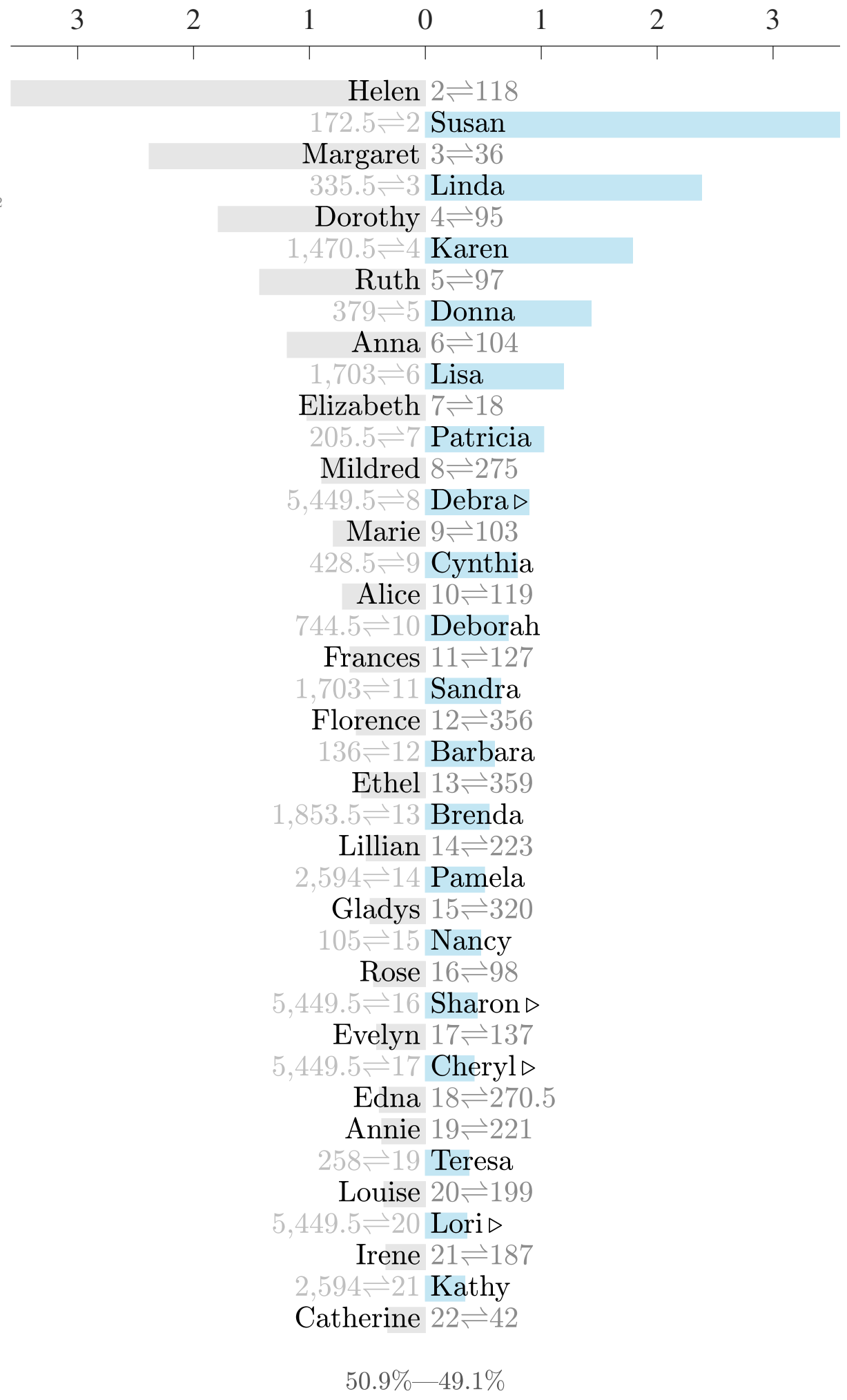
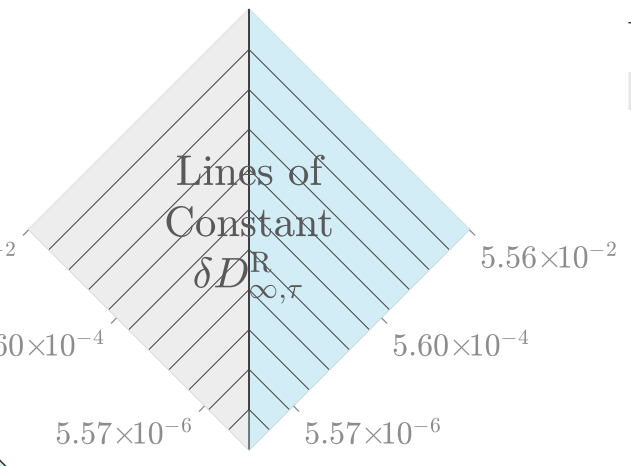
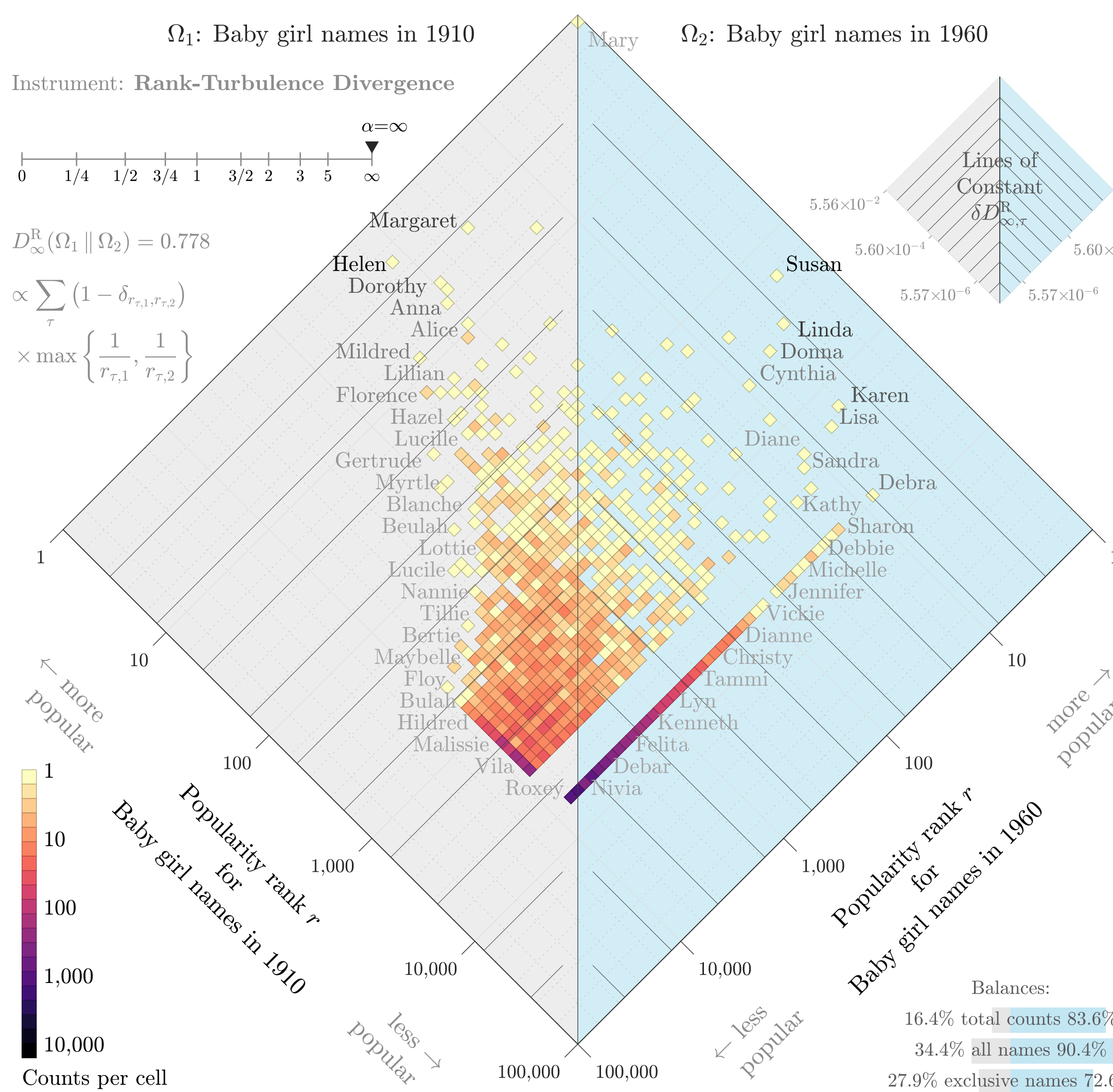
$\alpha = \infty$



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.778$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



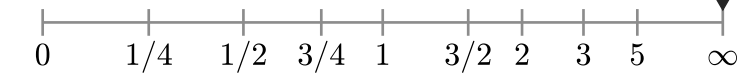
Ω_1 : Baby girl names in 1915

Ω_2 : Baby girl names in 1965

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence

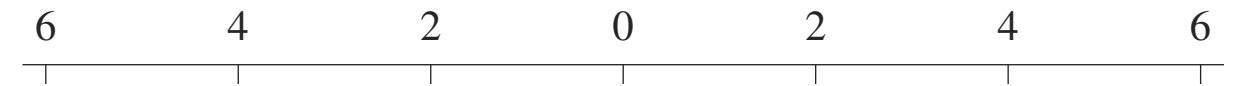
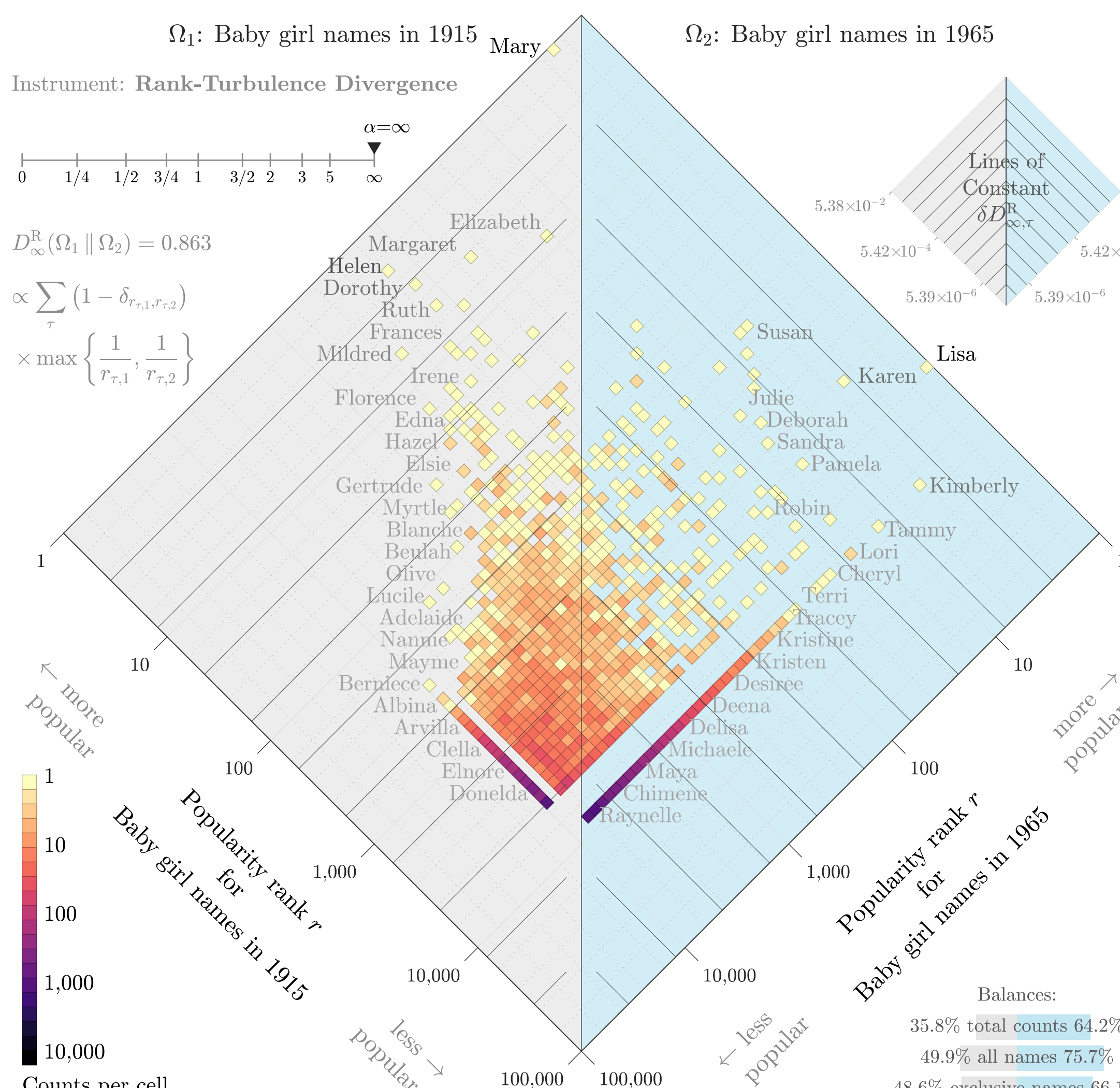
$\alpha = \infty$



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.863$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Mary	1 \Rightarrow 2
2,198.5 \Leftarrow 1	Lisa
Helen	2 \Rightarrow 137
Dorothy	3 \Rightarrow 130
1,146 \Leftarrow 3	Karen
Margaret	4 \Rightarrow 52
7,459 \Leftarrow 4	Kimberly \triangleright
Ruth	5 \Rightarrow 118
202 \Leftarrow 5	Susan
Mildred	6 \Rightarrow 329
189 \Leftarrow 6	Patricia
Anna	7 \Rightarrow 96
267.5 \Leftarrow 7	Donna
Elizabeth	8 \Rightarrow 16
349 \Leftarrow 8	Linda
Frances	9 \Rightarrow 163
406 \Leftarrow 9	Cynthia
Evelyn	10 \Rightarrow 176
225 \Leftarrow 10	Angela
Marie	11 \Rightarrow 106
7,459 \Leftarrow 11	Tammy \triangleright
Virginia	12 \Rightarrow 115
1,596 \Leftarrow 12	Pamela
Alice	13 \Rightarrow 145
645.5 \Leftarrow 13	Deborah
Florence	14 \Rightarrow 450.5
467.5 \Leftarrow 14	Julie
Lillian	15 \Rightarrow 271.5
951 \Leftarrow 15	Sandra
Rose	16 \Rightarrow 133
Irene	17 \Rightarrow 211
4,620.5 \Leftarrow 17	Michelle
Louise	18 \Rightarrow 283.5
61 \Leftarrow 18	Laura
Catherine	19 \Rightarrow 57
7,459 \Leftarrow 19	Lori \triangleright
Edna	20 \Rightarrow 340
7,459 \Leftarrow 20	Jennifer \triangleright
Gladys	21 \Rightarrow 378.5
125 \Leftarrow 21	Christine

Balances:
 35.8% total counts 64.2%
 49.9% all names 75.7%
 48.6% exclusive names 66.1%

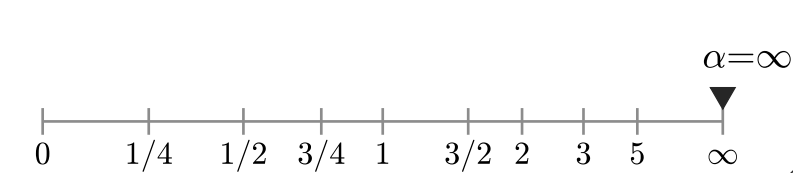
52.3%—47.7%

Ω_1 : Baby girl names in 1920

Ω_2 : Baby girl names in 1970

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

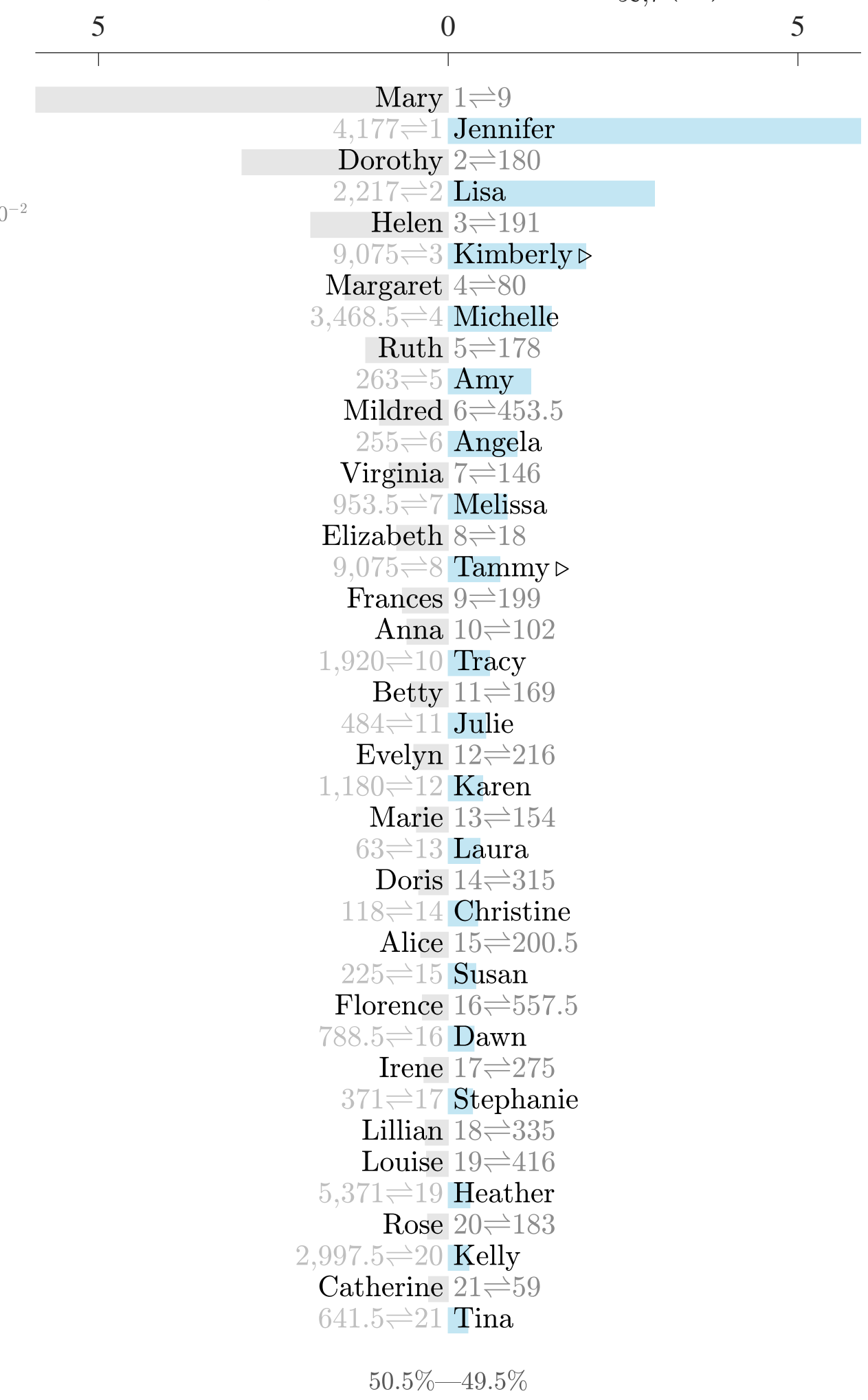
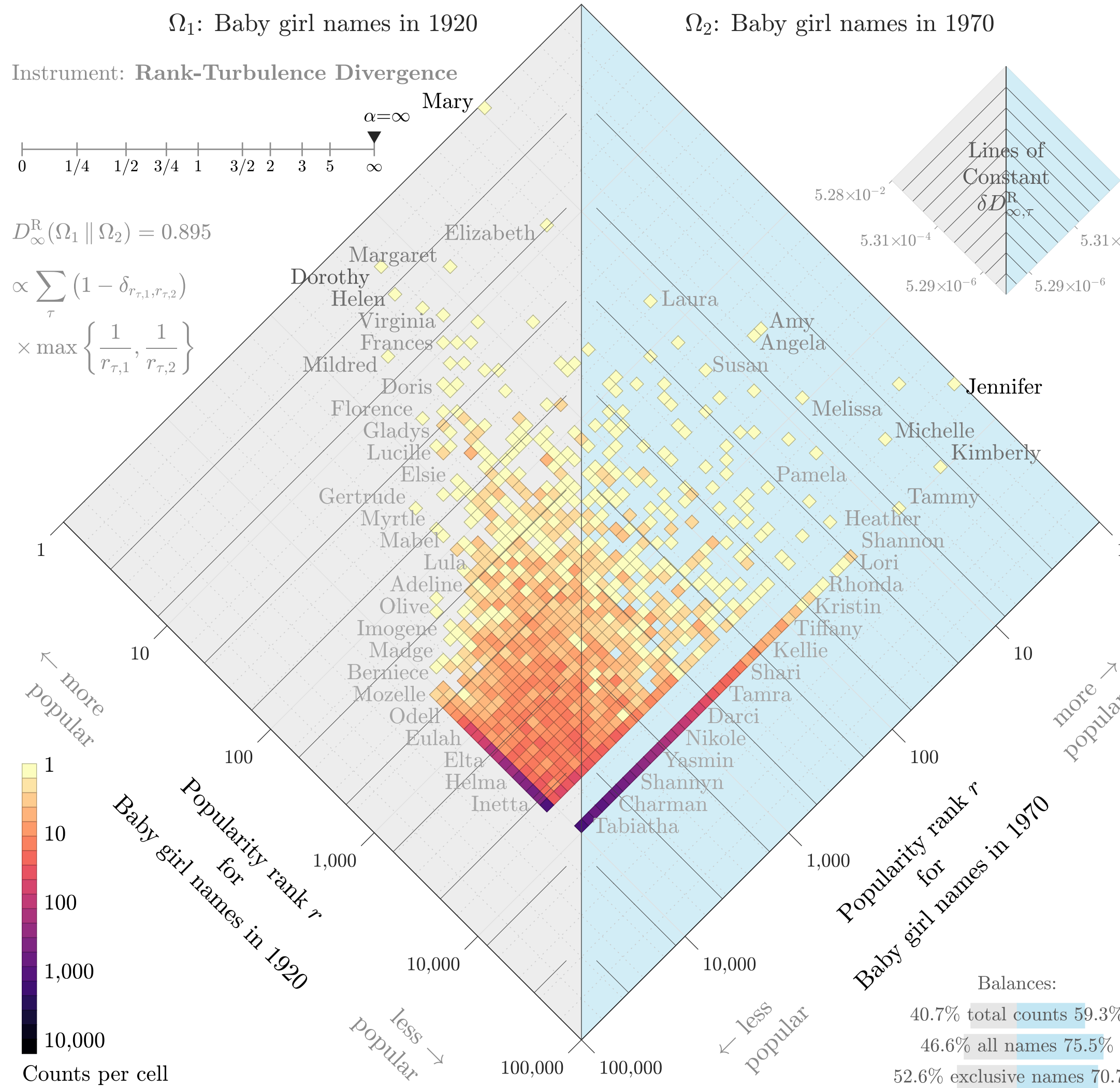
Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.895$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$

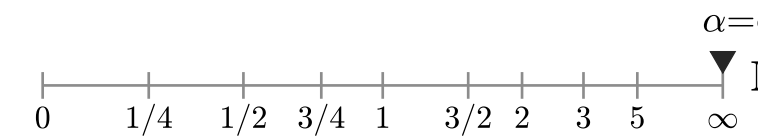


Ω_1 : Baby girl names in 1925

Ω_2 : Baby girl names in 1975

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

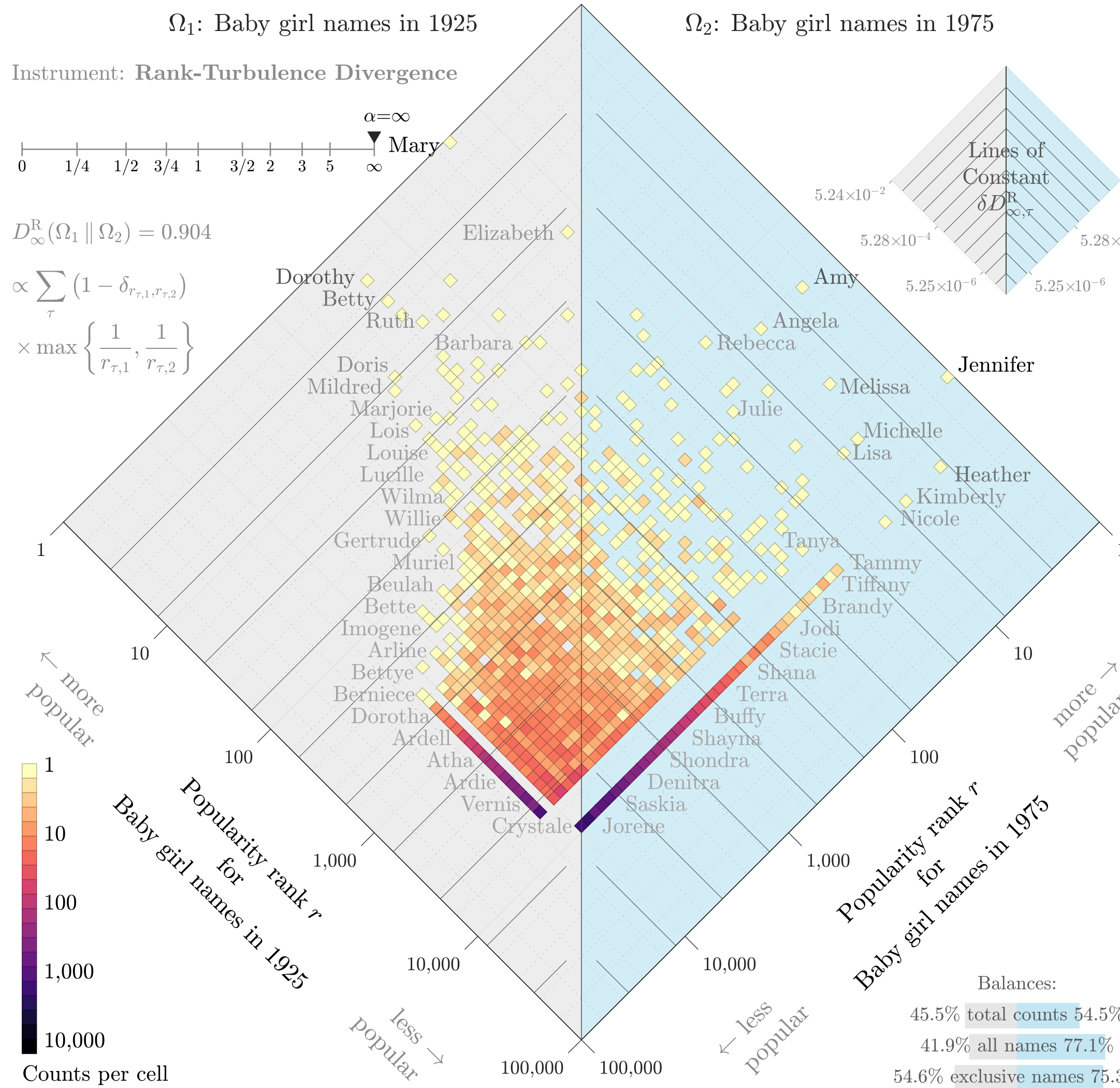
Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.904$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Balances:
 45.5% total counts 54.5%
 41.9% all names 77.1%
 54.6% exclusive names 75.3%

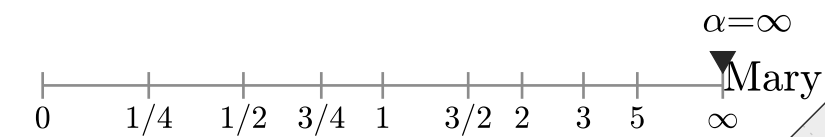
50.6%—49.4%

Ω_1 : Baby girl names in 1930

Ω_2 : Baby girl names in 1980

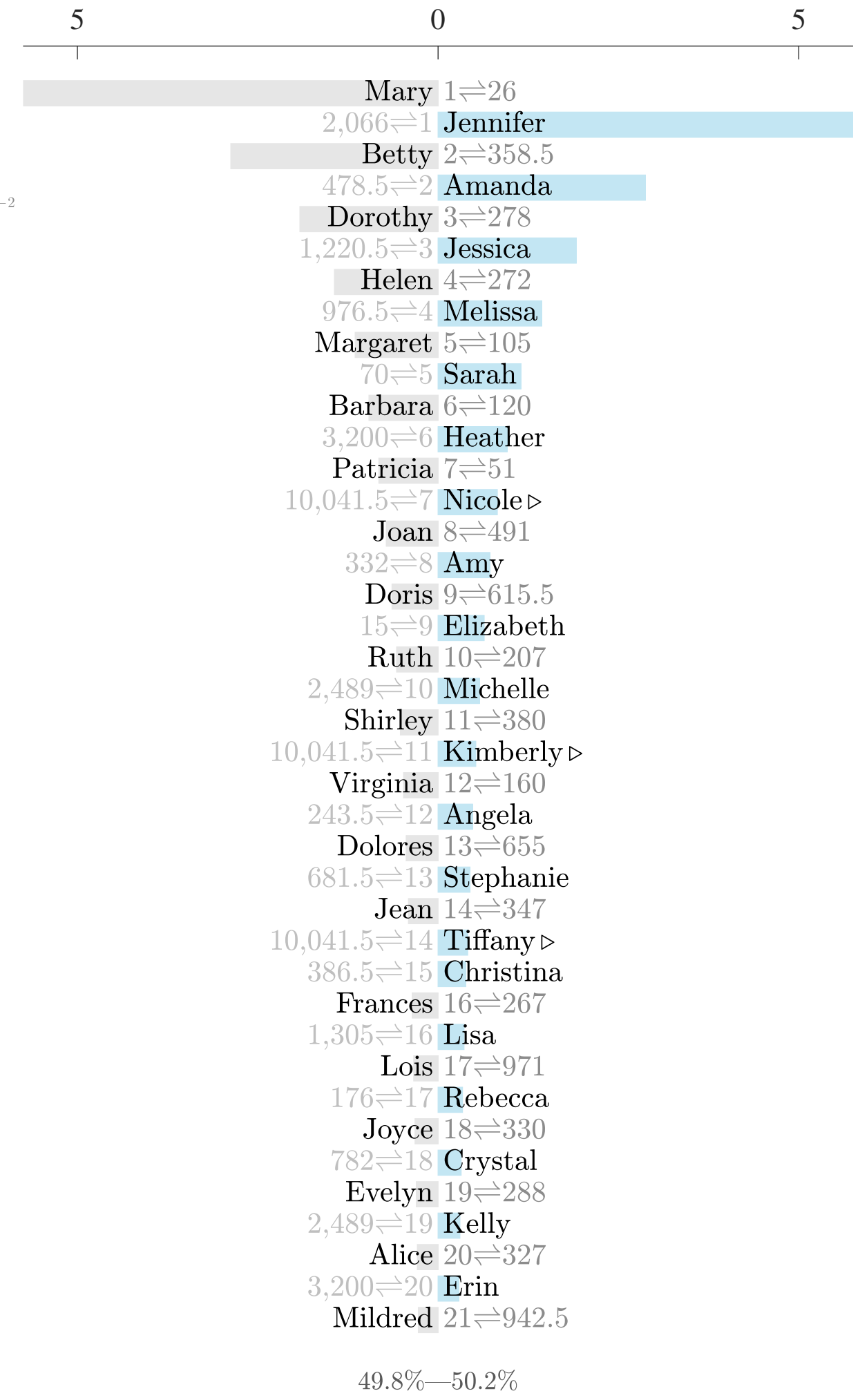
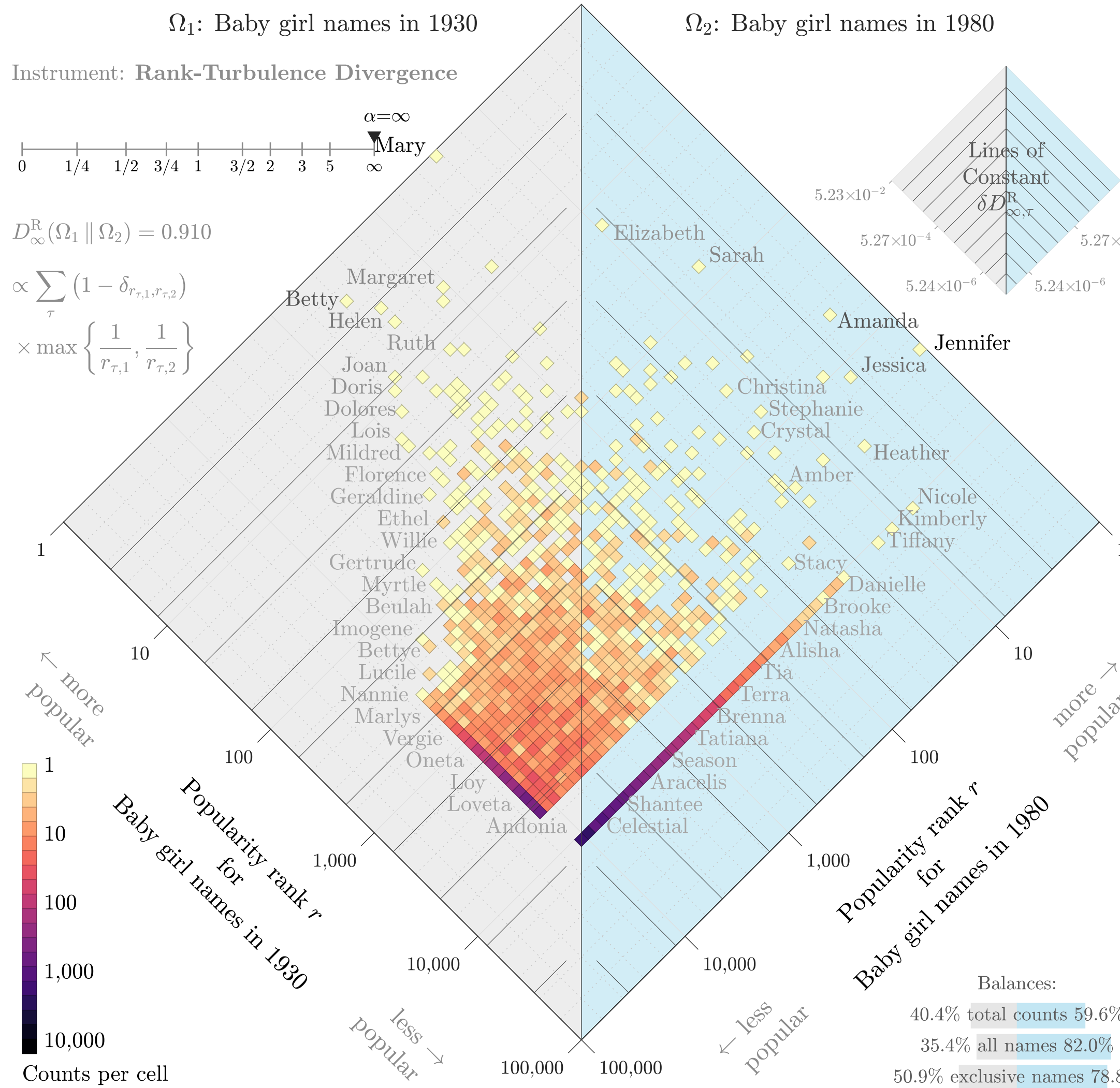
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.910$

$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$
 $\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$



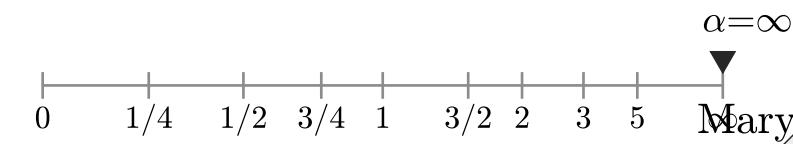
Balances:
 40.4% total counts 59.6%
 35.4% all names 82.0%
 50.9% exclusive names 78.8%

Ω_1 : Baby girl names in 1935

Ω_2 : Baby girl names in 1985

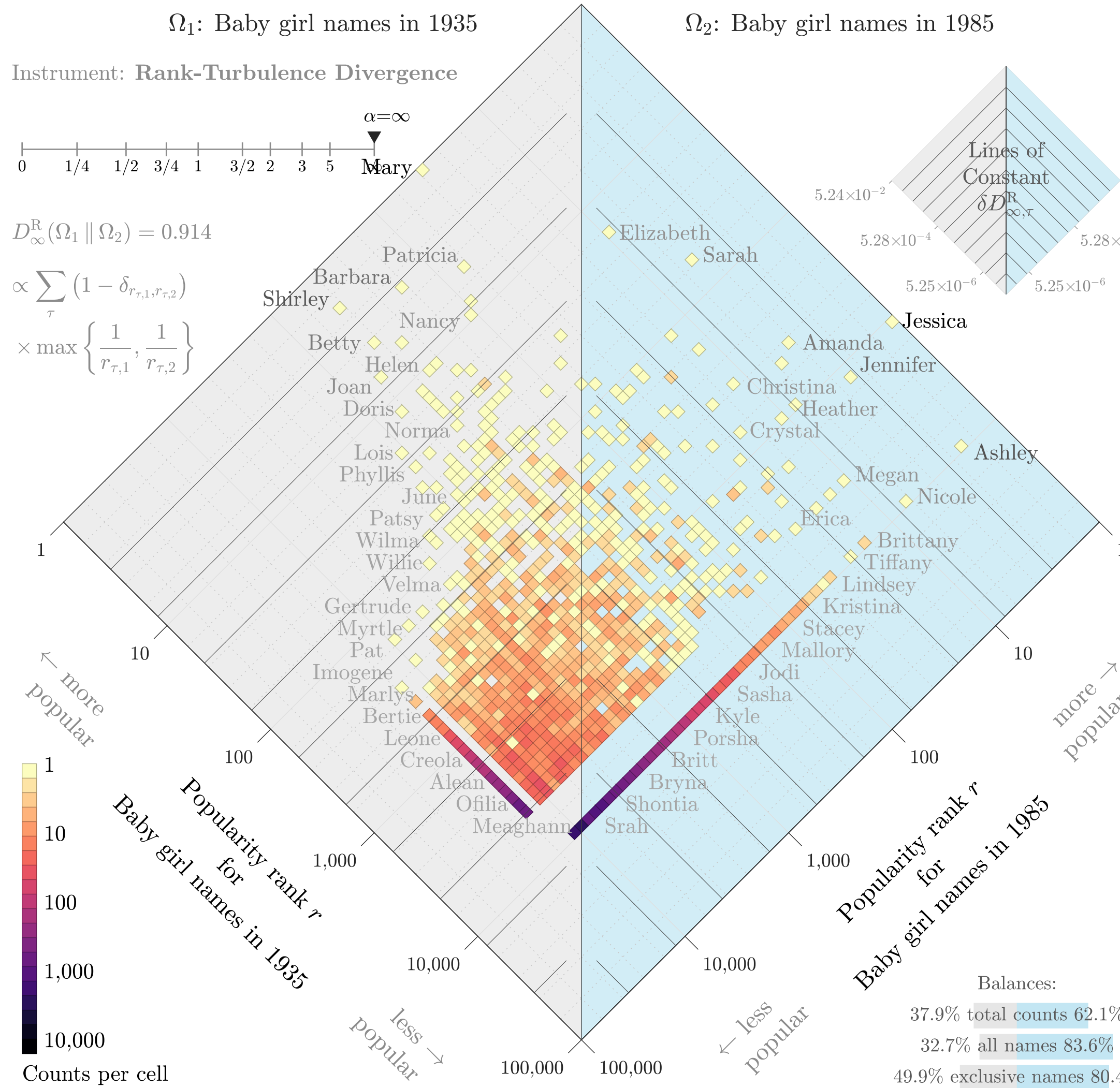
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.914$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



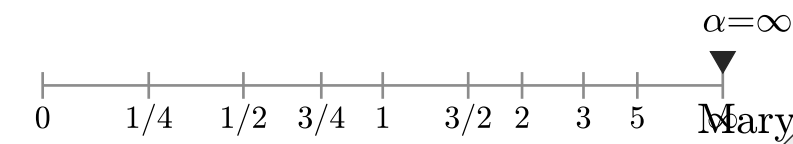
Balances:
 37.9% total counts 62.1%
 32.7% all names 83.6%
 49.9% exclusive names 80.4%

Ω_1 : Baby girl names in 1940

Ω_2 : Baby girl names in 1990

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

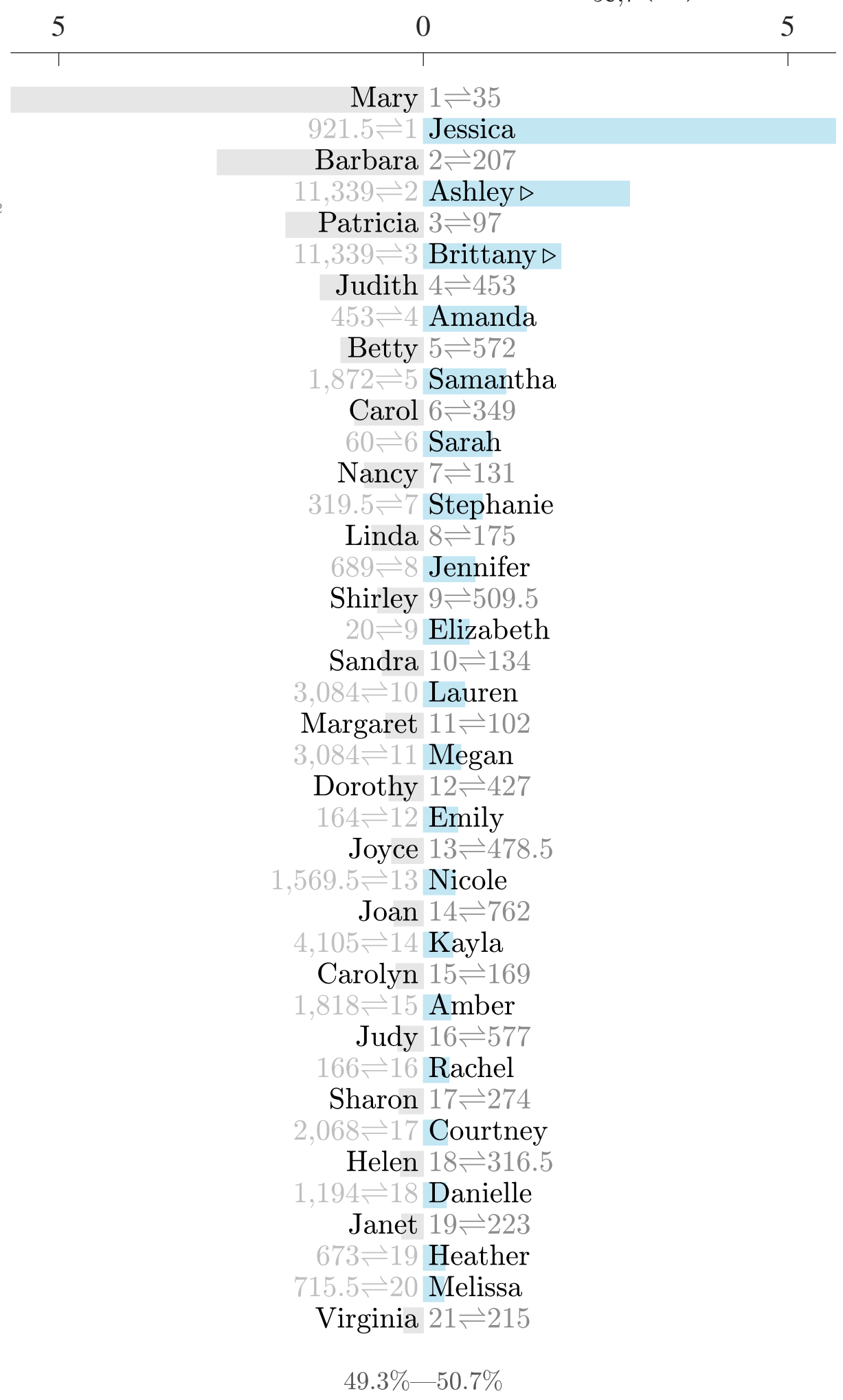
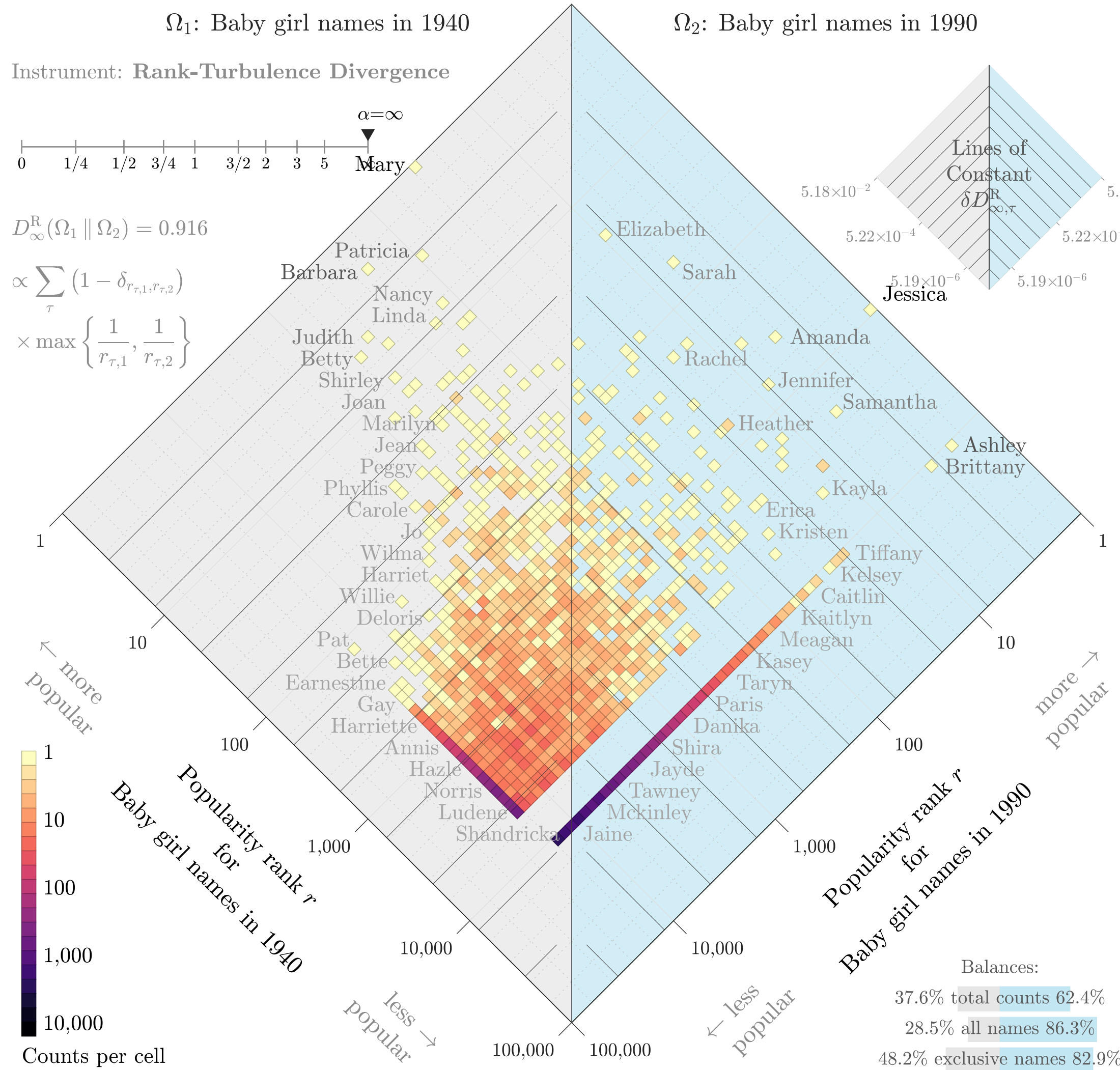
Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.916$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



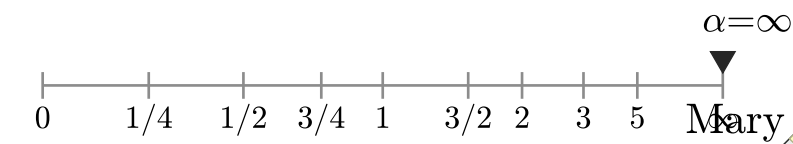
Balances:
 37.6% total counts 62.4%
 28.5% all names 86.3%
 48.2% exclusive names 82.9%

Ω_1 : Baby girl names in 1945

Ω_2 : Baby girl names in 1995

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

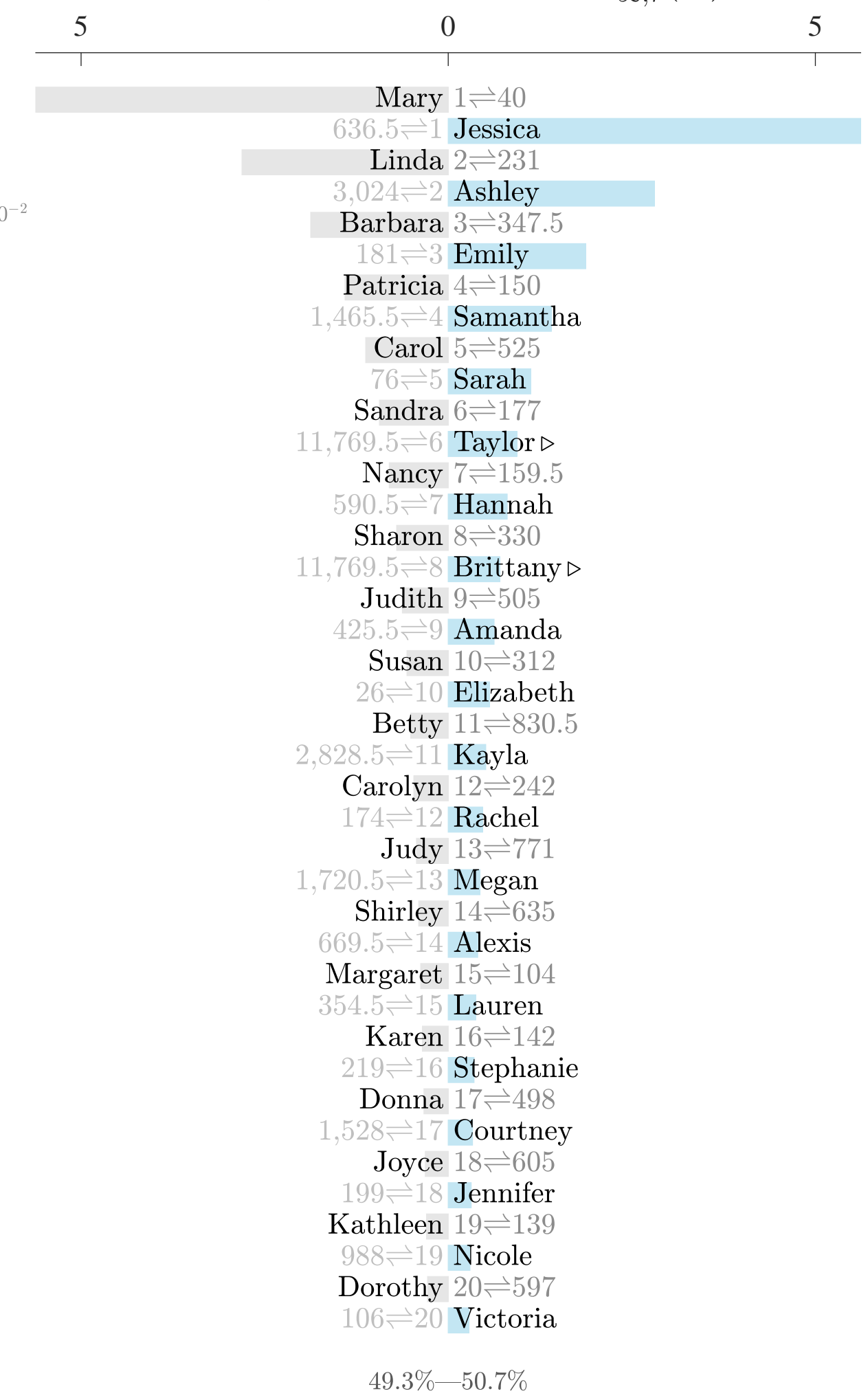
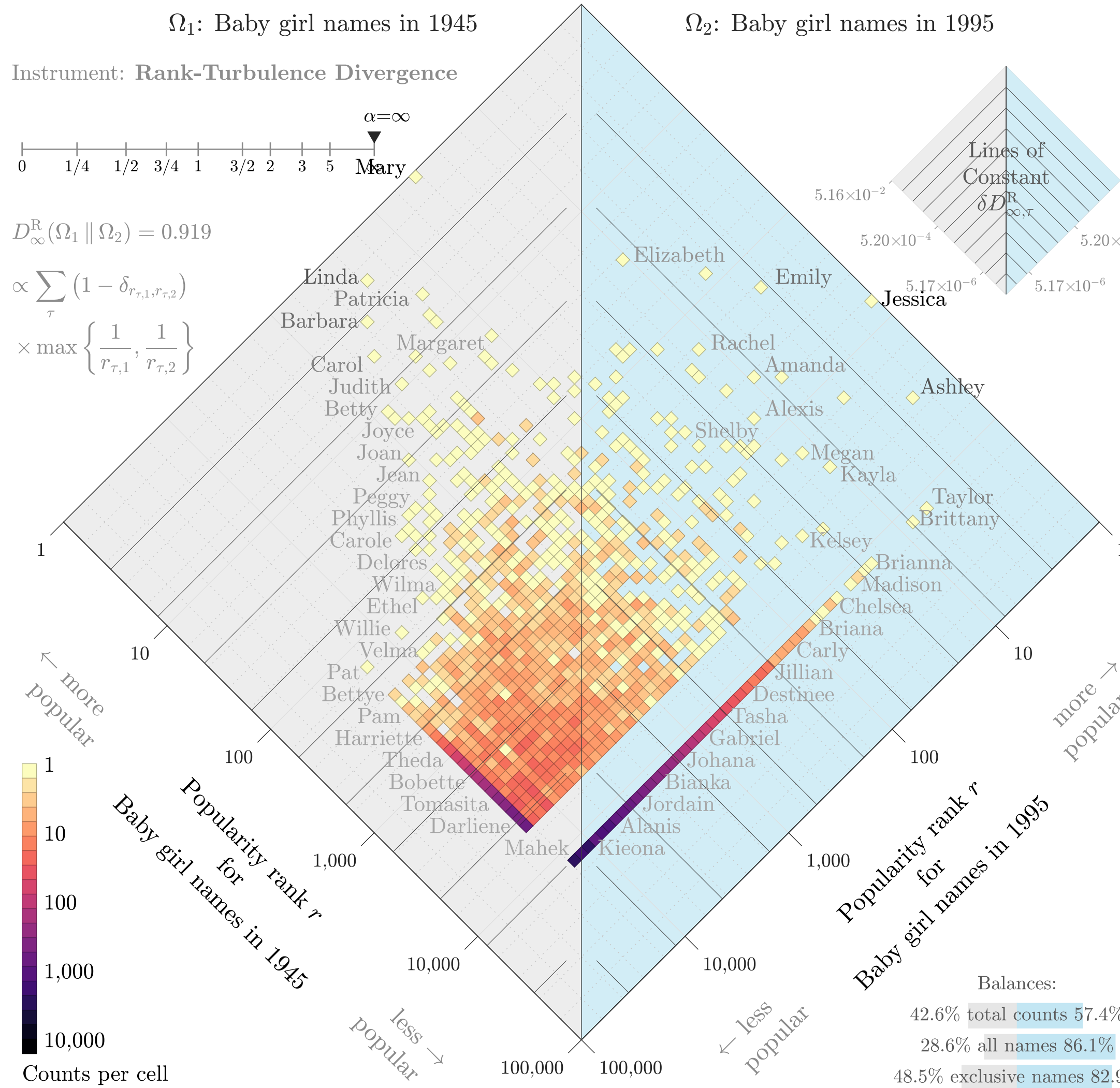
Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.919$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Balances:
 42.6% total counts 57.4%
 28.6% all names 86.1%
 48.5% exclusive names 82.9%

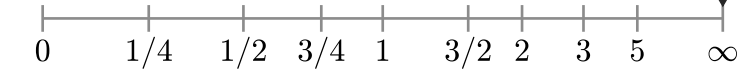
Ω_1 : Baby girl names in 1950

Ω_2 : Baby girl names in 2000

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

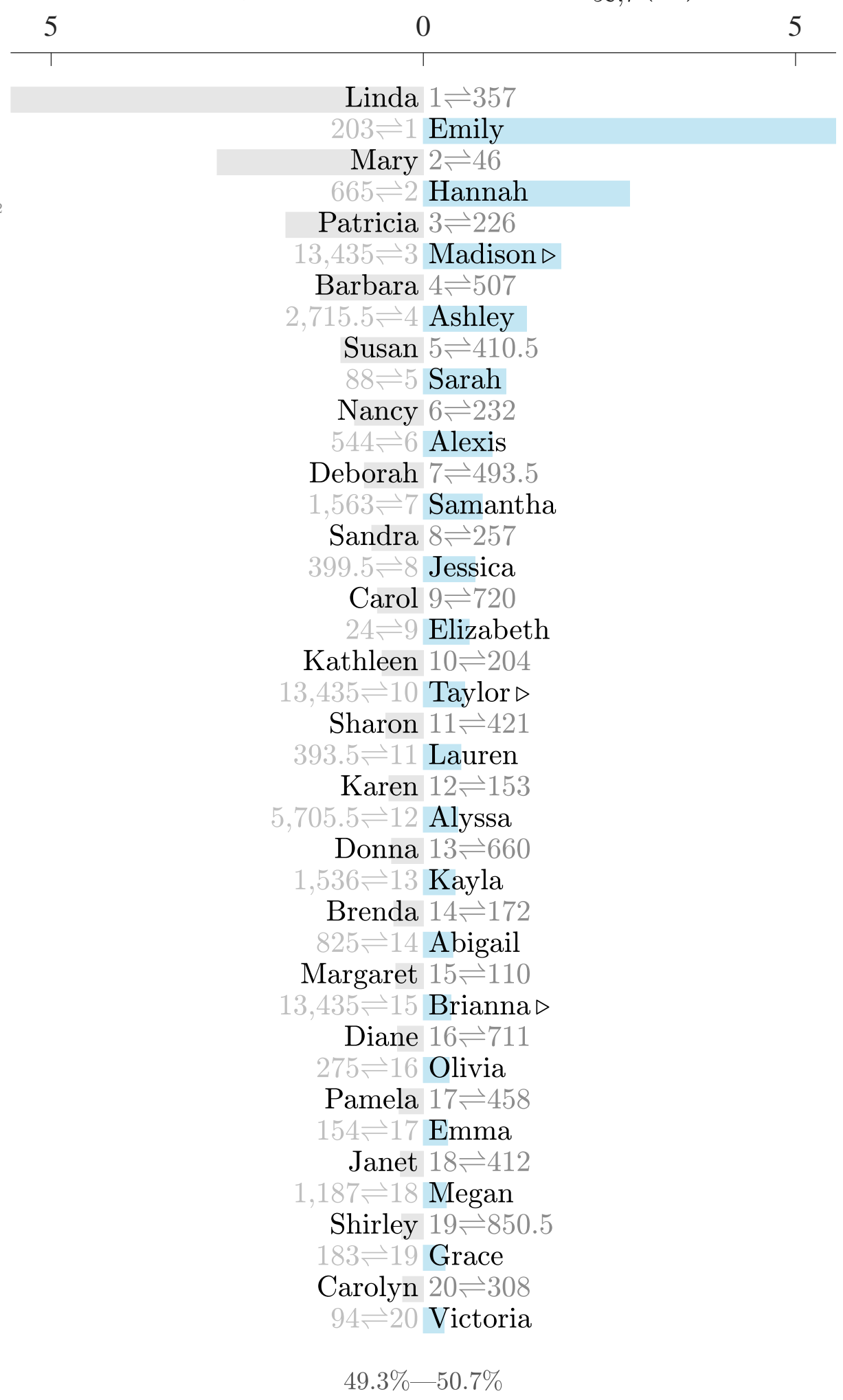
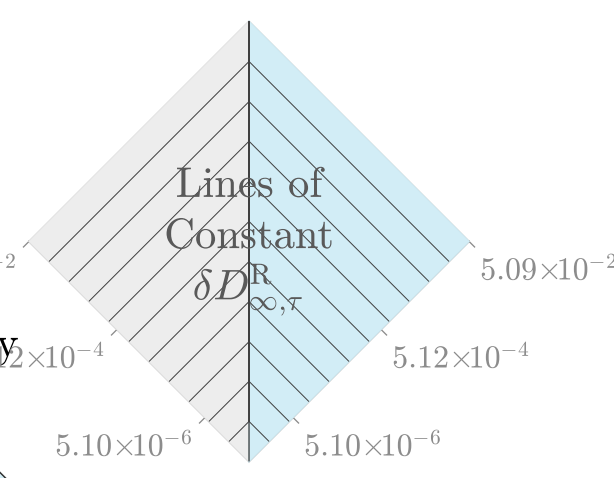
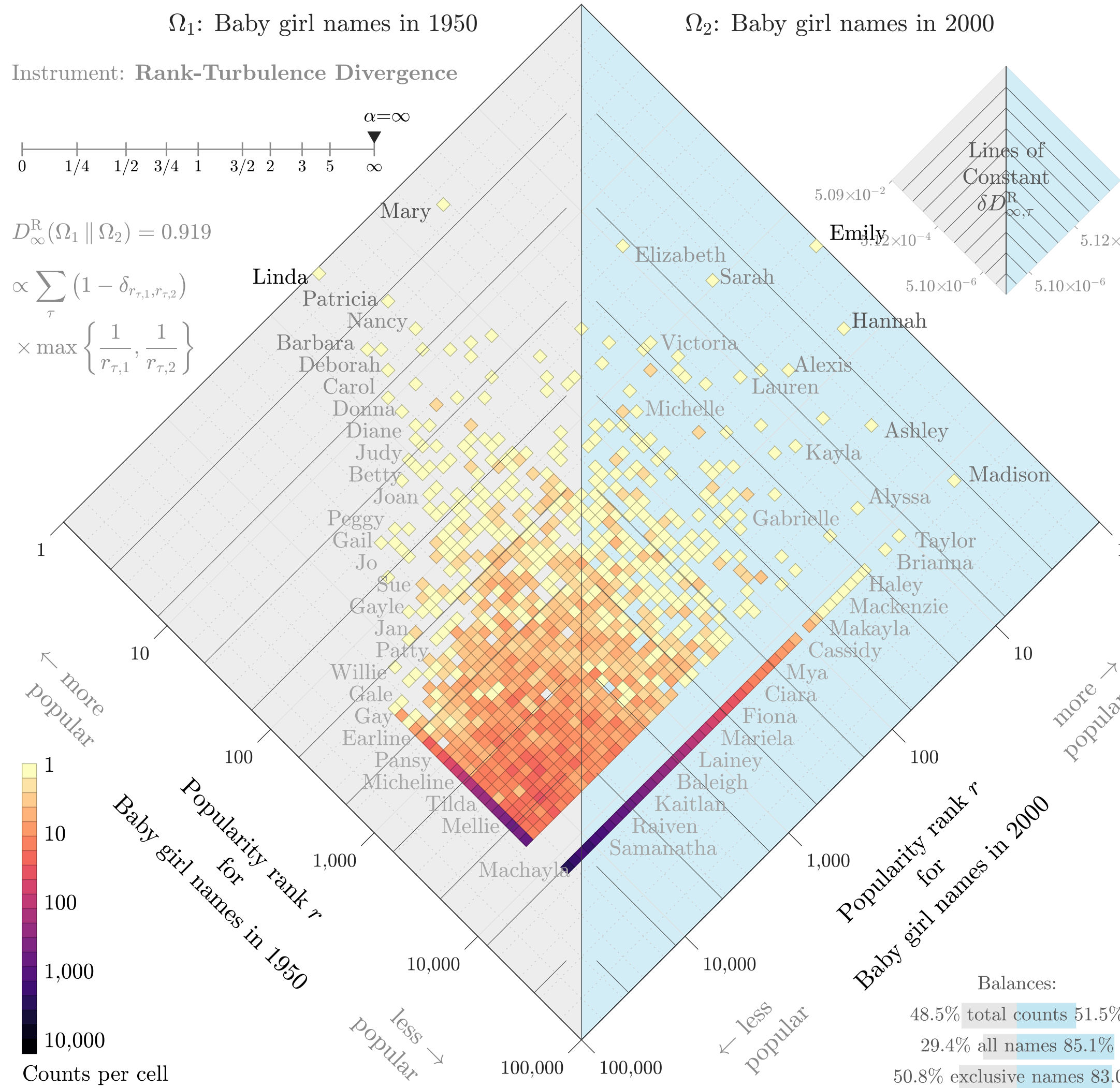
Instrument: Rank-Turbulence Divergence

$\alpha = \infty$



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.919$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



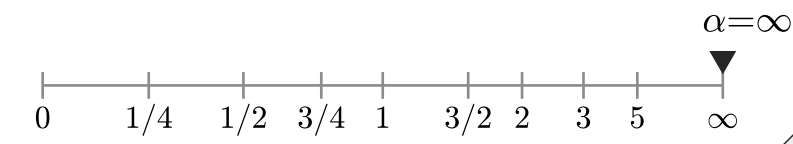
Balances:
 48.5% total counts 51.5%
 29.4% all names 85.1%
 50.8% exclusive names 83.0%

Ω_1 : Baby girl names in 1955

Ω_2 : Baby girl names in 2005

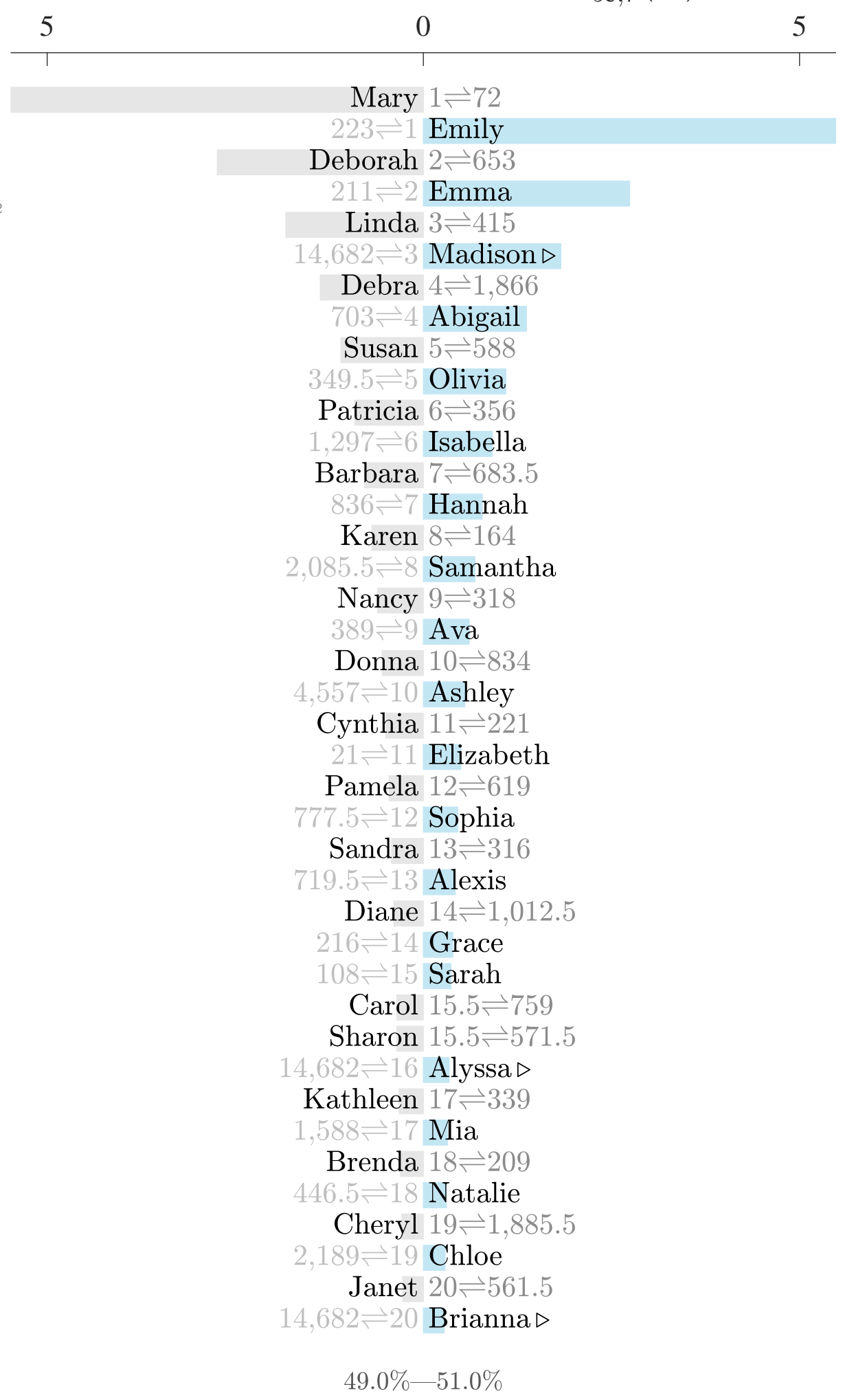
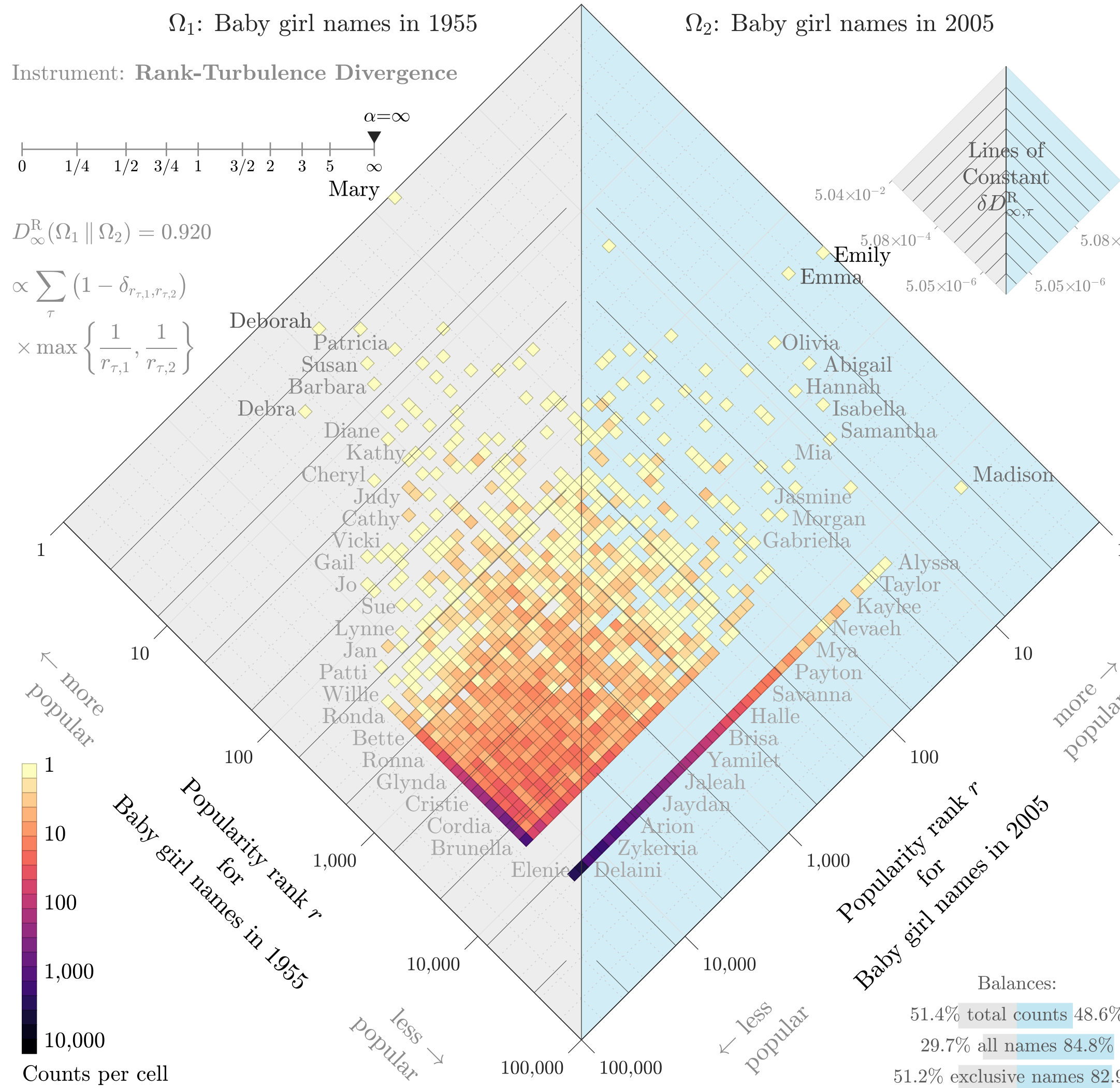
Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.920$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Balances:
 51.4% total counts 48.6%
 29.7% all names 84.8%
 51.2% exclusive names 82.9%

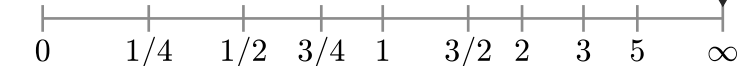
Ω_1 : Baby girl names in 1960

Ω_2 : Baby girl names in 2010

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence

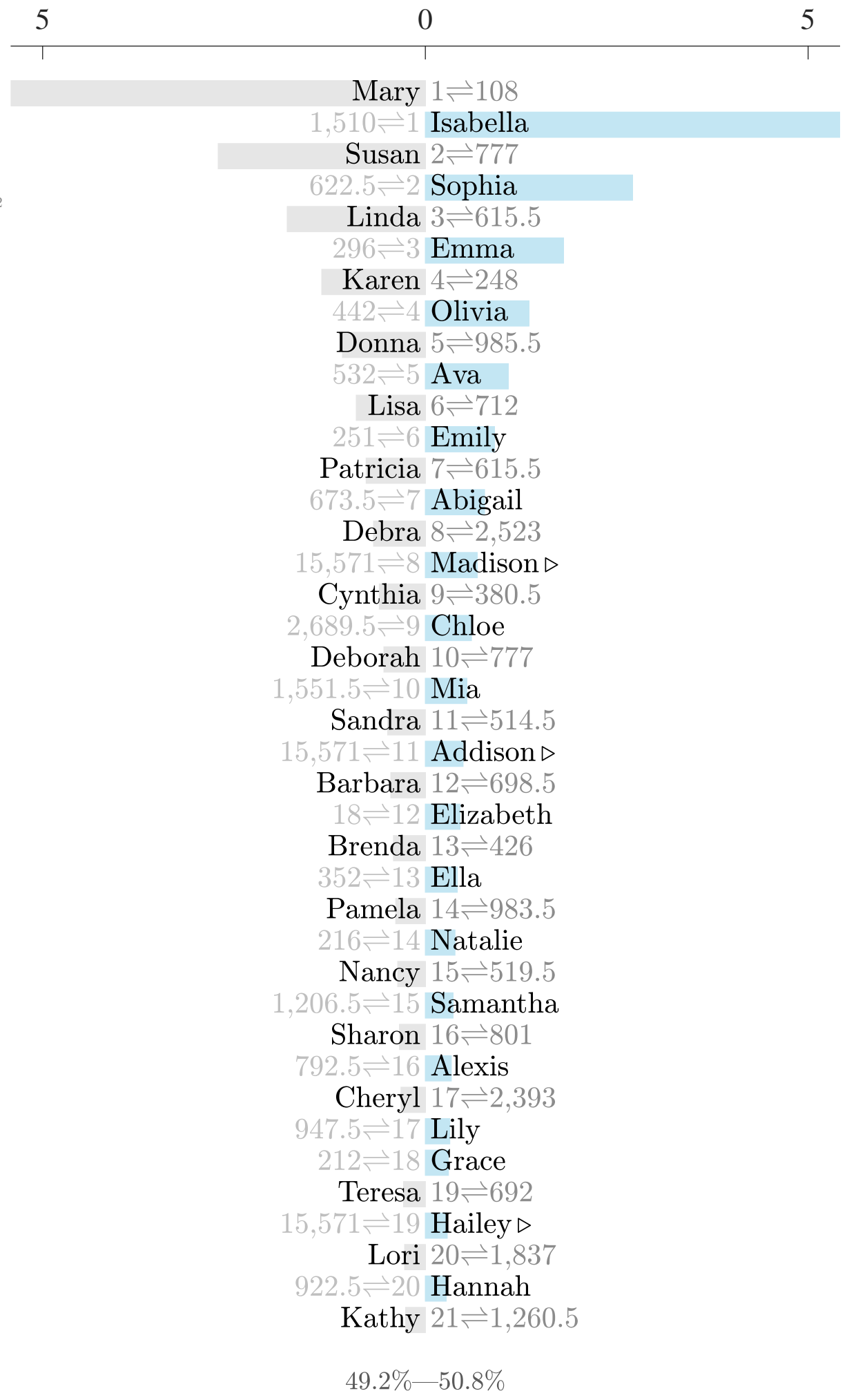
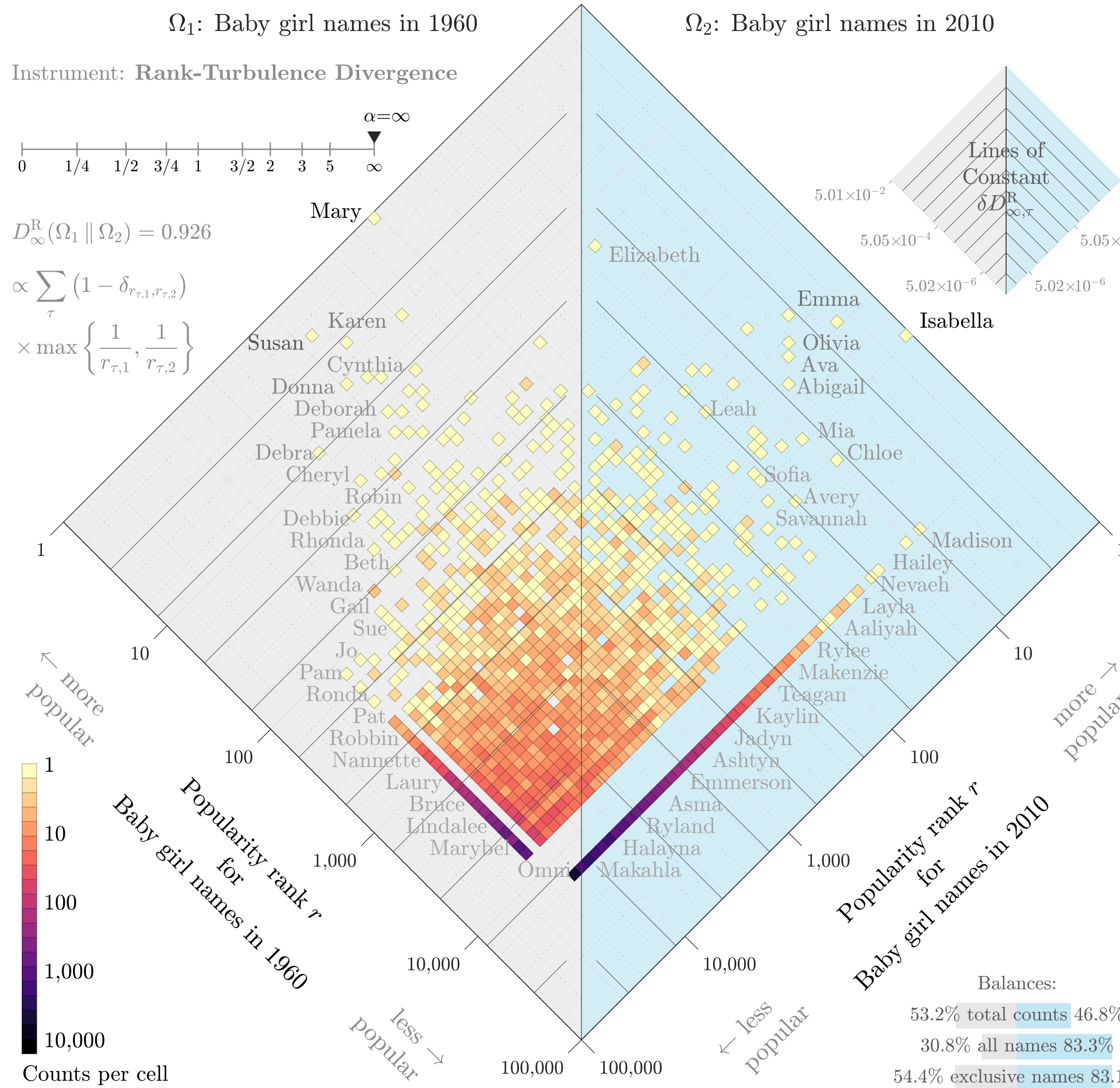
$\alpha = \infty$



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.926$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$$

$$\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



Balances:
 53.2% total counts 46.8%
 30.8% all names 83.3%
 54.4% exclusive names 83.1%

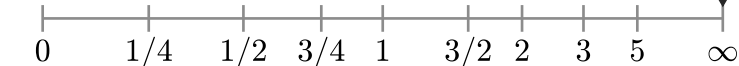
Ω_1 : Baby girl names in 1965

Ω_2 : Baby girl names in 2015

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

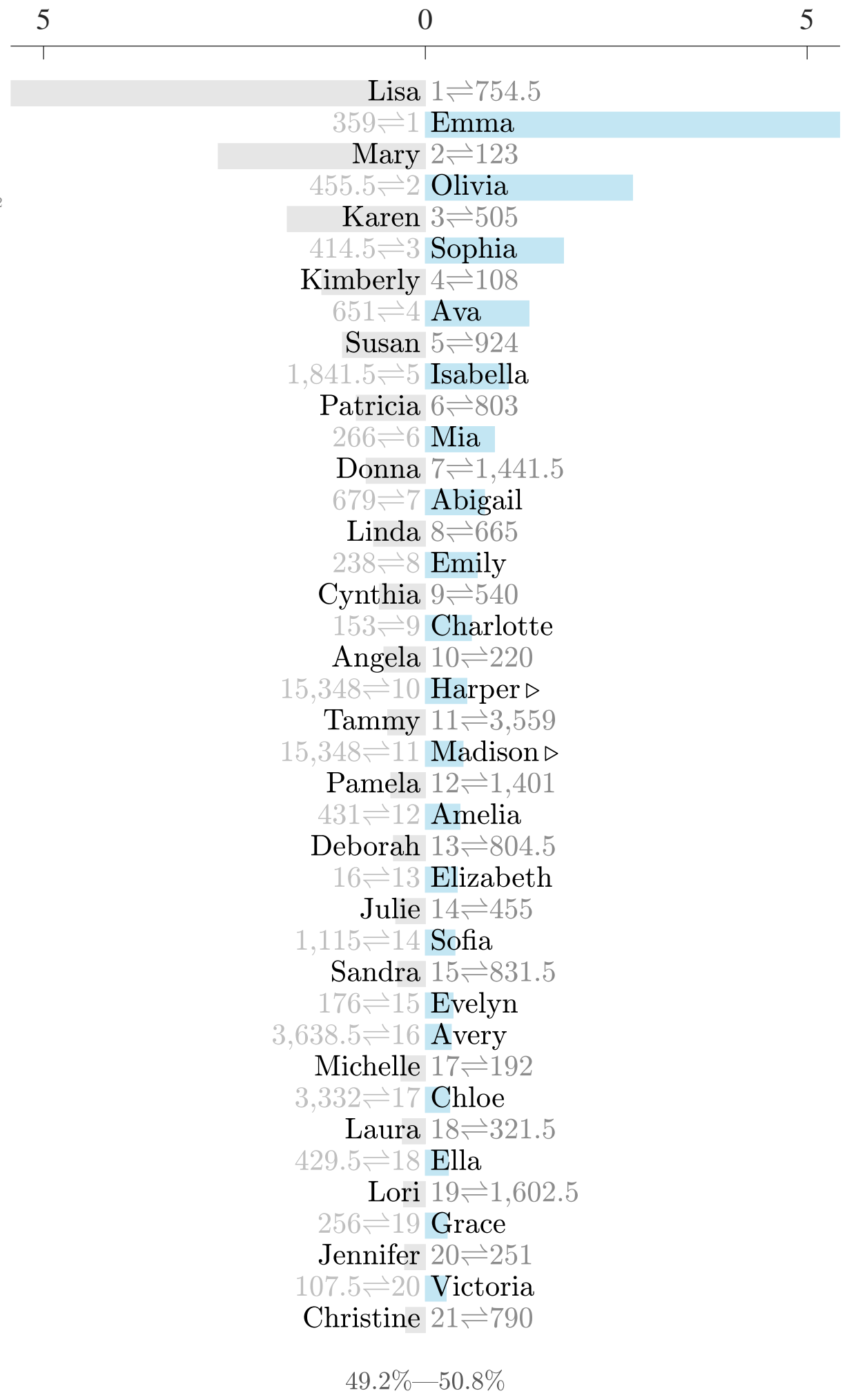
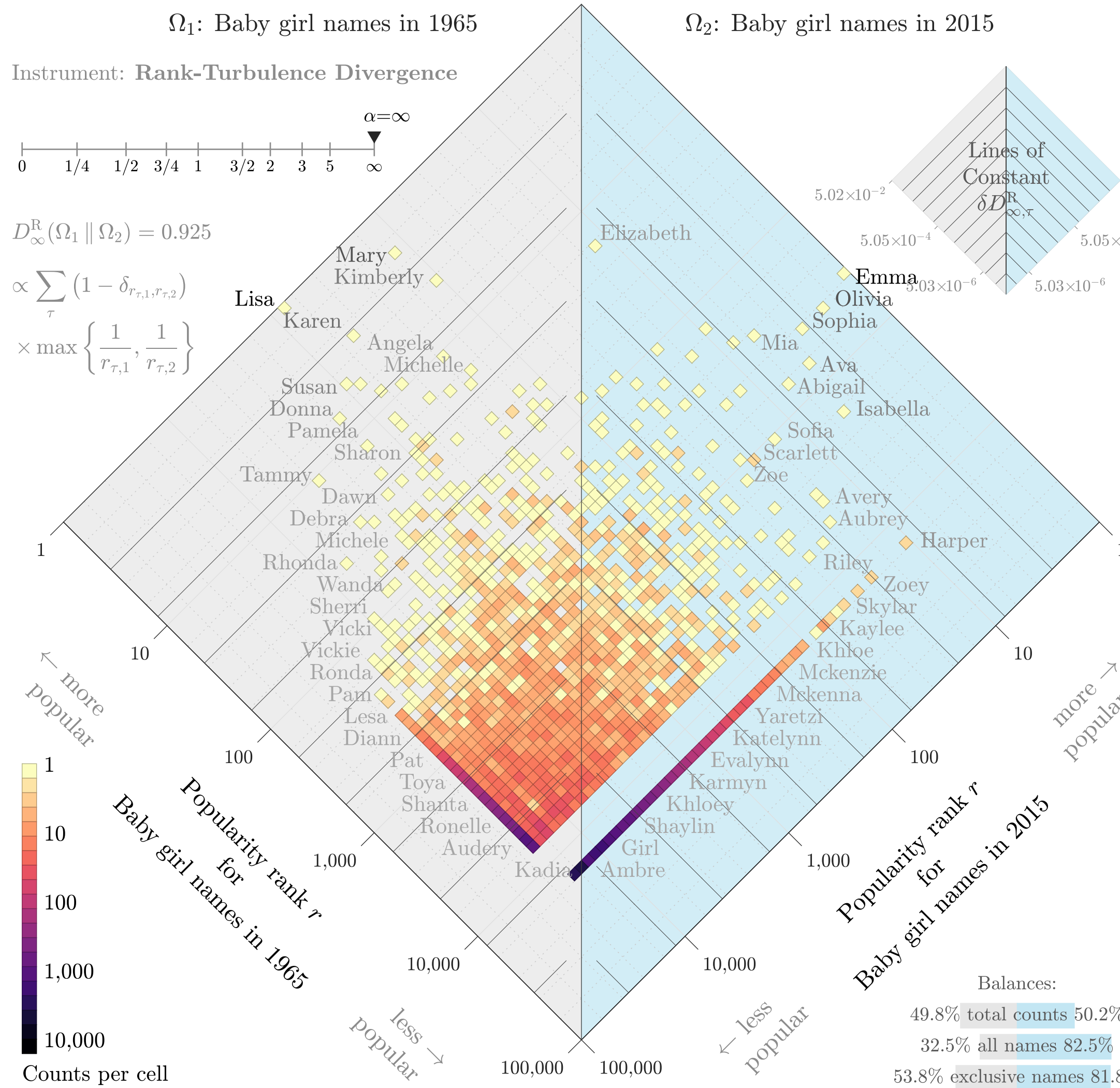
Instrument: Rank-Turbulence Divergence

$\alpha = \infty$



$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.925$

$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$
 $\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$



- Lisa 1 \Rightarrow 754.5
- 359 \Rightarrow 1 Emma
- Mary 2 \Rightarrow 123
- 455.5 \Rightarrow 2 Olivia
- Karen 3 \Rightarrow 505
- 414.5 \Rightarrow 3 Sophia
- Kimberly 4 \Rightarrow 108
- 651 \Rightarrow 4 Ava
- Susan 5 \Rightarrow 924
- 1,841.5 \Rightarrow 5 Isabella
- Patricia 6 \Rightarrow 803
- 266 \Rightarrow 6 Mia
- Donna 7 \Rightarrow 1,441.5
- 679 \Rightarrow 7 Abigail
- Linda 8 \Rightarrow 665
- 238 \Rightarrow 8 Emily
- Cynthia 9 \Rightarrow 540
- 153 \Rightarrow 9 Charlotte
- Angela 10 \Rightarrow 220
- 15,348 \Rightarrow 10 Harper \triangleright
- Tammy 11 \Rightarrow 3,559
- 15,348 \Rightarrow 11 Madison \triangleright
- Pamela 12 \Rightarrow 1,401
- 431 \Rightarrow 12 Amelia
- Deborah 13 \Rightarrow 804.5
- 16 \Rightarrow 13 Elizabeth
- Julie 14 \Rightarrow 455
- 1,115 \Rightarrow 14 Sofia
- Sandra 15 \Rightarrow 831.5
- 176 \Rightarrow 15 Evelyn
- 3,638.5 \Rightarrow 16 Avery
- Michelle 17 \Rightarrow 192
- 3,332 \Rightarrow 17 Chloe
- Laura 18 \Rightarrow 321.5
- 429.5 \Rightarrow 18 Ella
- Lori 19 \Rightarrow 1,602.5
- 256 \Rightarrow 19 Grace
- Jennifer 20 \Rightarrow 251
- 107.5 \Rightarrow 20 Victoria
- Christine 21 \Rightarrow 790

Balances:
 49.8% total counts 50.2%
 32.5% all names 82.5%
 53.8% exclusive names 81.8%

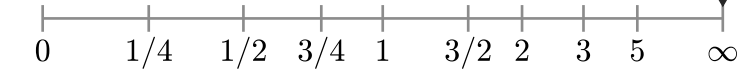
Ω_1 : Baby girl names in 1970

Ω_2 : Baby girl names in 2020

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

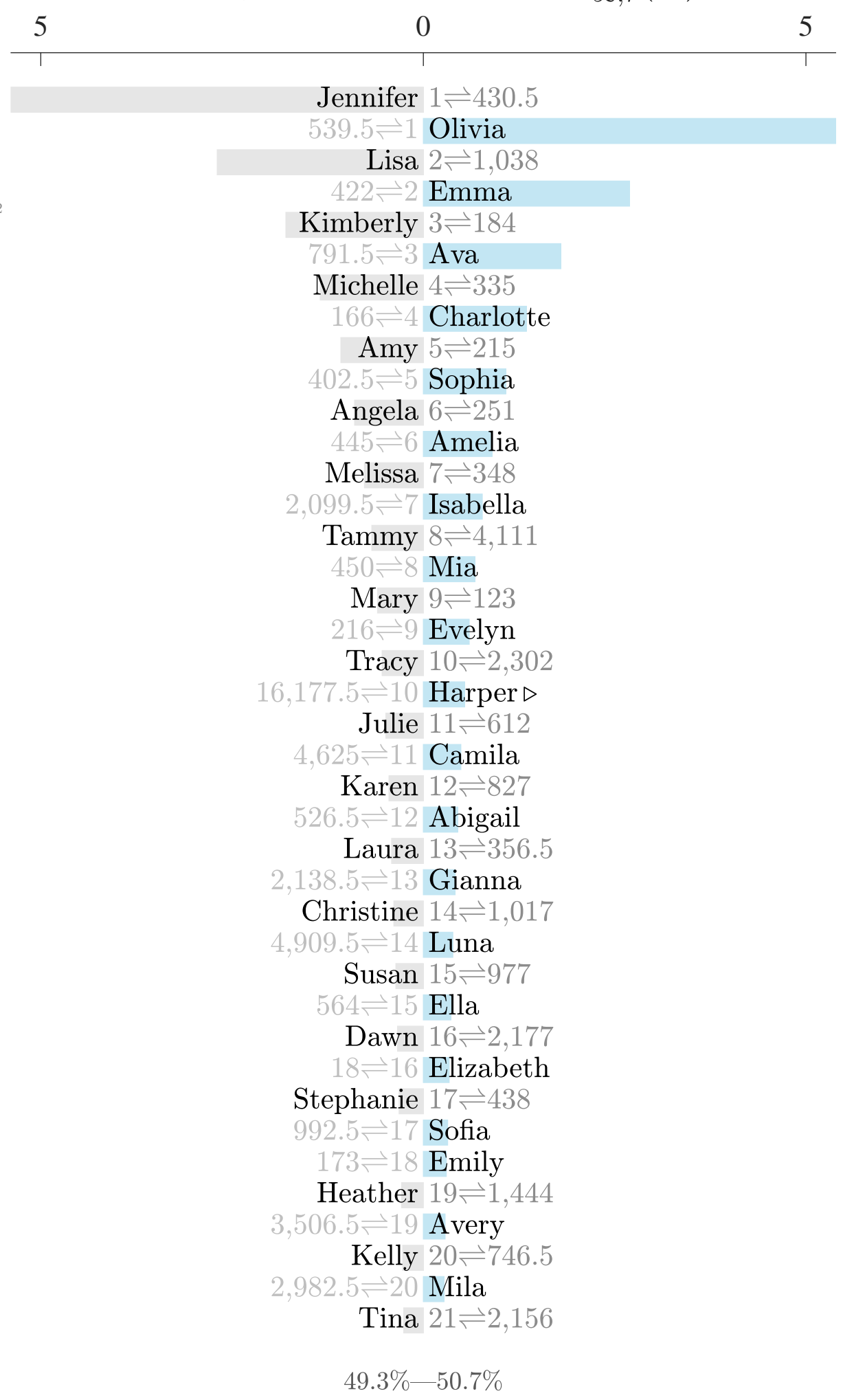
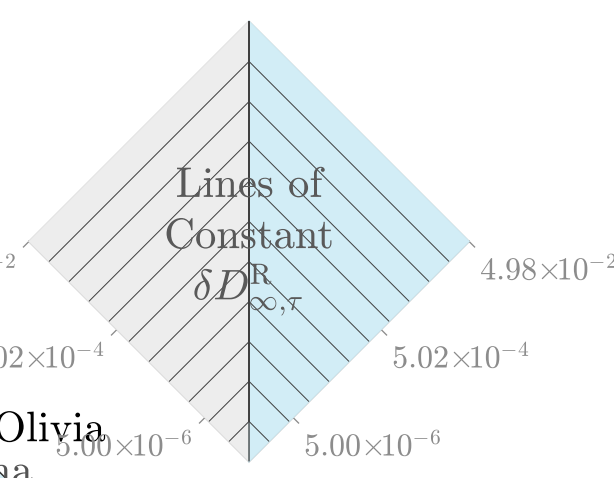
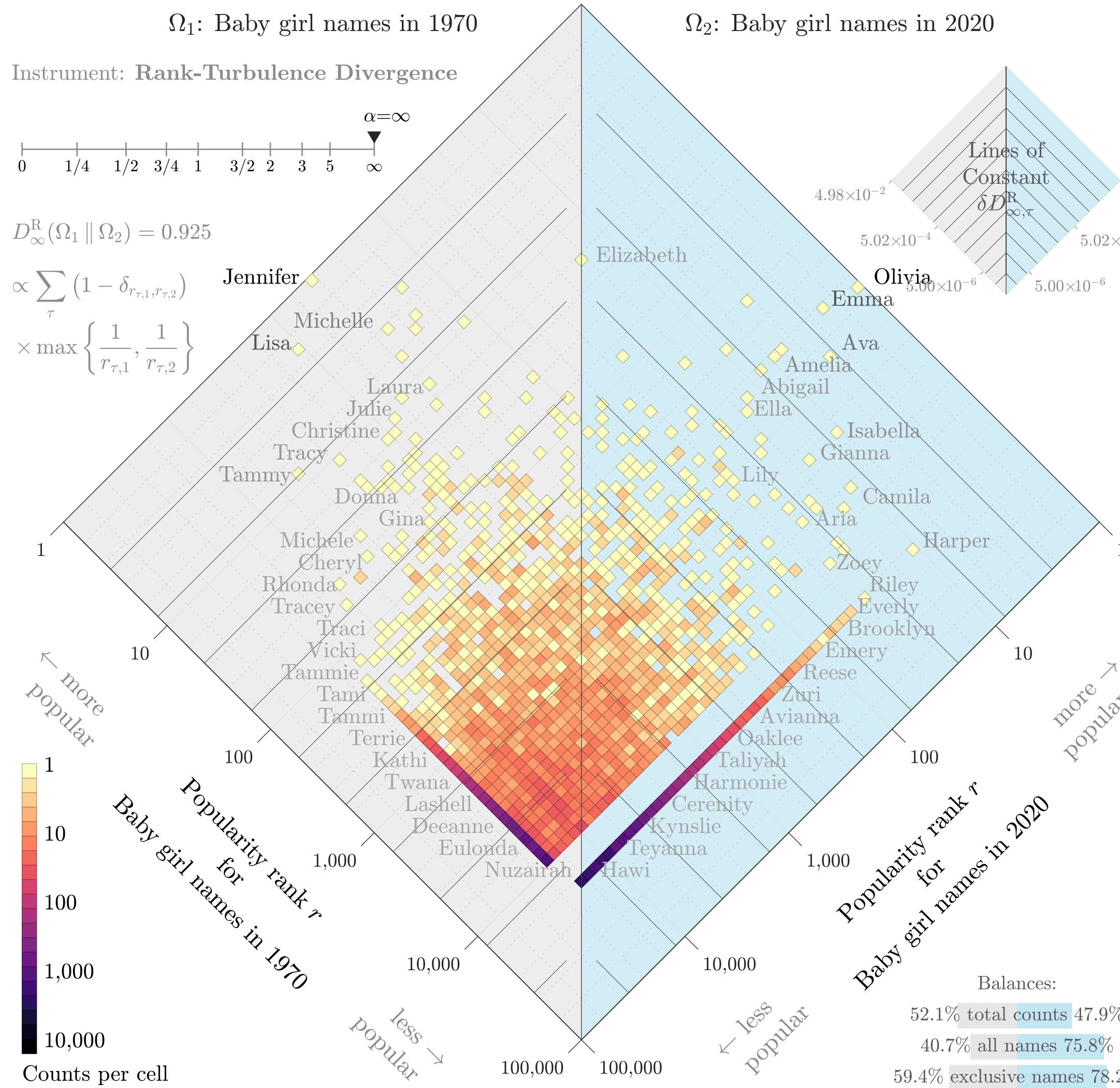
Instrument: Rank-Turbulence Divergence

$\alpha = \infty$



$$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.925$$

$$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}}) \times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$$



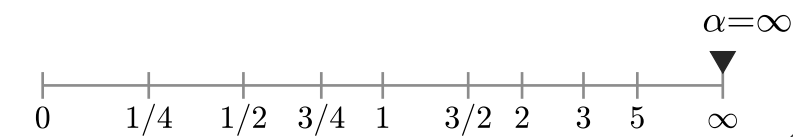
Balances:
 52.1% total counts 47.9%
 40.7% all names 75.8%
 59.4% exclusive names 78.2%

Ω_1 : Baby girl names in 1971

Ω_2 : Baby girl names in 2021

Divergence contribution $\delta D_{\infty, \tau}^R$ (%)

Instrument: Rank-Turbulence Divergence



$D_{\infty}^R(\Omega_1 \parallel \Omega_2) = 0.926$

$\propto \sum_{\tau} (1 - \delta_{r_{\tau,1}, r_{\tau,2}})$
 $\times \max \left\{ \frac{1}{r_{\tau,1}}, \frac{1}{r_{\tau,2}} \right\}$

