

Report 3: Gaps in Marriage Dates

A casual report

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Intro

Wondering about the gap in years between marriages? That's what we are here to investigate. You will find 2 [ACTION NEEDED] bolded in this report.

Problem: more cleaning needed ...

A quick overview: the first column has the difference in years between the first and the second marriage, and the second column the count. It is worth mentioning that the way this was computed was a straight subtraction of the year: if somebody's first marriage was in December 1912, and they committed bigamy in January 1913, effectively just one month after, the computation results in '1 year' difference. If the first marriage was November 1912 and the second December 1912, then it is '0 year' difference. This limitation is a result of unstandardized data collection: sometimes, only the year was/could be collected. So it had to be used as a common denominator for all. Future work may be to take the time to include the month and day information of those that have it, in the case that the information is available for both their first and second marriages, and to take a more comprehensive difference. But that require much more time and effort to work through so for now we move forward with our limitations.

We immediately see some things 'wrong': there are negative 'years' (ie second marriage comes before the first marriage).

Var1	Freq
-141	1
-96	1
-89	1
-20	1
-19	1
-7	1
-5	1
-4	1
-3	1
-2	1
0	57
1	115
2	154
3	172
4	187
5	198
6	155
7	132
8	136
9	117
10	98
11	98
12	75
13	81
14	72
15	51
16	41
17	49
18	46
19	33
20	28
21	22
22	19
23	16
24	14
25	16
26	12
27	8
28	14
29	13
30	16
31	3
32	2
33	8
34	2
35	1
36	5
37	2
38	2
39	1
40	3
42	1

Var1	Freq
47	1
48	1

There are 10 cases where the date of the first marriage appear to be after that of the second. These cases are shown in the following table. I suppose it may be a mixup from the transcriber, where they meant the ‘first’ marriage is the one dealt with ‘now’ and the second one is the previous one. Or they may be typos, like in the case of the second row here, where it may be either 1918, 1928, or possibly even 1912 (I quickly looked on the original spreadsheet to see if I confirm myself with primary sources but for this example there were no links. . .). I also quickly looked at the primary sources for the first item, to see if I could decide on something, but didn’t find any mention of years in the first three links I looked through and decided to use my time better. [**ACTION NEEDED: fix this typo**]

	state	FIRST__	SECOND__	THIRD__
1	NSW	October 10th, 1865	1860	NA
2	NSW	14 fev 1919	December 29, 19128	NA
3	NSW	MAY 14th, 1948	October 19th, 1929	NA
4	NSW	September 2nd, 1943	January 25th, 1941	NA
5	Queensland	Jan 17, 1925	April 30, 1905	NA
6	South_Australia	July 1868	1864, Nov. 12	before 1856
7	Tasmania	04 September, 1988	06 December, 1847	NA
8	Western_Australia	June 6, 1933	September 26, 1837	NA
9	Victoria	February 8th or 9th, 1943	October 18, 1854	NA
10	Victoria	July 21, 1934	September 21, 1931	NA

There are four cases where the third marriage appears at an earlier date than the second marriage. Does this suggest that the ‘third marriage’ in this case is in fact the ‘first’ chronologically? [post jul 6 meeting: yes]

	state	FIRST__	SECOND__	THIRD__
1	South_Australia	July 1868	1864, Nov. 12	before 1856
2	South_Australia	1893, May 17 (5)	1913, June 14	1883, May 23
3	South_Australia	1919 or July 1918	July 7 1928	April 22, 1923
4	Victoria	1873-01-05	1905-03-05	1900-01-01

There are two cases where the third marriage appears before the first marriage, which were included as well in the previous table. I checked just in case there would be some that are before the second but after the second, for whatever reason.

	state	FIRST__	SECOND__	THIRD__
1	South_Australia	July 1868	1864, Nov. 12	before 1856
2	South_Australia	1893, May 17 (5)	1913, June 14	1883, May 23

Given the complication of some cases having a ‘third’ marriage that seems to be the first chronologically, I won’t code up a solution for these cases under the logical assumption of a transcriber mixup, but rather wait on your thoughts, and then we can ‘fix’ it in the original spreadsheets. [Post Jul6 meeting: I will go and fix these in the original] For now, I will just remove these observations from the analysis.

I had fixed a typo using my best judgement (2938 -> 1938), but there is a typo I am not sure how to fix: what could a year of 8274 for a third marriage be? It seems like you have a whole document on this guy (which I don't have access to) so I'm sure you'll be able to find faster than me the correct year. **[ACTION NEEDED: fix typo]**

state	NAME	FIRST_	SECOND_	THIRD_
Victoria	Thomas OR Henry Chapman	1863	July 7, 1875	-8274

Analysis

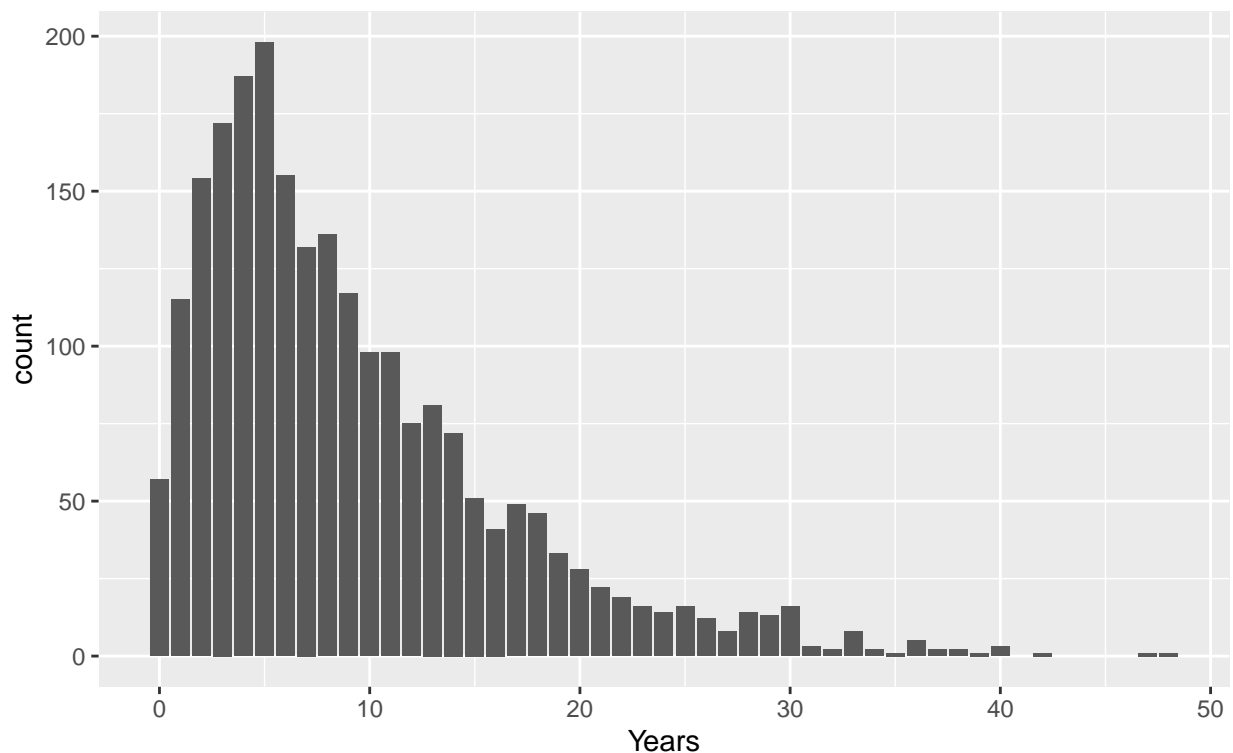
First and Second

There are 2,287 cases where a year for a first marriage and a second marriage is recorded, out of 3070 cases available. There are 155 cases where there is a date for the 'second' marriage, but nothing written for the 'first'. 17 of these have a known date for a third 'marriage'.

In the following plot, we see a graph of the time between first and second marriages, with the count associated. This plot only includes the cases where the first and second years of marriages were known in the data. The differences range from 0 (happened in the same year) to 48. 99% of differences are under 33 years, 95% are under 24 years, 90% are under 19 years, 75% are under 13 years. Another way to phrase this is that only 10% of cases are over 19 years, 5% over 24 years, and 1% over 33 years. The mean (average) difference is 9 years, and the median is 7 years. The median is the value at which half of the values (50%) occur below and half of them above. The difference occurring the most is 6 years, followed by 5, then 4. The distribution is left-skewed, ie have a tendency of occurring at 'smaller' differences.

Time Between First and Second Marriage

n = 2,287

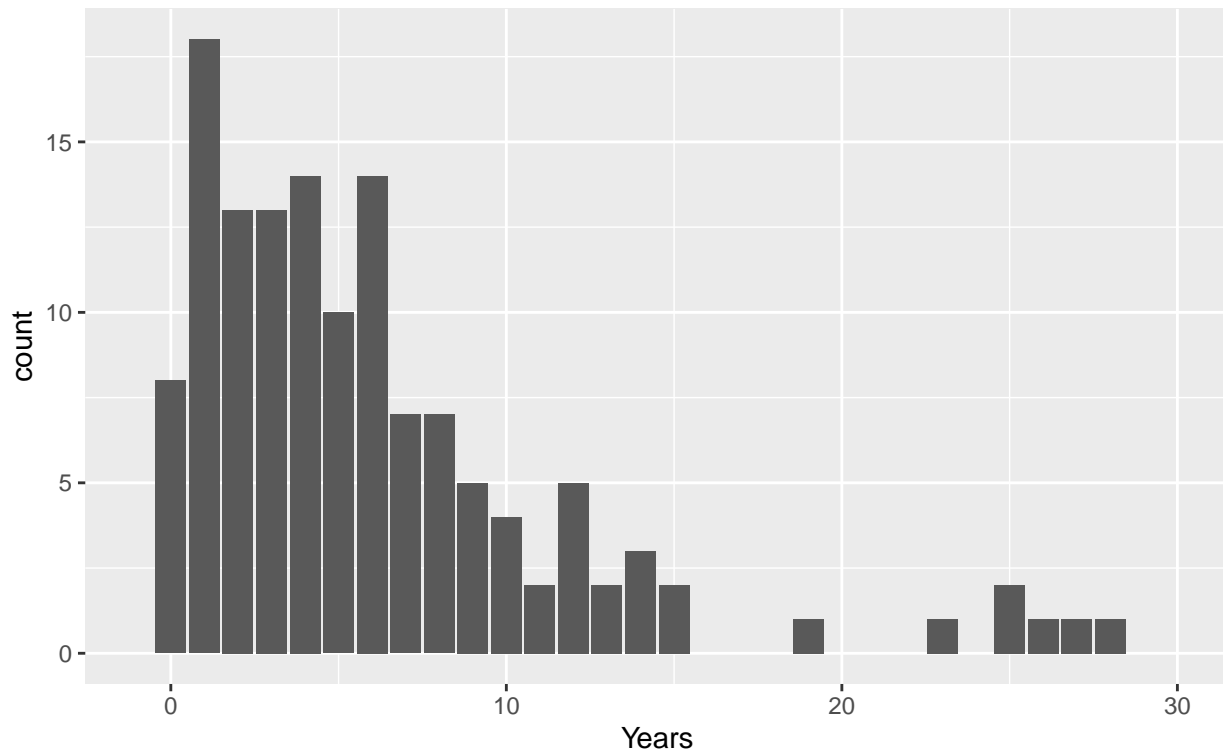


Second and Third

There is a much smaller count of cases where there are both years for a second marriage and a third marriage recorded: only 139. The mean difference in years is 6, and the median is 5. 75% occur under 8 years, 90% under 13, 95% under 17, and 99% under 27.

Time Between Second and Third Marriage

n = 139



First, Second, AND Third

This next plot needs some work to be more understandable, but provides an initial idea of the years between first and second marriages versus the years between second and third. There are only 120 cases where there is a year recorded for all three events. The black points represent the difference in the first set, and the red points the second. Any red point that is above a black point means that more years elapsed between the second and third compared to the first and the second. Any red point below is the opposite: there was less time elapsed between the second and the third than the first and the second.

It looks like there are more points below the black 'curve', indicating that it seems like in general, less time elapsed between the second and the third marriage. In fact, that was the case 78 times, whereas more time elapsed before getting married a third time 34 times. There was only 8 times when the number of years was equal (when the a red point overlaps directly a black point).

Of interest might be the first few points on the left side of the plot, where the first and second marriage happened in the same calendar year, and the third marriage followed 1 and 2 years behind.

Comparison of Years between First and Second Marriage (black)
and between Second and Third Marriage (red)

n = 120

