Analyzing UK Divorce and Marriage Data

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Problem Statement and Background

- The problem we intended to address was trying to find interesting statistics and relationships between the attributes from our dataset, which contained data on UK divorce and marriage, and visualizing them with graphs. The problem we intended to address was important because by finding interesting statistics and relationships between the attributes from our dataset, which contained data on UK marriage and divorce, we could gather insights on UK marriage and divorce and find out about information relating to UK marriage and divorce that may have not been obvious or known to people.

The Data Source

- Our dataset contained information about divorce and marriage in the United Kingdom from 1901 to 2016, and was retrieved from Kaggle
- Specifically, the dataset contained annual information (relating to divorce and marriage in the UK from 1901 to 2016) on the:
    - number of divorces and marriages
    - number of husbands and wives who submitted for divorce
    - divorce rate for males and females of various age groups
    - median age of males and females getting married
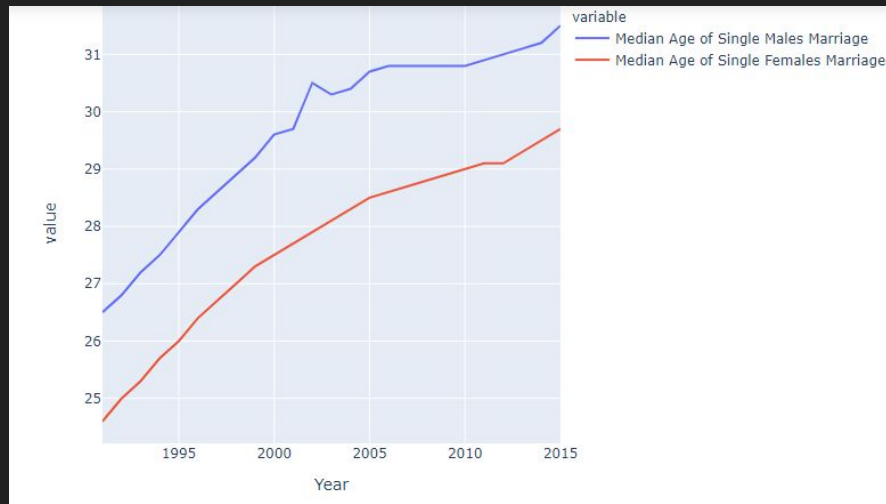- And much more!

Data Cleaning/Preparation

- When the dataset was initially inspected, we found that the dataset had many rows (years) with null values, and the data types of some of the columns/attributes in the dataset were improper. As a result, we decided to clean up the original dataset by removing the years with null values and changing the data types of columns with improper data types to proper ones. From these changes, we analyzed divorce and marriage data in the UK from 1991 to 2015, which we still felt was a large enough chunk of the dataset to gather valuable insights from.

Data Analysis

- The tools we used throughout the project to find the answers to our questions relating to UK divorce and marriage include exploratory data analysis and visualization. Exploratory data analysis was used to perform data wrangling and to find the answers to our questions relating to UK divorce and marriage. Visualization was used to to visualize the answers to our questions relating to UK divorce and marriage (if applicable) by using a variety of graphs and plots, such as bar graphs and line graphs.
- Initially, our project focused on exploratory data analysis to find the answers to our questions relating to UK divorce and marriage. Once the answers to our questions were found, our project focused on visualizing the answers to our questions (if applicable) by using a variety of graphs.
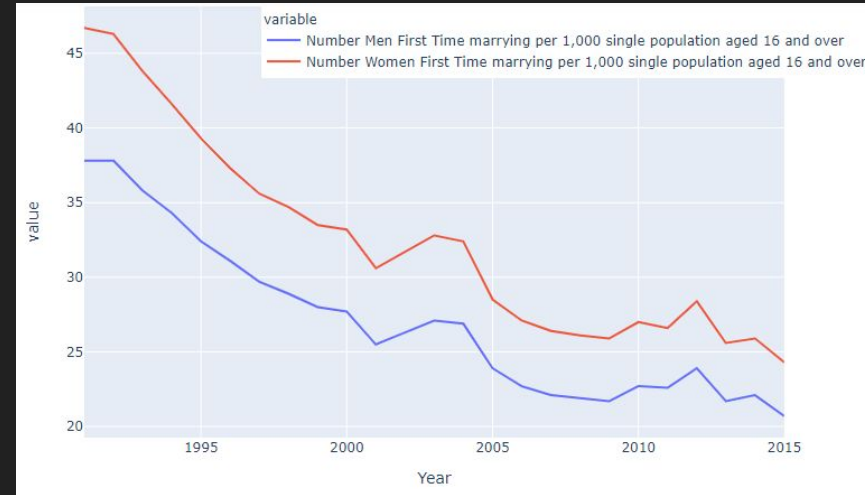
Findings (Kevin)

- From 1991 to 2015, the median age for males getting married was greater than the median age for females getting married every year, showing that males tended to marry younger women during the time period.
- From 1991 to 2015, the median age for males and females getting married increased. Males and females got married at an older age over the years.
- From 1991 to 2015, the number of men marrying per 1,000 unmarried men was greater than the number of women marrying per 1,000 unmarried women every, showing that more men tended to marry than women during the time period.
- From 1991 to 2015, the number of men marrying per 1,000 unmarried men and number of women marrying per 1,000 unmarried women decreased. Males and females married less frequently over the years.

Findings (Kevin) cont.

- From 1991 to 2015, the number of men marrying for the first time per 1,000 people and number of women marrying for the first time per 1,000 people decreased. Therefore, less marriages consisted of people getting married for the first time over the years.
- From 1991 to 2015, the number of men remarrying per 1,000 people was greater than the number of women remarrying per 1,000 people every year, showing that more men tended to remarry than women during the time period.
- From 1991 to 2015, the number of men marrying for the first time per 1,000 people was less than the number of men remarrying per 1,000 people every year, showing that men were more likely to be getting remarried than getting married for the first time during the time period.
- From 1991 to 2015, the number of women marrying for the first time per 1,000 people was greater than the number of women remarrying per 1,000 people, showing that women were more likely to be getting married for the first time than getting remarried during the time period.

Findings (Jayson)

- Between 1991 and 2015, the 5 years with the highest number of marriages were 1992, 1991, 1993, 1994, and 1995. The 5 years with the lowest number of marriages were 2009, 2007, 2008, 2015, and 2006.
- Between 1991 and 2015, the 5 years with the highest number of divorces were 1993, 1992, 1991, 1994, and 1996. The 5 years with the lowest number of divorces were 2015, 2014, 2009, 2013, and 2011.
- From 1991 to 2015, the number of marriages and divorces decreased. Marriage and divorce became less common over the years.
- Between 1991 and 2015, the number of marriages consisting of people who both married for the first time was around 2.4 million, the number of marriages consisting of a person who previously divorced was around 660,000, the number of marriages consisting of people who both previously divorced was around 330,000, the number of marriages consisting of the husband previously divorcing was around 665,000, and the number of marriages consisting of the wife previously divorcing was around 650,000. A marriage was most likely to consist of people marrying for the first time, and least likely to consist of people who both previously divorced.
- From 1991 to 2015, the number of marriages consisting of people who both married for the first time decreased, while the number of marriages consisting of a person who previously divorced, consisting of people who both previously divorced, consisting of the husband previously divorcing, and consisting of the wife previously divorcing remained relatively constant. Marriages consisting of people marrying for the first time became less common over the years.

Total # of Marriages by Marriage Composition between 1991 and 2015

Findings (Mark)

- From 1991 to 2015, the number of divorces filed by wives has consistently been higher than husbands, while the number of divorces filed by husbands remained constant.
- The amount of divorces filed by wives has decreased significantly.

- The two most common causes of divorce were unreasonable behavior and adultery.
- In recent years, adultery being the cause of divorce has decreased significantly.
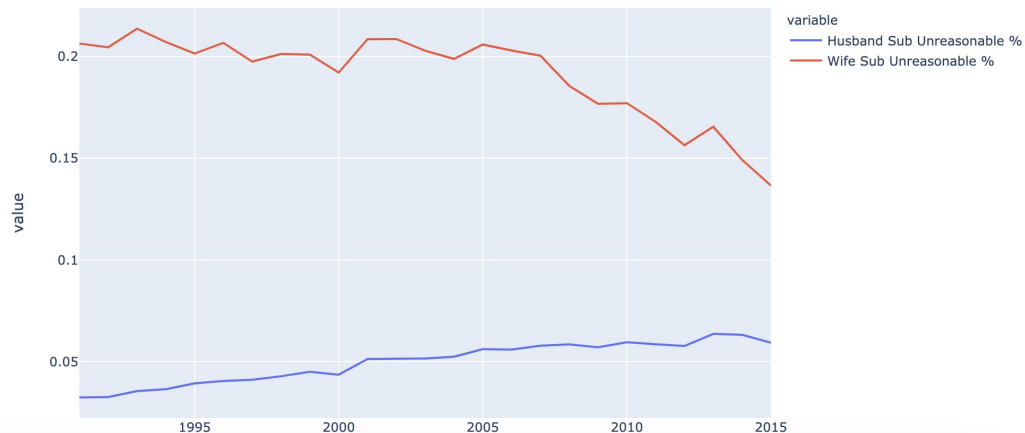
Findings (Mark) cont.

- Husbands and wives filing due to adultery has decreased, but is still more common in the wife
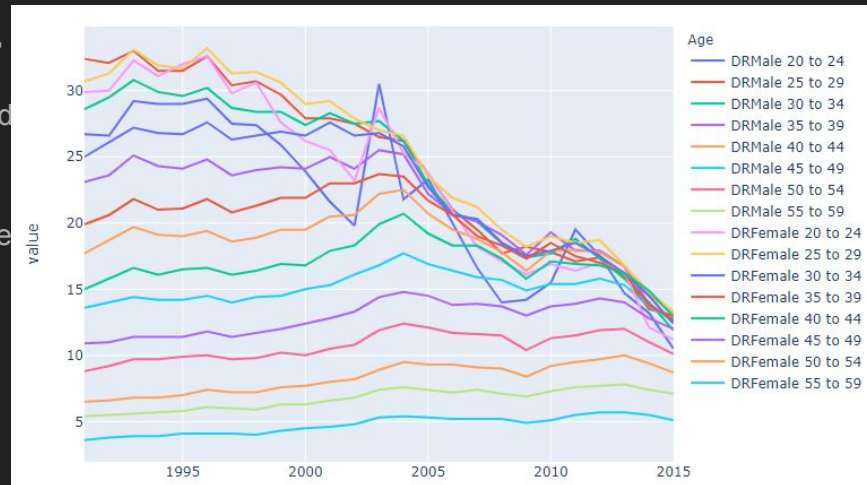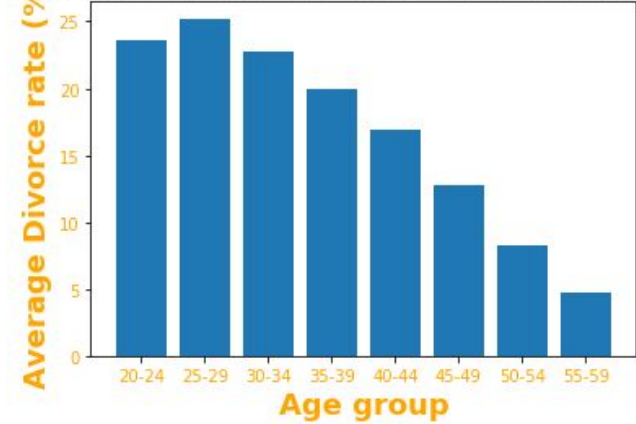

- For divorces filed due to unreasonable behavior, the amount has decreased for wives, and slightly increased for husbands.

Findings (Eric)

● Age seemed to play a larger role in divorce rates than gender. Between 1991 and 2015, men and women tended to have lower divorce rates at higher ages, with both the male and female divorce rates for the age group 55-59 being the lowest of their respective genders.

● Between 1991 and 2015, the age group with the highest divorce rate every year was either age group 20-24 or 25-29 (with two outliers being in 2014 and 2010), reaffirming that divorce rates are much higher amongst younger people in the UK than older people.

● From 1991 to 2015, the divorce rate for males aged 25-29, males aged 30-34, males aged 35-39, and males aged 40-44 decreased, while the divorce rate for males aged 45-49, males aged 50-54, and males aged 55-59 remained constant. Younger males divorced less frequently over the years.

● From 1991 to 2015, the divorce rate for females aged 25-29, females aged 30-34, and females aged 35-39 decreased, while the divorce rate for females aged 40-44, females aged 45-49, females aged 50-54, and females aged 55-59 remained constant. Younger females divorced less frequently over the years.

● Between 1991 and 2015, divorce rates for older individuals remained relatively constant over the years, and divorce rates for younger individuals dropped by nearly half over the years.

Conclusion

- In our opinion, analyzing our dataset was well worth our time and effort
- From analyzing our dataset, which contained data on UK marriage and divorce, we gathered interestings insights on UK marriage and divorce and found out about interesting information relating to UK marriage and divorce that probably wasn't obvious or known to people.