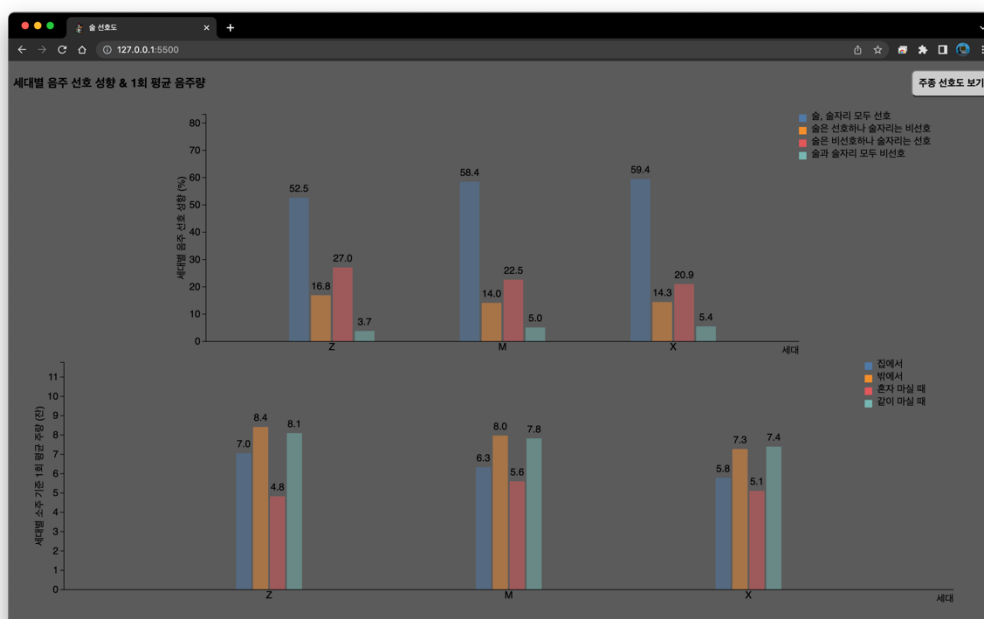# Trend of Alcohol

[2023 Information Visualizing Assignment 2]

20191128 Jian Park

Ⅰ. Basic Info

1. Teaser

2. Feature

Consists of two pages:
1. Main: Alcohol Preference Analysis
- Provides data on preferences for drinking and drinking.
- Provides data on situational alcohol consumption based on 1 class of soju.
- Allows for comparison between different generations.

2. Sub: Preferred Alcohol Types Analysis
- Provides data on preferred alcohol types based on different situations.
- Allows for comparison between different generations.

3. Purpose

To understand alcohol preferences among different generations (Generation Z, Millennials, Generation X).

4. How to use?

Download the code and port it then immediate use.
Alternatively, access the link through the Git page below. *https://rutuna.github.io/Trend_of_Alcohol/*

5. User scenarios

 On the main page, users can compare data on preferences for alcohol and drinking occasions, as well as average alcohol consumption base on situation.
 By using the button in the top right corner, users can navigate to the subpage and compare preferred alcohol types.

Ⅱ. Data

1. Used Data

The data used for this project was collected by the '대학내일20대연구소' (April 2023). A survey of 1,200 both gender between the ages of 19 and 53 from 18 cities across the country who have experienced alcohol consumption within the past three months. https://www.20slab.org/Archives/38479
The survey aimed to understand drinking behaviors, perceptions, and consumption preferences. The raw data is provided as a paid Excel file, categorized by age/generation for each item. Copyright authorization was granted in advance to use the data in the desired format (CSV file).

안녕하세요, 박지안 님!
대학내일20대연구소입니다.

1. 저희 데이터는 엑셀 표 형태로 제공됩니다.
2. 과제 제출용으로 사용하는건 괜찮습니다. 다만, 사용 시 저희 출처를 꼭 기재해 주세요!
출처 표기법은 아래를 참고해주세요.

- '대학내일20대연구소'는 띄어쓰기 없이 붙여써야 합니다.
- 조사 결과 인용 시 조사 개요의 조사 대상, 표본 수, 조사 기간을 명시해야 합니다. 아래 세 가지 예시를 참고해주세요.
(예시 1) 대학내일20대연구소가 전국 17개 시도 만 15~34세 남녀 900명을 대상으로 2020년 3월 설문조사를 진행한 결과
(예시 2) *출처 : , 대학내일20대연구소, 2020.01.29
(예시 3) 대학내일20대연구소(2020), MZ세대의 유료 콘텐츠 이용 행태

고맙습니다.

The data is classified based on age groups and generations, specifically Z / M / X generations and Z / Late M / Early M / X generations. For this project, the analysis focuses on the drinking preferences among Z/M/X generations, with the following criteria for each generation:

- Z Generation: Generally, refers to person born in the mid-1990s to the late 2000s. In this dataset, person born between 1996 and 2004 are classified as the Z Generation.
- M Generation (Millennials): Generally, refers to person born in the early 1980s to the mid-1990s. In this dataset, person born between 1981 and 1995 are classified as the M Generation.
- X Generation: Generally, refers to person born in the 1970s. In this dataset, person born between 1970 and 1980 are classified as the X Generation.

For this project, the aim is to compare the drinking preferences and preferred alcohol types among different generations. Therefore, we used the data below among the original data.

SQ5. 음주 선호 성향 (단수)
A3. [홈술] 주 음용 주종 (경험 없음 응답자 제외, 복수)
A3-1. [홈술] 1회 평균 음주량 1) 소주 (단수)
A4. [밖술] 주 음용 주종 (경험 없음 응답자 제외, 복수)
A4-1. [밖술] 1회 평균 음주량 1) 소주 (단수)
A5-1. [혼술] 주 음용 주종 (복수)
A5-2. [혼술] 1회 평균 음주량 1) 소주 (단수)
A6-1. [떼술] 주 음용 주종 (복수)
A6-2. [떼술] 1회 평균 음주량 1) 소주 (단수)

2. Preprocessing of Data

To preprocess the original data, the following datasets were generated:

1. **tendency.csv:**
   Contains data on alcohol preference tendencies.

2. **quantity.csv:**
   Provides data on average alcohol consumption per generation based on different situations (using soju as a reference).
3. **home.csv, outside.csv, alone.csv, together.csv:**
   These datasets contain information on the preferred types of alcohol consumed in different situations. To create treemaps and pie charts, additional steps were taken to separate the data by generation.
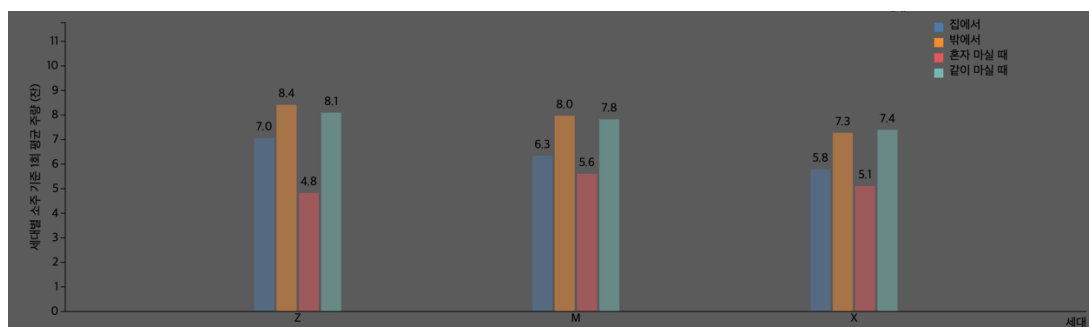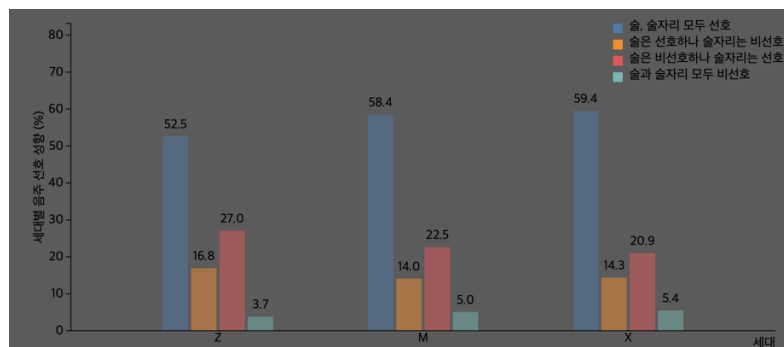
The data was processed to ensure that it could be effectively used for analysis and visualization purposes.

Ⅲ. Visual Method

The two pages will display different data:

1. Alcohol Preference Tendencies & Average Alcohol Consumption per Occasion

[Visual encoding]

- Tabular Data with two category attributes (generation and preference/situation) and one quantity attribute.
- Group Bar Chart: Used to effectively represent the data.
- Color mark: Based on preference/situation for easy comparison.
- Used easily distinguishable colors for comparison for categorical attribution.

[Interaction]
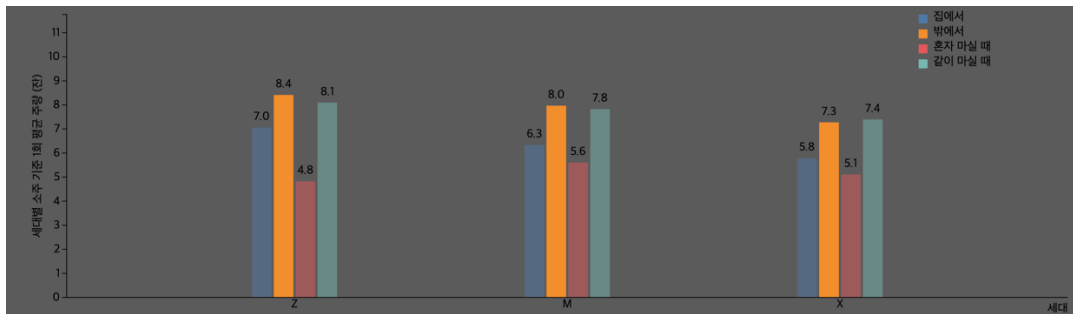
- Comparing generation-specific preferences/situations directly can be complex due to the grouping by generation.
- Highlighting: Added highlighting on mouse hover to facilitate comparison.

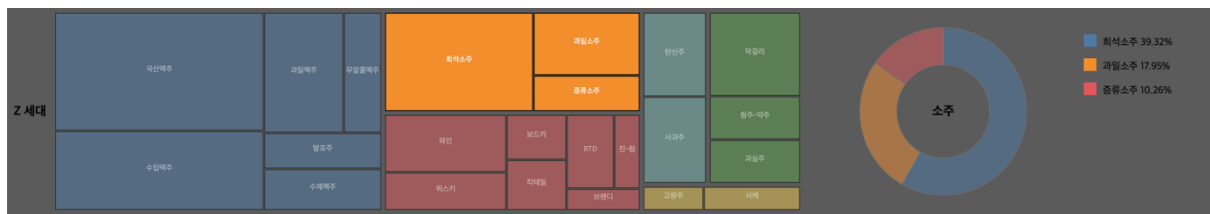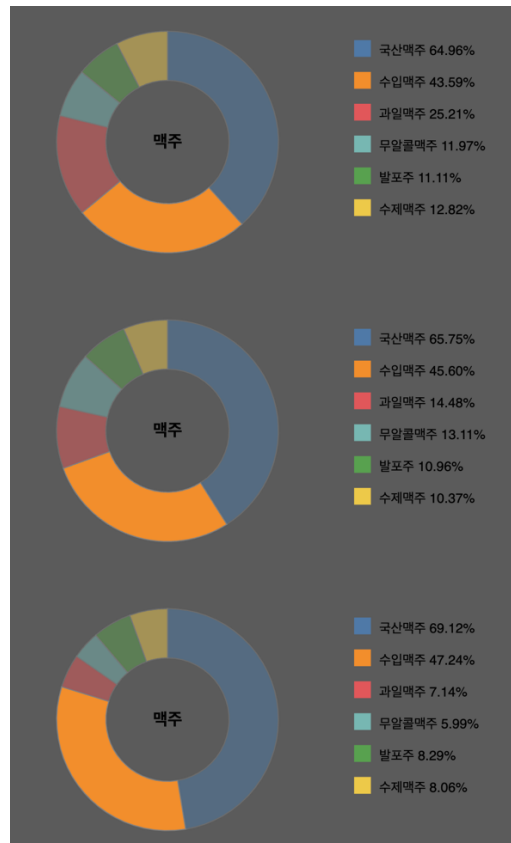# 2. Preferred Alcohol Types by Situation

[Visual encoding]

Treemap:
- Used for a hierarchical tree structure of network data.
- Tree Data: Represents the hierarchy of alcohol types, with leaf nodes indicating the proportionate quantity attribute.
- Initially considered Circular Packing but abandoned due to drawbacks. (Detail later)
- Quantity Attribute: Encoded as the area size mark for each entity.
- Color mark: Used consistent colors based on major categories for easy comparison.

Pie Chart:
- Used as an alternative view (multi view) to complement treemaps for easier comparison.
- Legend: Added to indicate absolute values and displayed the major category names in the center of the pie chart.
- Color mark: Used consistent colors based on subcategories for easy comparison.

[Interaction]

Mouse Hover:

- Added highlighting on treemaps and pie charts for easier comparison of preferred alcohol types by generation.

Mouse Click:

- Linkage: Selecting a major category in the treemap will display the linked pie chart showing subcategories belonging to that major category.
- This interaction is consistent across all generation charts.
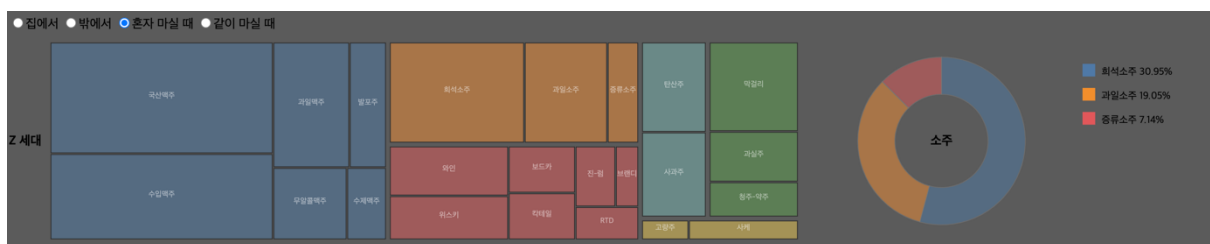
- Added radio buttons to enable filtering by situation, as alcohol preferences may vary depending on the situation.
- Displayed all generation charts simultaneously, while filtering was applied to the situation-specific charts.
- The focus of this work is on generational comparisons, which are relatively less important. Therefore, the charts of all generations were shown at once, and the charts by situation were filtered.

+) Circular Packing Consideration:
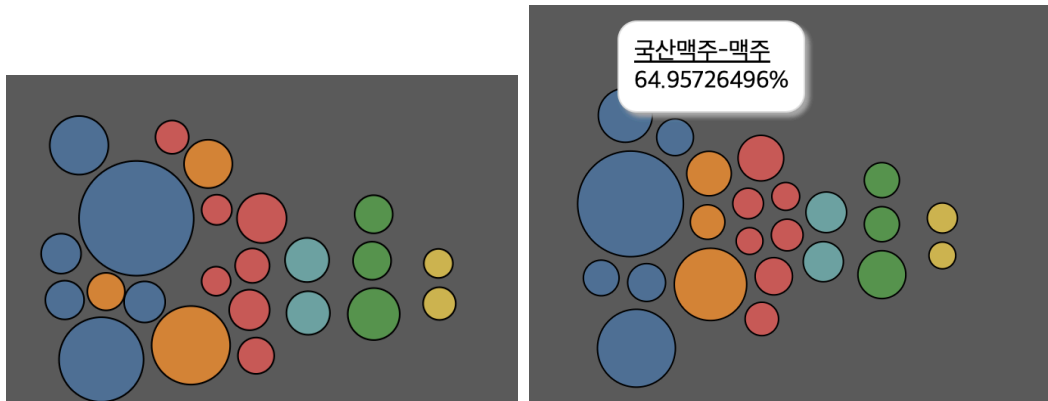
Initially considered circular packing and completed the implementation. Used the circle's radius as a size mark to encode the quantity attribute. Added drag interaction to compare circle sizes with other marks. Added mouse hover interaction to display tooltips for detailed values.

However, due to the inability to add labels individually and the overhead of remembering values for comparison, circular packing was rejected.

Ⅳ. Observation Result

1. Alcohol Preference Tendencies

Similar preference tendencies were observed across generations. Most respondents showed a preference for both alcohol and drinking occasions, while those who disliked both were the minority. This result was expected as the survey targeted individuals who had experienced alcohol consumption in the past three months.

The second-largest group consisted of individuals who did not prefer alcohol but enjoyed drinking occasions.

Although there were no significant differences among generations, as we move towards the X generation, the proportion of individuals who prefer both alcohol and drinking occasions increases, while the proportion of those who only prefer drinking occasions decreases. This suggests that older individuals tend to drink alcohol only if they enjoy it.

2. Average Alcohol Consumption per Occasion by Situation

The values by situation showed a similar trend across generations. As we move towards the Z generation, the average alcohol consumption per occasion increases. However, interestingly, as we move towards the X generation, the amount consumed when drinking alone increases. This indicates that younger individuals tend to drink more when socializing with others.

3. Preferred Alcohol Types by Situation

Beer was the most consumed type, followed by soju, showing consistent patterns across generations. However, as we move towards the Z generation, there is a preference for sweeter alcoholic beverages like fruit beer and fruit-flavored soju.

As we move towards the Z generation, we see a preference for lower-alcohol content and a wider variety of beverages such as sparkling drinks, apple-flavored drinks, and sake. On the other hand, as we move towards the X generation, there is a higher preference for makgeolli, a traditional Korean rice wine. This confirms the general belief that adults tend to enjoy makgeolli more.

The preference for whiskey and wine remains relatively consistent, but as we move towards the X generation, there is a higher proportion of individuals who prefer wine and whiskey. This suggests that as experience grows, individuals tend to choose drinks that align with their preferences.

When drinking alone or at home, the proportion of beer is high, but when drinking with others or outside, the proportion of alcohol other than beer increases. This can be attributed to the fact that beer is less accessible than other alcohols and is convenient to drink alone due to its low frequency. There is also a reason that beer and soju are cheaper than other types, so it is less burdensome to drink alone.

Ⅴ. Discussion

Due to the busy schedule, we produced it for a short time of 2 days. Therefore, it is regrettable that the details or the design could not be neatly conceived. If time is available, I would like to add more data and modify the color to use the same color between major categories.

It was fun to do the assignment on an interesting topic. I bought some expensive data for the assignment, but it was a choice without regret.