How to use and understand the “Split By” variable in the Tableau Public Visualization Tool

What is the “Split By” function?
Within the Tableau Public Visualization Tool, users may select the “Split By” option (see arrow and circle below) to breakdown survey questions and responses by demographic variables. Using this function allows viewers to see how different subgroups responded to a question and compare results.
Variable Calculations and Descriptions

Users can choose from many variables when using the Split By function (see arrow and circle below). Descriptions and categorization methods for each variable are provided below.

**All**
This option displays the overall proportion of survey respondents who selected each response for the specified survey question.

**Age**
Age was assessed using the VoiceKent survey question: *How old are you?*

Respondents provided their individual ages, and groups of respondents were then distributed into categories as follows:

- Young Adult: 18 to less than 26 years old
- Middle Aged Adult: 26 to less than 45 years old
- Mature Adult: 45 to less than 65 years old
- Senior: 65 or older

Therefore, these are the categories that appear when the Split By variable “Age Category” is selected.
**Basic Needs**
Respondents were asked to assess their ability to meet basic needs by choosing among provided answers to the following question: *Based on your current income, how well can you afford to meet your basic needs (food, including water; shelter; utilities; and clothing)? Choose only one:*

- Very well
- Fairly well
- Not very well
- Not at all

**Body Mass Index Category**
An individual's Body Mass Index (BMI) is calculated using the following formula:

\[
\text{BMI} = \frac{\text{weight} \times 703}{\text{height}^2}
\]

Therefore, in order to assess the BMI of VoiceKent respondents, the survey asked each participant to provide their height and weight using the following questions:

- What is your height without shoes?
- What is your weight without shoes?

These responses were entered into the formula noted above to determine each respondent’s BMI. Respondents were then distributed into categories as defined by the Centers for Disease Control and Prevention as follows:

- Underweight: Less than 18.5
- Normal Weight: 18.5 to less than 25
- Overweight: 25 to less than 30
- Obese: Greater than 30

After review of the VoiceKent 2017 data and the distribution of responses, BMI greater than 100 were excluded from categorization. Therefore, these are the categories that appear when the Split By variable “Body Mass Index Category” is selected.

**Education**
Survey respondents were asked to identify their highest level of education achieved by choosing among provided answers to the following question: *What is the highest level of education you have completed? Choose only one.*

- Less than or some high school (no diploma)
- High school graduate or GED
- Some college (no degree)
- Associate degree (AA or 2-year college)/Technical certification
- Bachelor’s degree
- Graduate degree or higher
Employment Status
Survey respondents were asked to identify their employment status by choosing among provided answers to the following question: *What is your current employment status? Choose only one.*

- Employed, full-time
- Employed, part-time
- Not currently working
- Unable to work
- Retired
- Homemaker or stay-at-home parent
- Other (please specify):

Gender
Survey respondents were asked to identify their gender by choosing among provided answers to the following question: *What gender do you identify with? Choose only one.*

- Male
- Female
- None of the above (please specify):
- Don’t know/not sure

Health Insurance Status
Survey respondents were asked to the status of their healthcare coverage by choosing among provided answers to the following question: *In the past year, did you have health insurance? Choose only one.*

- Yes, for all of the year
- Yes, for part of the year
- No, not in the past year

Housing Status
Survey respondents were asked to identify their housing status by choosing among provided answers to the following question: *What is your housing status right now? Choose only one.*

- Own, no mortgage
- Own, paying mortgage
- Rent, including subsidized housing or college housing (contract or lease)
- Living with someone (friend, relative, etc.) and not paying rent
- Homeless (skip to 27)
- Other (please specify):
Near or Below 100% and 200% Poverty
Survey respondents were asked to provide their annual household income range by choosing among provided answers to the following question: Which of the following categories best fits your total household income last year, before taxes? Choose only one:

- Less than $5,000
- $5,000 to less than $10,000
- $10,000 to less than $15,000
- $15,000 to less than $20,000
- $20,000 to less than $25,000
- $25,000 to less than $30,000
- $30,000 to less than $35,000
- $35,000 to less than $40,000
- $40,000 to less than $45,000
- $45,000 to less than $50,000
- $50,000 to less than $60,000
- $60,000 to less than $70,000
- $70,000 to less than $80,000
- $80,000 to less than $90,000
- $90,000 to less than $100,000
- $100,000 to less than $120,000
- $120,000 to less than $140,000
- $140,000 or more

Survey respondents were asked to provide the number of people living in their household by filling in a number for each of the following questions:

- How many adults ages 18 years or older live in your household, including yourself? (Enter number of adults)
- How many children under 18 years old live in your household? (Enter number of children)

The 100% poverty level is the federal guideline set by the United States Department of Health and Human Services and is often used to determine eligibility for federal assistance programs. The federal poverty level is updated each year based on census data.

The VoiceKent survey collects annual household income ranges and the number of people living in the household in order to approximate if a respondent falls above or below 100% of the poverty level. The 200% poverty level is approximated, as well, since it is more commonly reflective of a living wage than the 100% poverty level.

The thresholds for the approximation can be seen in the table below.

<table>
<thead>
<tr>
<th>Family Size</th>
<th>100% Cutoff</th>
<th>200% Cutoff</th>
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<td>8</td>
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<td>80,000</td>
</tr>
</tbody>
</table>
Neighborhood
Respondents were categorized by neighborhood in one of two ways:

- If the respondent took the survey online, they were asked to click on the approximate location of their home on a map.
- If the respondent took the survey on paper, they were asked to report the intersection nearest to their home.

From that information, respondents were assigned to larger geographic areas, such as neighborhoods.

Race
Survey respondents were asked to identify their race by choosing among provided answers to the following question: *Which of the following race/ethnicity categories best describes you? Check all that apply.*

- White
- Black or African American
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Hispanic or Latino/a
- Middle Eastern or North African descent
- Multiracial
- Other (please specify):

Two questions from the U.S. Census Bureau’s 2010 Census Questionnaire were combined to create this question and enable surveyors to understand the racial/ethnic identity of the respondent.

A new variable with mutually exclusive categories was then created for race based on the following conditions: If a respondent checked more than one race and one of the races checked was ‘Hispanic or Latino/a,’ then the respondent was assigned to the ‘Hispanic or Latino/a’ category to differentiate and categorize respondents who identified as Hispanic or Latino/a. Once respondents were assigned to the Hispanic or Latino/a category, remaining respondents who checked more than one race (and not ‘Hispanic or Latino/a’) were assigned to the ‘Multiracial’ category; this category then excludes Hispanic or Latino/a respondents. Otherwise, the respondent was assigned the same race category as they checked in the original question; these categories also then exclude Hispanic or Latino/a respondents.

Race by Gender
The Split By variables *Gender* and *Race* were combined to create an extra split.

Race by Level of Education
The Split By variables *Education* and *Race* were combined to create an extra split.
**Relationship Status**
Survey respondents were asked to identify their relationship status by choosing among provided answers to the following question: *What is your current relationship status? Check all that apply.*

- Single
- Committed relationship (not married)
- Married
- Widowed
- Divorced
- Separated
- Other

A new variable with mutually exclusive categories was then created for relationship status based on the following conditions: If a respondent indicated more than one relationship status, the respondent was assigned to the ‘Multiple Statuses’ category; otherwise, the respondent was assigned the same relationship status category as they checked in the original question.

**Religion/Spirituality/Beliefs**
Survey respondents were asked to identify their religion/spirituality/beliefs by choosing among provided answers to the following question: *What is your current religion, faith, or belief? Check all that apply.*

- Agnosticism
- Atheism
- Buddhism
- Catholicism
- Protestant Christianity (for example, Baptist, Reformed, Non-Denominational)
- Hinduism
- Islam
- Judaism
- Spiritual, Non-religious
- None
- Other

A new variable with mutually exclusive categories was then created for religion/spirituality/beliefs based on the following conditions: If a respondent indicated more than one religion/spirituality/belief, the respondent was assigned to the ‘Multi-Religious’ category; otherwise, the respondent was assigned the same religion/spirituality/belief category as they checked in the original question.
**Sexual Orientation**
Survey respondents were asked to identify their sexual orientation by choosing among provided answers to the following question: *How would you describe your sexual orientation? Choose only one.*

- Heterosexual/straight
- Gay/lesbian
- Bisexual
- None of the above (please specify):
- Don’t know/not sure

**Student Status**
Survey respondents were asked to identify their student status by choosing among provided answers to the following question: *Are you currently a student? Choose only one.*

- Yes
- No