

Visualizing Survey Data with Tableau

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Peoples of Treaty 7

Blackfoot Confederacy

Siksika



Piikani



Kainai



Tsuut'ina



Stoney Nakoda

Bearspaw



Chiniki



Goodstoney



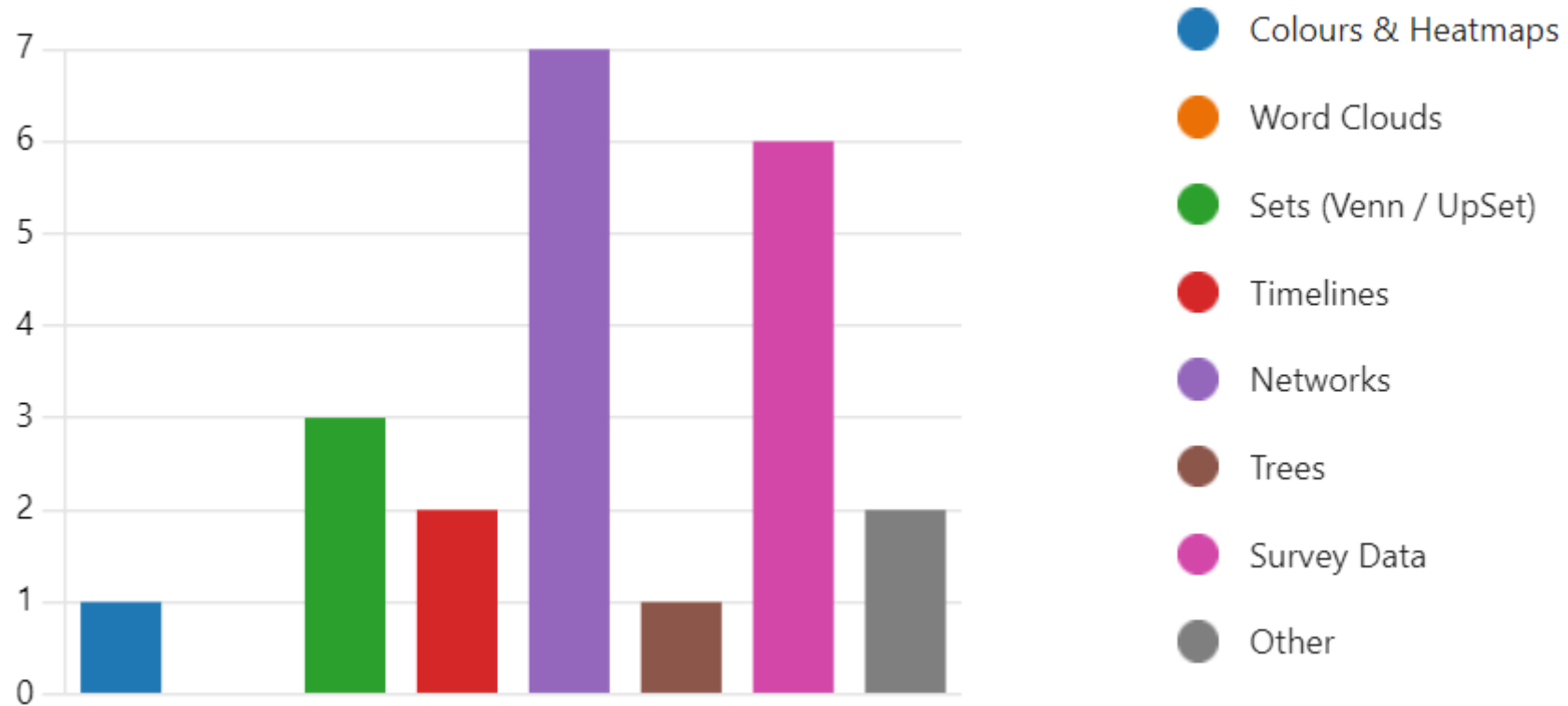
Métis Nation of Alberta Districts 5 & 6



The University of Calgary, located in the heart of Southern Alberta, both acknowledges and pays tribute to the traditional territories of the peoples of Treaty 7, which includes the Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including the Chiniki, Bearspaw, and Goodstoney First Nations). The City of Calgary is also home to the Métis Nation of Alberta (Districts 5 and 6).



New Workshop



CUSTOMER SURVEY

Thank you for shopping with us! Please take a few minutes to rate us so we can serve you better.

Very Bad Bad Neutral Good Excellent

Your question goes here. Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Your question goes here. Lorem ipsum dolor sit amet, consectetur adipiscing elit.

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How else can we improve?

Your Name: Date:

1 Survey

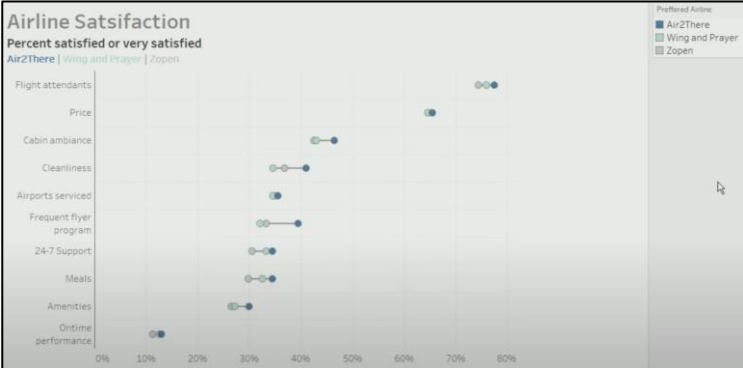


2 Data

1	Very Good				Very Good					
2	Good									
3	Very Good				Very Good				Very Good	
4	Poor			OK				OK		Very Good
5	Great	Great						OK	Great	
6	Good	Good	Great	Good		Great				
7	Great		Great			Great			Great	
8	Very Good		Good			Good				Very Good
9	Good		Very Good					Good		Very Good
10	Great			Great				Very Good		
11	Great			Great		Great				Great
12	Great		Good					Very Good		
13			Great			Great				Great
14	Great	Very Good								
15	Great			Great			OK			
16	Great			Great			Great		Great	
17		Good					Very Good			Great
18	OK			Great			OK			Good
19	Great			Great		Great				Great
20	Very Good					Good			Very Good	
21	Very Good		Very Good							
22										
23	Very Good		Great				Good			Very Good
24				Very Good				Very Good	OK	Very Good
25	Great		Great				Good		Good	
26	Very Good		Great					Very Good		Very Good



3 Visualization (Chart)



80-90% of a visualization project is working with the data

Agenda

Why Tableau?

Reorganizing
the data

Creating
visualizations

Likert questions



Not Covering:

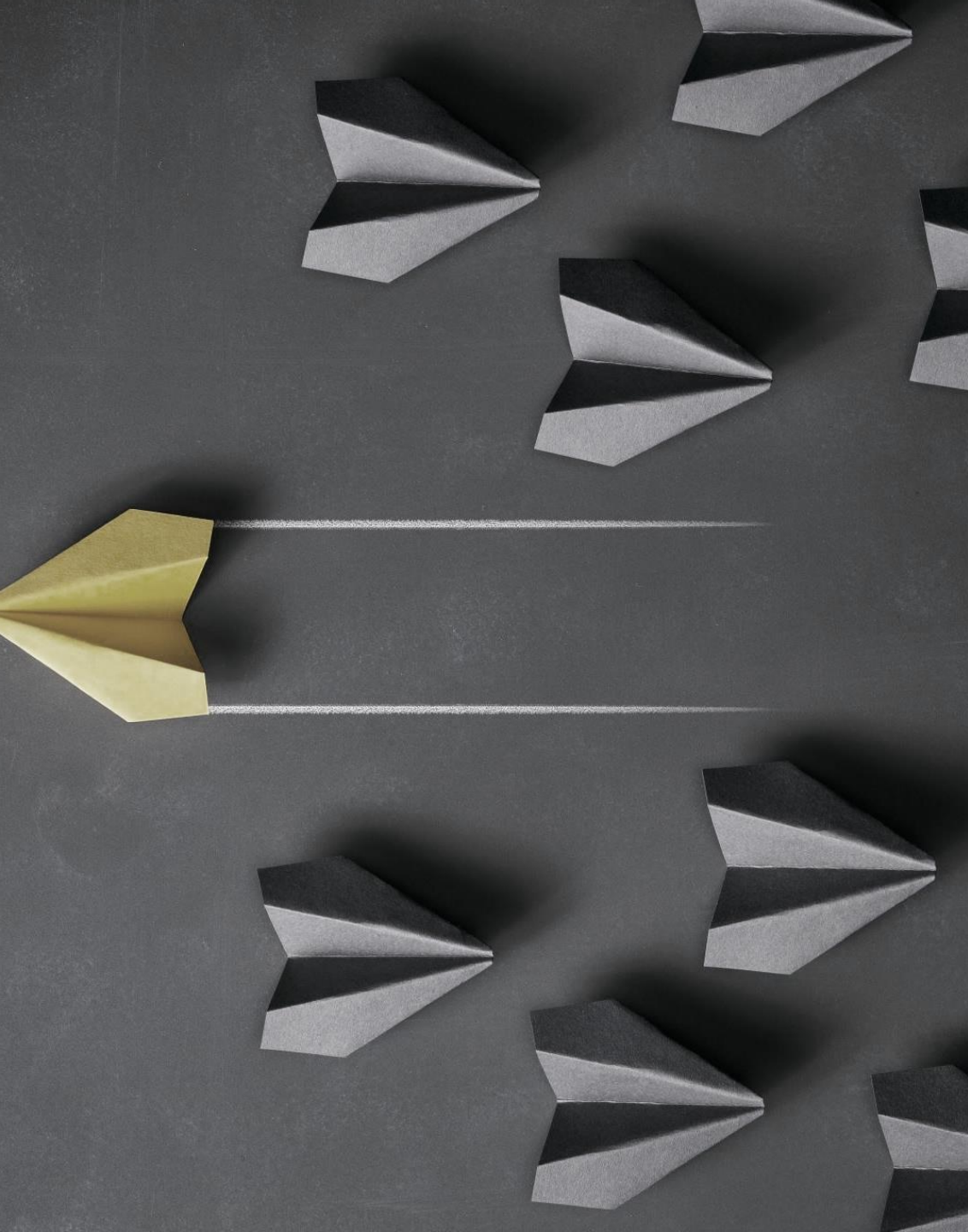
- Survey design
- Statistical analysis of results
- Text analysis



Why Tableau?

- Free for students and non-commercial research
 - <https://www.tableau.com/community/academic>
- Easy to use, drag & drop
- Powerful, many options
- Tableau Prep: Great tool to reorganize survey data.

* How many have used Tableau before?



Why **NOT** Tableau?

- Expensive
- Does not support advanced statistics
- One more thing to learn

Alternatives:

Visualization: PowerBI, Qlik, Google Data Studio, Flourish, DataWrapper

Other: Excel, SPSS, STATA, R

Tableau Versions

Creating Visualizations

- **Tableau desktop**
- Tableau cloud
- Tableau public *

Viewing Visualizations

- Tableau reader *

AI Products

- Tableau pulse
- Tableau AI

Data Wrangling

- **Tableau prep**

Server

- Tableau server



* Free

Data



- 80-90% of a visualization project is working with the data
- Tableau Desktop is designed to work with data tables/spreadsheets
- Each column needs to be its own field
- Each row needs to be its own record

Crosstab Data (you don't want it shaped like this):

Net Income (millions of dollars)			
Company	2010	2009	2008
Citi Group	10602	-1606	-27684
General Electric	11644	11025	17410
Siemens AG	5554	3650	8504
Koninklijke Philips Electronic	1948	608	-262

While crosstabs make sense to people, it makes our software's head hurt because each row contains three pieces of data -- in this case the company's net income in 2010, 2009 and 2008. Tableau feels much more comfortable when data is in a normalized format, where each row contains only one net income figure.

Normalized Data (you want your data shaped this way):

Company	Year	Net Income (\$millions)
Citi Group	2010	10602
Citi Group	2009	-1606
Citi Group	2008	-27684
General Electric	2010	11644
General Electric	2009	11025
General Electric	2008	17410
Siemens AG	2010	5554
Siemens AG	2009	3650
Siemens AG	2008	8504
Koninklijke Philips Electronic	2010	1948
Koninklijke Philips Electronic	2009	608
Koninklijke Philips Electronic	2008	-262

Example

Please rank the following question types in order of usefulness, where 1 represents "most useful" and 5 represents "least useful."

Single-answer multiple choice questions	1
Multiple-answer multiple choice questions	2
Single-line text entry questions	3
Essay box text entry questions	4
Rank order questions	5

Q9 Rank order 1	Q9 Rank order 2	Q9 Rank order 3	Q9 Rank order 4	Q9 Rank order 5
5	4	1	2	3
5	2	1	4	3
2	1	4	5	3
5	2	1	3	4

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I can build the kind of questions necessary to collect the feedback I need using Qualtrics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Qualtrics provides a flexible survey tool that can be configured to meet my needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can use a variety of question types to accomplish my research goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Matrix table 1	Q10 Matrix table 2	Q10 Matrix table 3
Strongly disagree	Somewhat disagree	Neither agree nor disagree
Strongly agree	Strongly agree	Somewhat agree
Neither agree nor disagree	Neither agree nor disagree	Neither agree nor disagree
Somewhat agree	Neither agree nor disagree	Somewhat agree
Somewhat agree	Strongly agree	Somewhat agree

Tableau Prep

Reorganizes data through a series of operations

- Union, Aggregation, Pivot/Unpivot, Filter, Change Values
- Flow chart

See your data

- Highlights missing/exceptional values
- Shows extent of all values

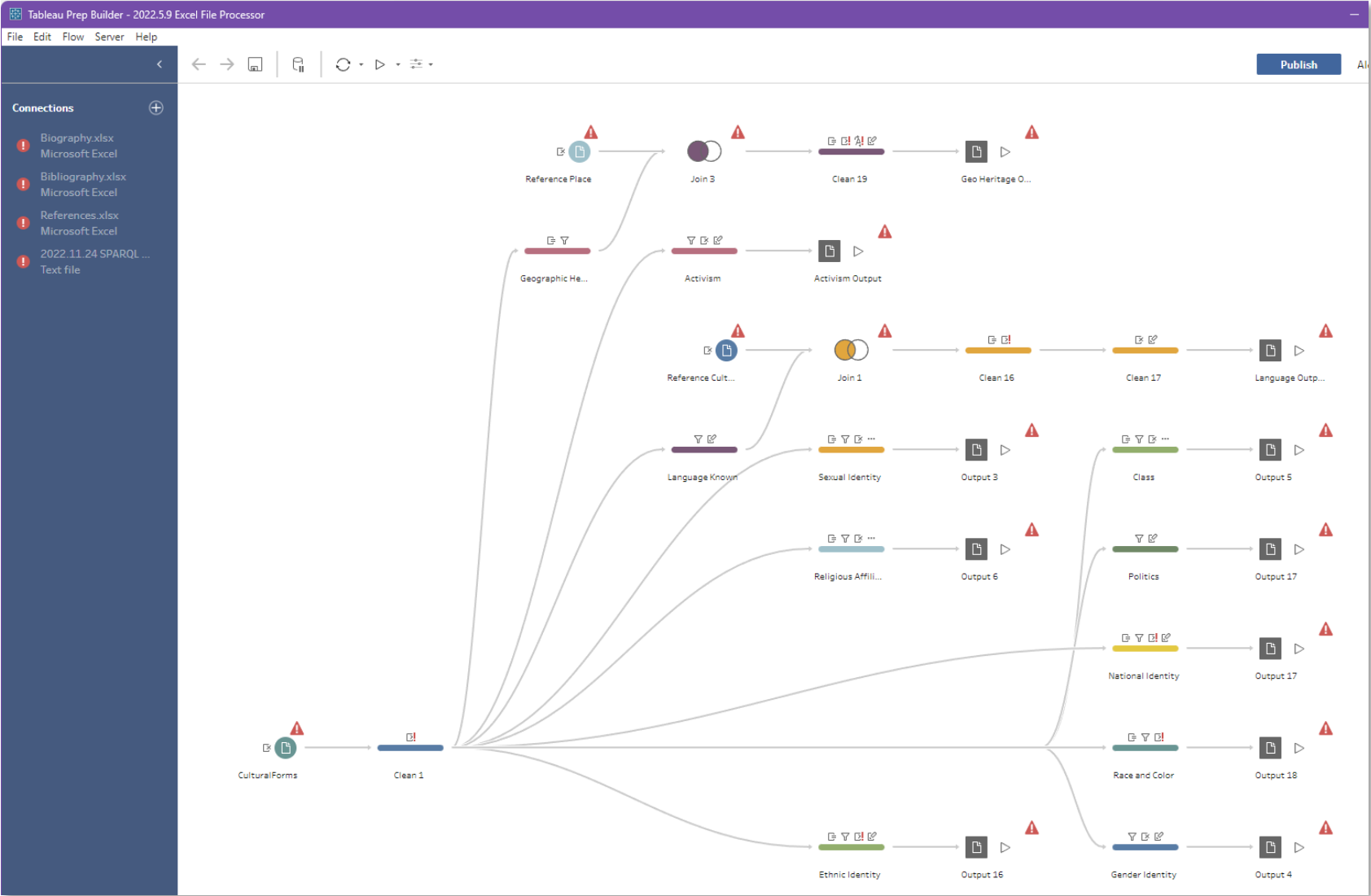
Records all operations

- Useful for showing provenance
- Can be repeated with on new/updated data

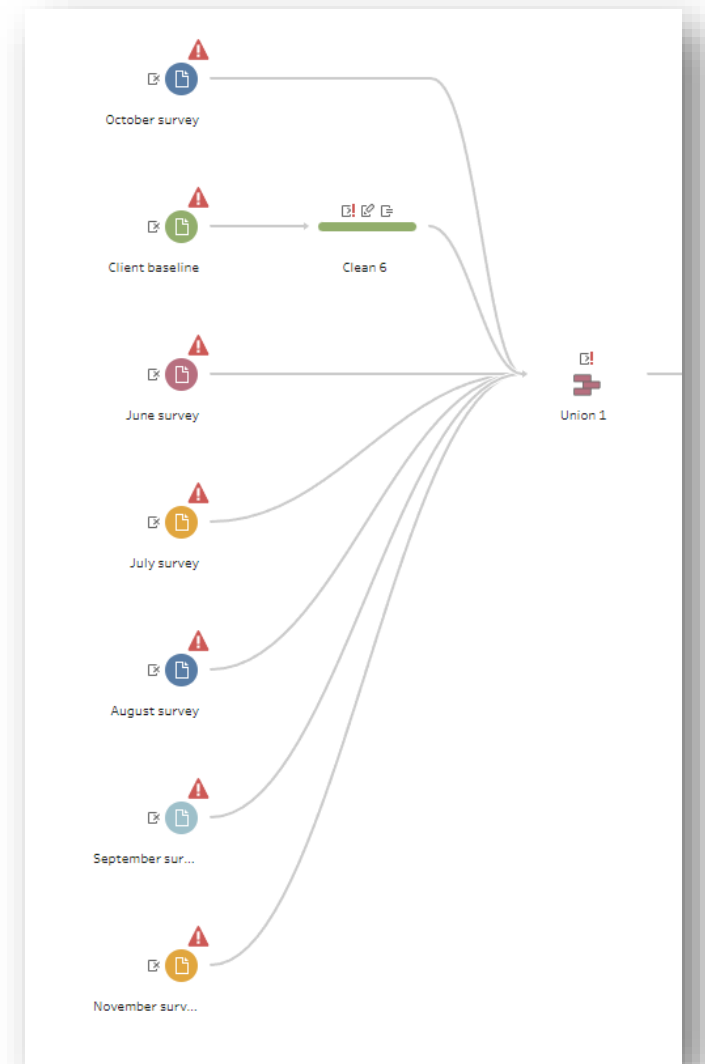
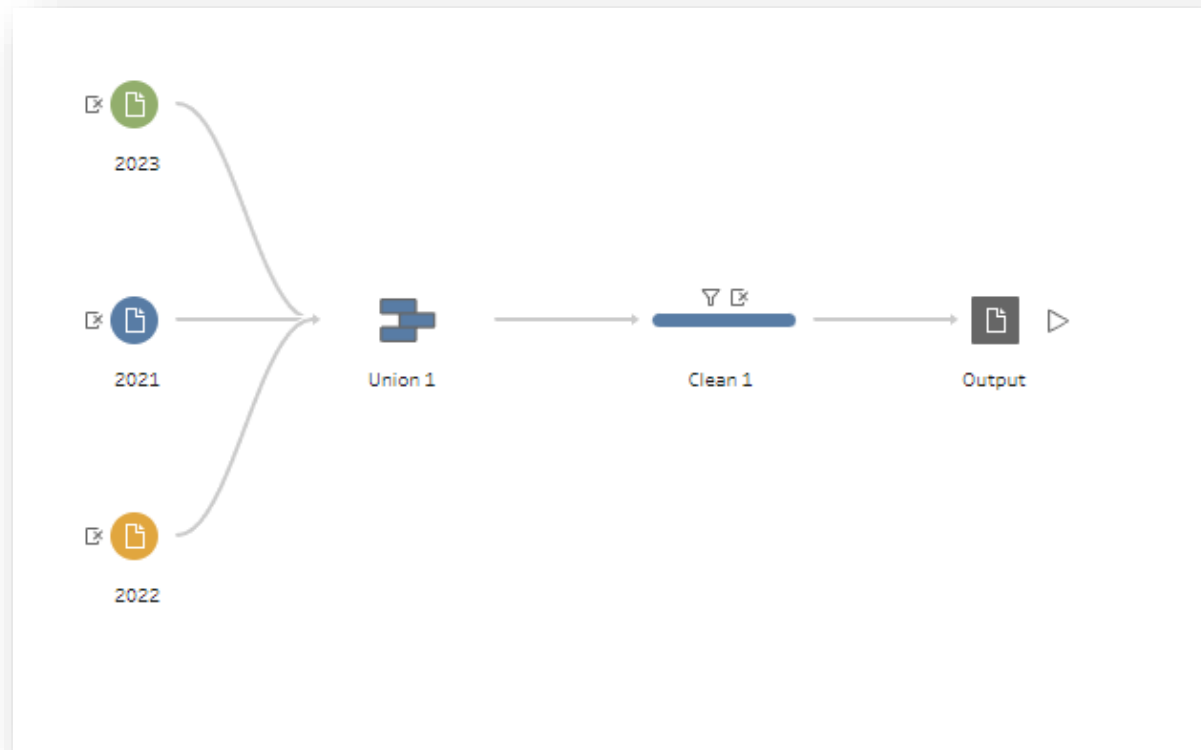
Join / Split data tables

- Merging datasets

Tableau Prep



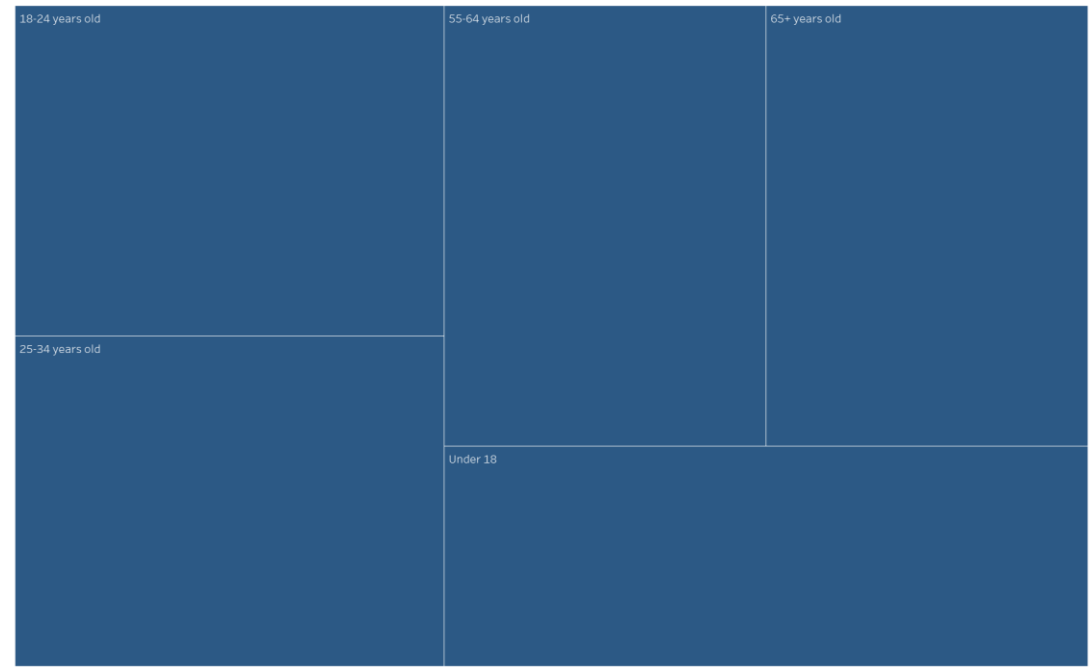
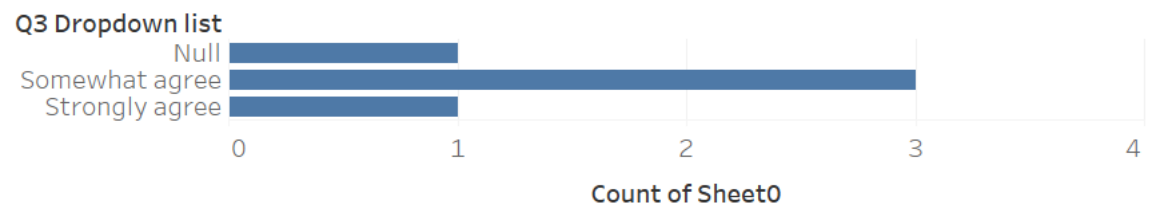
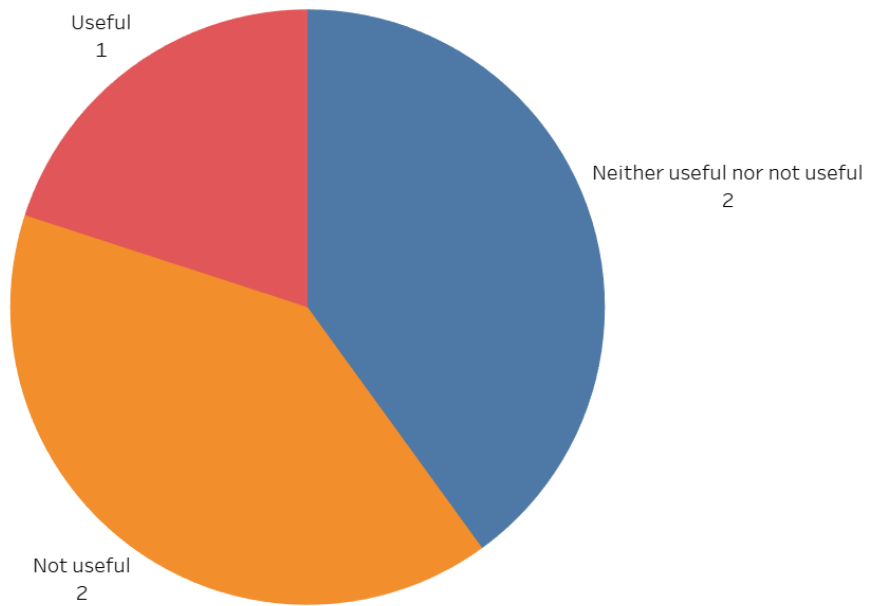
Union



Single Choice Example

Recorded Date	Q1 Single choice	Q3 Dropdown list	Q4 Certified choice	Q5 Random choice	Q6 Text entry	Q7 Multi line text	Q8 Form field_1 field_2 Q8 Form field_3 Q8 Form field_4	Q9 Rank order_1	Q9 Rank order_2	Q9 Rank order_3	Q9 Rank order_4	Q9 Rank order_5	Q10 Matrix table_1	Q10 Matrix table_2	Q10 Matrix table_3	Q11 Slider_1	Q11 Slider_2	Q11 Slider_3	Q12 Side by Side#1	Q12 Side by Side#2	Q12 Side by Side#3	Q12 Side by Side#4	Q12 Side by Side#5	Q12 Side by Side#6	Q12 Side by Side#7	Q12 Side by Side#8	Q12 Side by Side#1	Q12 Side by Side#2	Q12 Side by Side#3	Q12 Side by Side#4	Q12 Side by Side#5	Q12 Side by Side#6	Q12 Side by Side#7	Q12 Side by Side#8	End of survey				
2024-02-09 18:44	Not useful	Somewhat agree	18-24 years old	Single-answer multiple choice questions	2B or ~2B	Boy howdy!	Imma Fakir imma.fakir@ucalgary.ca 4032208895	5	4	1	2	3	Strongly disagree	Some what disagree	Strongly disagree				Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Need more information Yes
2024-02-09 18:58	Not useful	Somewhat agree	65+ years old	Multiple-answer multiple choice questions	Already completed poll	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor	Chris P. Chicken chris.chicken@ucalgary.ca 403-419-0210	5	2	1	4	3	Strongly agree	Strongly agree	Some what agree				Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Very difficult	Yes
2024-02-09 19:05	Neither useful nor not useful	Somewhat agree	25-34 years old	Dropdown list multiple choice questions	ChatGPT	Another type of text entry question is a Multi line question.	Bill Loni bill.loni@ucalgary.ca 309 5879116						Neither agree nor disagree	Neither agree nor disagree	Neither agree nor disagree				Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Very easy	Very difficult	Not sure Yes		
2024-02-11 2:00	Useful	Somewhat agree	Under 18	Dropdown list multiple choice questions	Luke, I am your father	Lorem Ipsum	Homer Simpson homer.simpson@ucalgary.ca 4037119 111	2	1	4	5	3	Some what agree	Neither agree	Some what disagree				Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Not sure
2024-02-11 2:03	Neither useful nor not useful	Strongly agree	55-64 years old	Dropdown list multiple choice quick poll	Feedback		Benny Bear benny.the.bear@ucalgary.ca 5872203 579	5	2	1	3	4	Some what agree	Strongly agree	Some what agree				Very easy	Some difficult	Neither difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	Some difficult	No

[https://brosz.ca/slides/survey/ Demo_Survey.csv](https://brosz.ca/slides/survey/Demo_Survey.csv)



Unpivot Example

- Ranking Order

Q9 Rank order | Please rank the following question types in order of usefulness. 

In this last block, we'll explore other types of standard questions that are available to you.

The first is **Rank order**, which is a specialized question that asks your respondents to change the ranking of options to show which they prefer the most or dislike the most. There are a few different variations, with **Drag and drop** being the most common, but you can also choose **Radio buttons**, **Text box** or **Select box** if you want to optimize your survey for mobile survey takers.

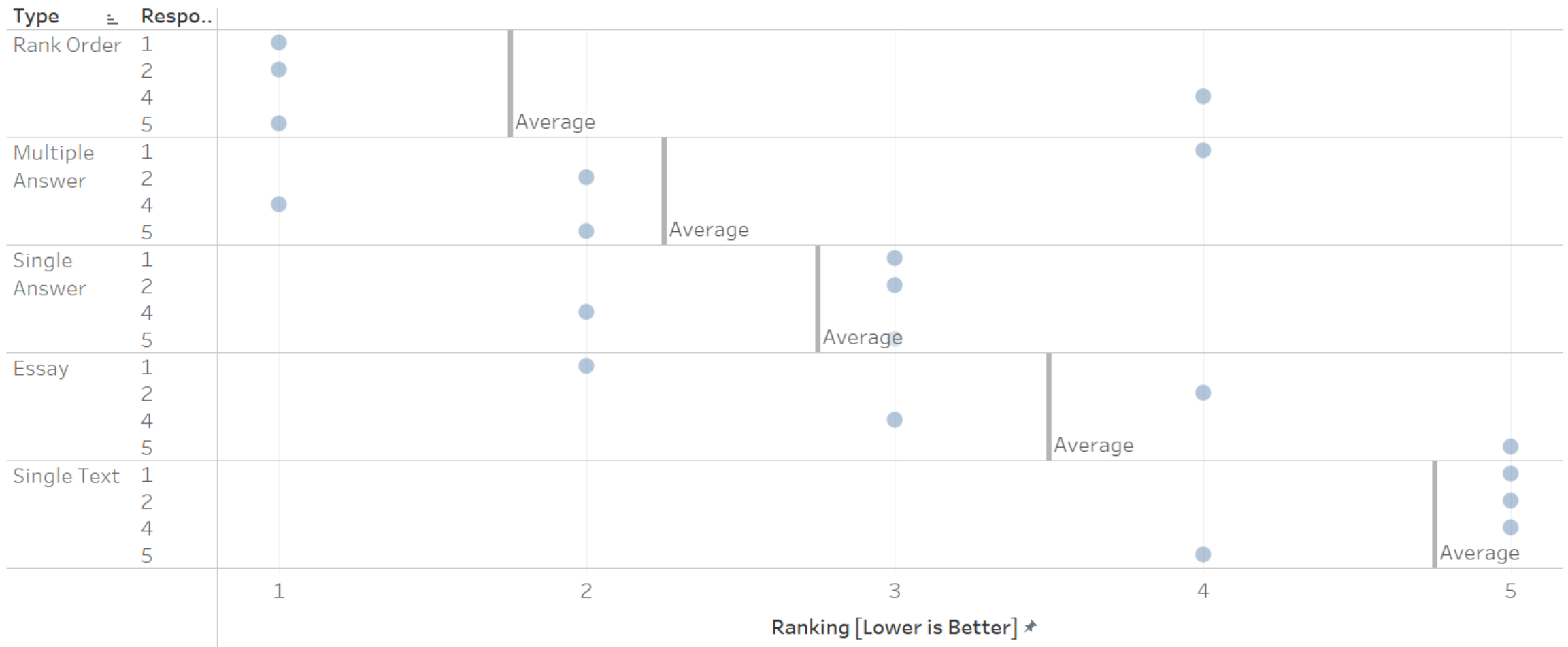
Please rank the following question types in order of usefulness, where 1 represents "most useful" and 5 represents "least useful."

- Single-answer multiple choice questions 1
- Multiple-answer multiple choice questions 2
- Single-line text entry questions 3
- Essay box text entry questions 4
- Rank order questions 5

Q9 Rank order_1	Q9 Rank order_2	Q9 Rank order_3	Q9 Rank order_4	Q9 Rank order_5
5	4	1	2	3
5	2	1	4	3
2	1	4	5	3
5	2	1	3	4



[https://brosz.ca/slides/survey/2 Transformed Ranking Output.csv](https://brosz.ca/slides/survey/2%20Transformed%20Ranking%20Output.csv)



Multiple Choice

Why did you choose to take the question tour? Please select all that apply.

To learn about different question types and how to use them	To practice building and editing a survey without starting from scratch
To see best practices in survey construction and design	To see if Qualtrics provides the features I need to build the survey I have planned
To explore the different features and functionality of the survey editor tool	None of the above (this answer is "exclusive" which means you can't choose it with any other option - it can be set using the response menu that becomes available when you click into the answer to make edits)

Q2 Multiple choice

To see best practices in survey construction and design, To practice building and editing a survey without starting from scratch

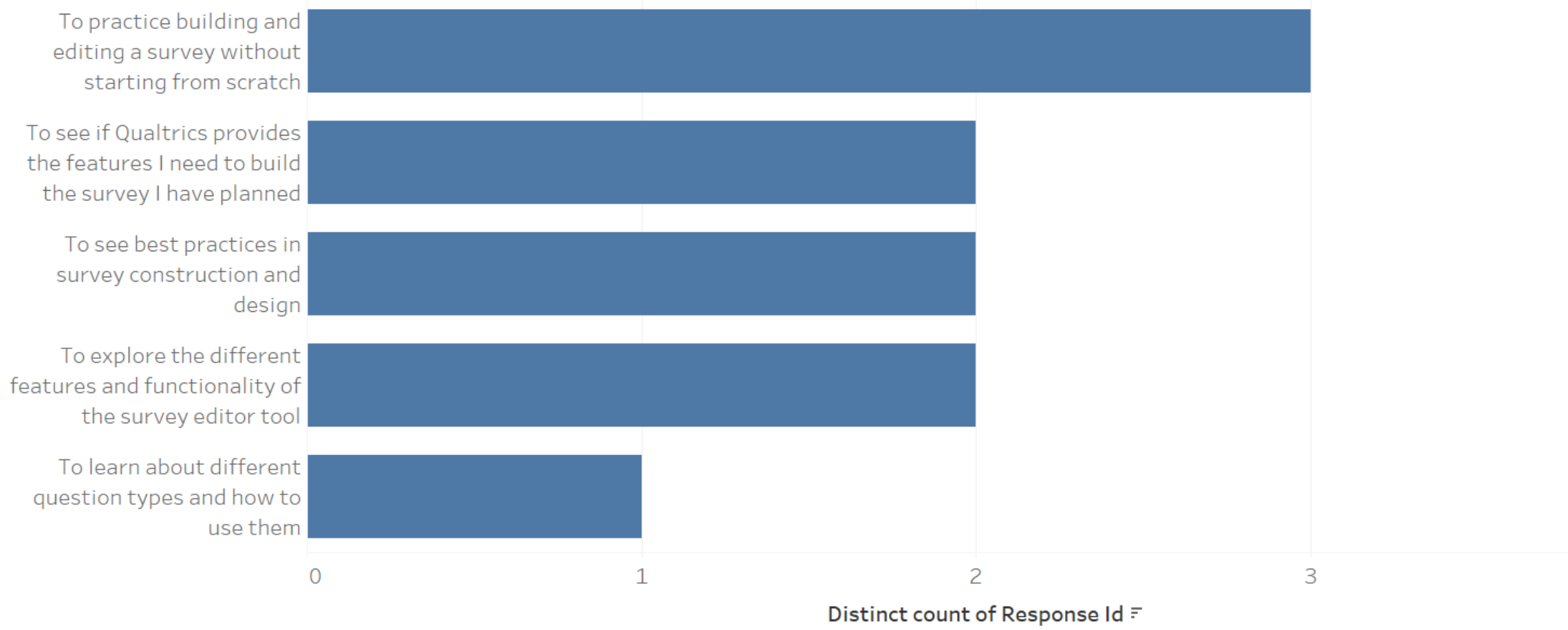
To practice building and editing a survey without starting from scratch

To explore the different features and functionality of the survey editor tool, To see if Qualtrics provides the features I need to build the survey I have planned

To learn about different question types and how to use them, To see best practices in survey construction and design, To explore the different features and functionality of the survey editor tool, To practice building and editing a survey without starting from scratch, To see if Qualtrics provides the features I need to build the survey I have planned



[https://brosz.ca/slides/survey/3 Transformed Multiple Choice Output.csv](https://brosz.ca/slides/survey/3%20Transformed%20Multiple%20Choice%20Output.csv)



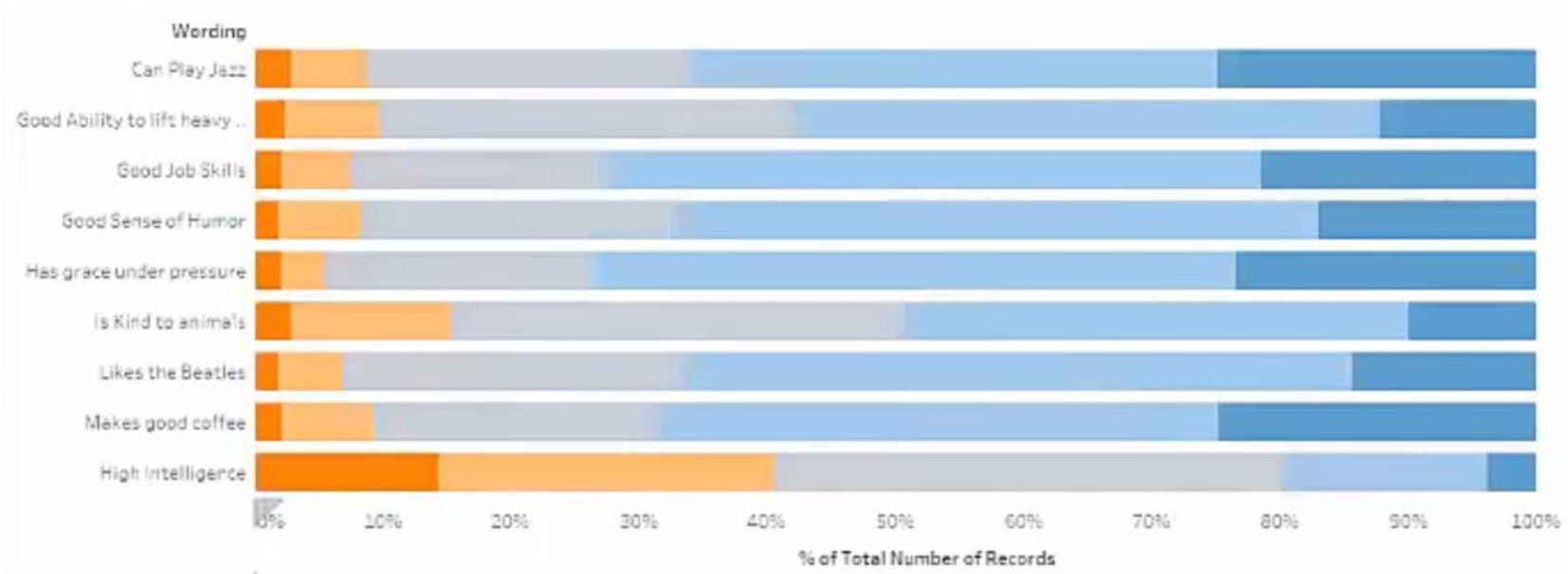
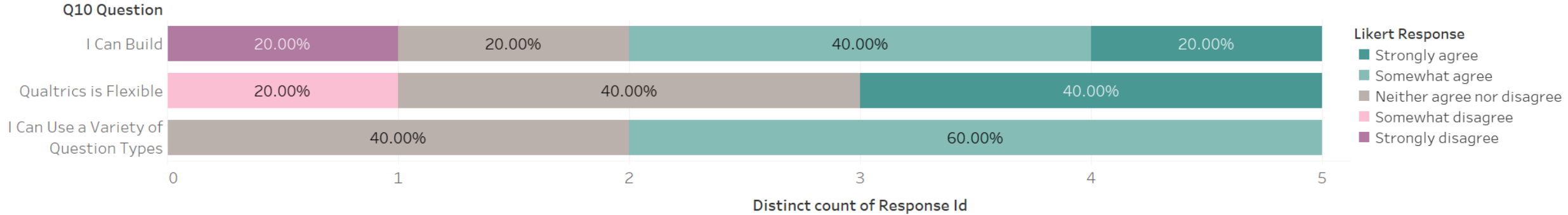
Likert Scale Questions

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I can build the kind of questions necessary to collect the feedback I need using Qualtrics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Qualtrics provides a flexible survey tool that can be configured to meet my needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can use a variety of question types to accomplish my research goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Matrix table_1	Q10 Matrix table_2	Q10 Matrix table_3
Strongly disagree	Somewhat disagree	Neither agree nor disagree
Strongly agree	Strongly agree	Somewhat agree
Neither agree nor disagree	Neither agree nor disagree	Neither agree nor disagree
Somewhat agree	Neither agree nor disagree	Somewhat agree
Somewhat agree	Strongly agree	Somewhat agree

[https://brosz.ca/slides/survey/4 Transformed Likert Output.csv](https://brosz.ca/slides/survey/4%20Transformed%20Likert%20Output.csv)

Stacked Bar Chart



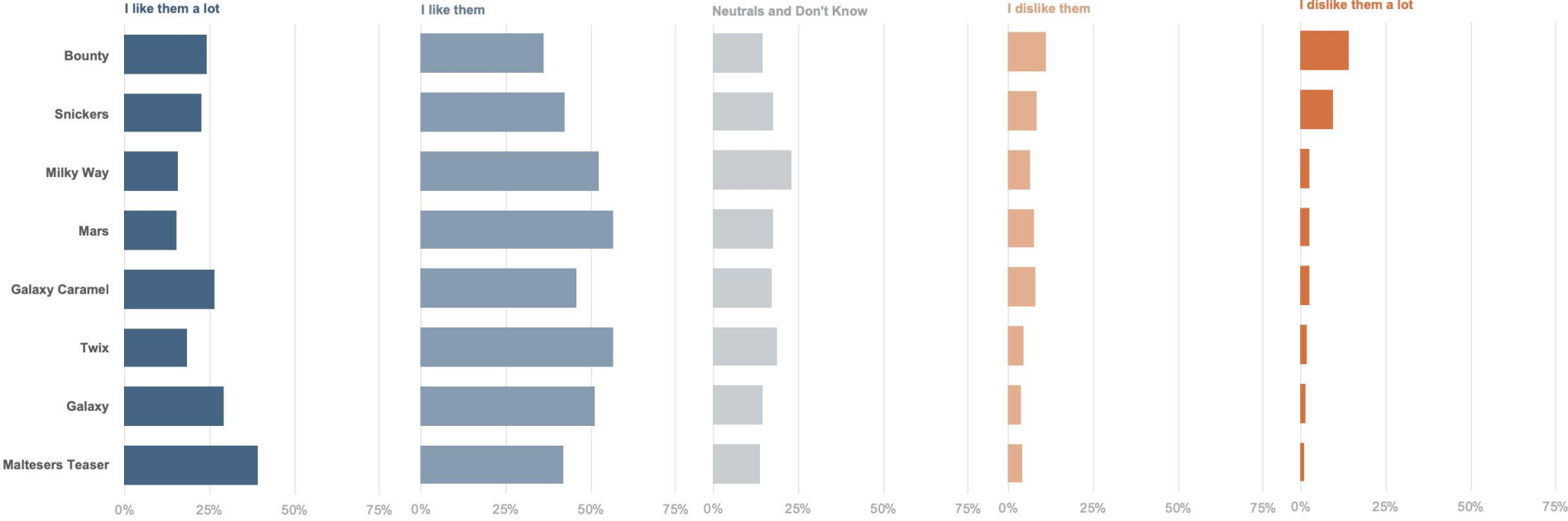
Downsides

- No common baselines for comparison
- Can be hard to determine whether there is more support for or against

Small Multiple Bar Charts

Everyone likes chocolates, but Bounty and Snickers get the most extreme opinions

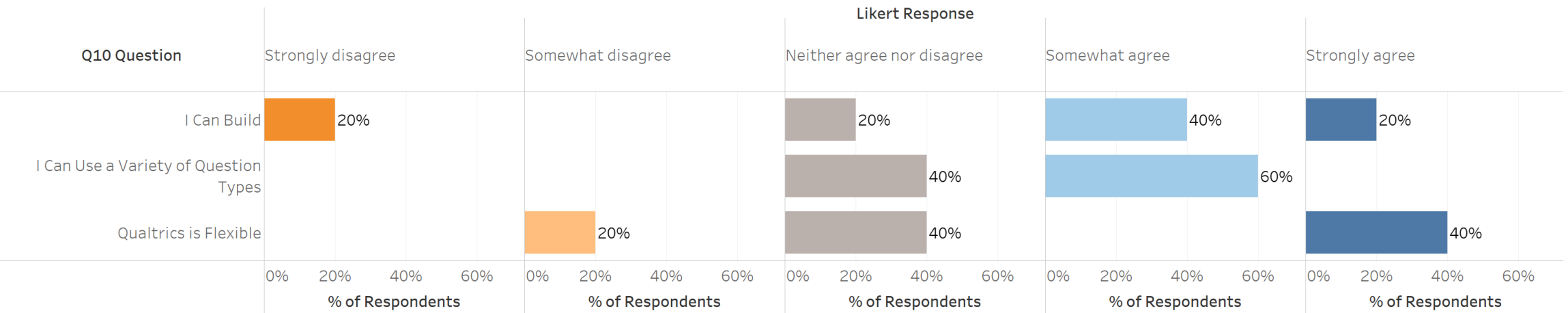
Replies to the question, *Which one, if any, of the following best describes how much you like or dislike each of the following chocolates?, from a YouGov survey asked of 1855 adults in Great Britain who have eaten Celebrations chocolates before.*



From <https://daydreamingnumbers.com/blog/4-ways-to-visualize-likert-scales/>

Downsides:

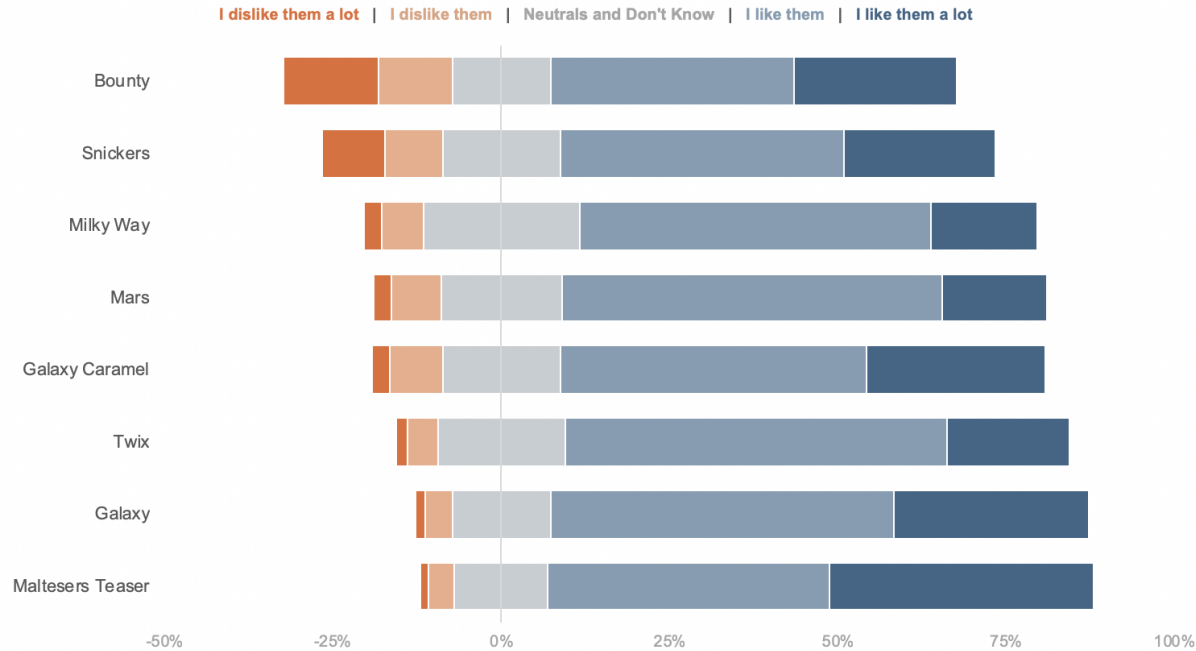
- Loss of part-to-whole relationship
- Hard to group together “agrees” in comparison to both “disagree” columns
- Takes up more space



Diverging Bar Chart

Everyone likes chocolates, but Bounty and Snickers get the most extreme opinions

Replies to the question, *Which one, if any, of the following best describes how much you like or dislike each of the following chocolates?*, from a YouGov survey asked of 1855 adults in Great Britain who have eaten Celebrations chocolates before.



From <https://daydreamingnumbers.com/blog/4-ways-to-visualize-likert-scales/>

Downsides:

- Can be hard to read if neutral values vary greatly from topic to topic
- Does it make sense to split neutral values between likes and dislikes?
- Harder to create in Tableau

Starting Point



Columns		
Rows		
Q10 Question	Likert Response	
I Can Build	Neither agree nor disagree	Abc
	Somewhat agree	Abc
	Strongly agree	Abc
	Strongly disagree	Abc
I Can Use a Variety of Question Types	Neither agree nor disagree	Abc
	Somewhat agree	Abc
Qualtrics is Flexible	Neither agree nor disagree	Abc
	Somewhat disagree	Abc
	Strongly agree	Abc

Based on
<https://willmasse.com/tableau-diverging-stacked-bar-chart>

New Field: Likert Response (Numeric)

```
CASE [Likert Response]
WHEN "Strongly agree" THEN 5
WHEN "Somewhat agree" THEN 4
WHEN "Neither agree nor disagree" THEN 3
WHEN "Somewhat disagree" THEN 2
WHEN "Strongly disagree" THEN 1
END
```

Sort [Likert Response] x

Sort By
Field

Sort Order
 Ascending
 Descending

Field Name
Likert Response (Numeric)

Aggregation
Average

Clear

Q10 Question	Likert Response	
I Can Build	Strongly disagree	Abc
	Neither agree nor disagree	Abc
	Somewhat agree	Abc
	Strongly agree	Abc
I Can Use a Variety of Question Types	Neither agree nor disagree	Abc
	Somewhat agree	Abc
Qualtrics is Flexible	Somewhat disagree	Abc
	Neither agree nor disagree	Abc
	Strongly agree	Abc

New Field: Number of Records

```
COUNT ([Likert Response (Numeric)])
```

The screenshot shows a data visualization tool interface. On the left, there are panels for 'Filters' (Measure Names), 'Marks' (Automatic, Colour, Size, Text, Detail, Tooltip, Measure Values), and 'Measure Values' (CNT(4 Transformed .., AGG(Number of Rec..)). The main area displays a table with the following data:

Q10 Question	Likert Response	Count of 4 Transformed Likert Output...	Number of Records
Diverging	I Can Build	Strongly disagree	1.000
		Neither agree nor disagree	1.000
		Somewhat agree	2.000
		Strongly agree	1.000
I Can Use a Variety of Question Types	Neither agree nor disagree	2.000	
	Somewhat agree	3.000	
Qualtrics is Flexible	Somewhat disagree	1.000	
	Neither agree nor disagree	2.000	
	Strongly agree	2.000	

New Field: Negative Responses

(This will help us determine how far to the left of the central axis we need to position the bar)

```
IF [Likert Response (Numeric)] < 3 THEN 1
ELSEIF [Likert Response (Numeric)] = 3 THEN 0.5
ELSE 0
END
```

The screenshot shows a data visualization tool interface with a table of data. The table has five columns: Q10 Question, Likert Response, Count of 4 Transformed Likert Output.csv, Number of Records, and Negative Responses. The data is filtered by 'Diverging' and shows results for three question types: 'I Can Build', 'I Can Use a Variety of Question Types', and 'Qualtrics is Flexible'. Each question type has three rows corresponding to different Likert response levels: 'Strongly disagree', 'Neither agree nor disagree', and 'Strongly agree'. The 'Negative Responses' column shows the count of records for each response level.

Q10 Question	Likert Response	Count of 4 Transformed Likert Output.csv	Number of Records	Negative Responses
I Can Build	Strongly disagree	1.000	1.000	1.000
	Neither agree nor disagree	1.000	1.000	0.500
	Somewhat agree	2.000	2.000	0.000
I Can Use a Variety of Question Types	Strongly agree	1.000	1.000	0.000
	Neither agree nor disagree	2.000	2.000	1.000
	Somewhat agree	3.000	3.000	0.000
Qualtrics is Flexible	Strongly agree	2.000	2.000	0.000
	Neither agree nor disagree	2.000	2.000	1.000
	Somewhat disagree	1.000	1.000	1.000

New Field: Total Negative Responses

(We need to know how many negative responses we have, this will help making the axis)

```
TOTAL(SUM([Negative Responses]))
```

The screenshot shows the 'Table Calculation [Total Negative Responses]' dialog box. The 'Calculation Definition' section has 'Compute using:' set to 'Likert Response' (circled in red). The 'Description' field contains the text 'Totals summarize values from Likert Response.' The 'Apply' and 'OK' buttons are visible at the bottom.

The screenshot shows the Tableau interface with a table view. The table has the following columns: Q10 Question, Likert Response, Count of 4 Transformed Likert Output.csv, Number of Records, Negative Responses, and Total Negative Responses. The table is filtered by 'Diverging' and 'Q10 Question'. The 'Measure Values' pane on the left shows the calculation 'SUM(Negative Responses)' as the 'Total Negative Responses' field.

Q10 Question	Likert Response	Count of 4 Transformed Likert Output.csv	Number of Records	Negative Responses	Total Negative Responses
I Can Build	Strongly disagree	1.000	1.000	1.000	1.500
	Neither agree nor disagree	1.000	1.000	0.500	1.500
	Somewhat agree	2.000	2.000	0.000	1.500
	Strongly agree	1.000	1.000	0.000	1.500
I Can Use a Variety of Question Types	Neither agree nor disagree	2.000	2.000	1.000	1.000
	Somewhat agree	3.000	3.000	0.000	1.000
Qualtrics is Flexible	Somewhat disagree	1.000	1.000	1.000	2.000
	Neither agree nor disagree	2.000	2.000	1.000	2.000
	Strongly agree	2.000	2.000	0.000	2.000

New Field: Total Responses

(This will tell us how long our bar should be)

TOTAL([Number of Records])

Total Responses

TOTAL([Number of Records])

Table Calculation [Total Responses]

Calculation Definition

Compute using: Likert Response

At the level:

Restarting every:

Compute totals across all pages

Description

Totals summarize values from Likert Response.

OK Cancel

Default Table Calculation

Diverging		Count of 4 Transformed Likert Output.csv	Number of Records	Negative Responses	Total Negative Responses	Total Responses
Q10 Question	Likert Response					
I Can Build	Strongly disagree	1.000	1.000	1.000	1.500	5.000
	Neither agree nor disagree	1.000	1.000	0.500	1.500	5.000
	Somewhat agree	2.000	2.000	0.000	1.500	5.000
	Strongly agree	1.000	1.000	0.000	1.500	5.000
I Can Use a Variety of Question Types	Neither agree nor disagree	2.000	2.000	1.000	1.000	5.000
	Somewhat agree	3.000	3.000	0.000	1.000	5.000
Qualtrics is Flexible	Somewhat disagree	1.000	1.000	1.000	2.000	5.000
	Neither agree nor disagree	2.000	2.000	1.000	2.000	5.000
	Strongly agree	2.000	2.000	0.000	2.000	5.000

New Field: Percentage

(Percentage labels)

$[Number\ of\ Records] / [Total\ Responses]$

A screenshot of a software interface showing a context menu for a field named "Percentage". The menu is open, and the "Number Format..." option is highlighted. The background shows a list of fields including "Negative Respo...", "Number of Rec...", "Percentage", "Total Negat", "Total Respo", "4 Transform", and "Measure Va".

- [-] Negative Respo...
- [-] Number of Rec...
- [-] **Percentage**
- [-] Total Negat
- [-] Total Respo
- [-] 4 Transform
- [-] Measure Va

Add to Sheet

- Cut
- Copy
- Edit...
- Duplicate
- Rename
- Hide
- Delete
- Create
- Convert to Discrete
- Change Data Type
- Default Properties**
 - Comment...
 - Color...
 - Number Format...**
 - Total using
- Geographic Role
- Group by
- Folders
- Replace References...
- Describe...

A screenshot of a data table showing survey results. The table has columns for "Q10 Question", "Likert Response", "Count of 4 Transformed Likert Output.csv", "Number of Records", "Negative Responses", "Total Negative Responses", "Total Responses", and "Percentage". The data is grouped by "Q10 Question" and "Likert Response".

Q10 Question	Likert Response	Count of 4 Transformed Likert Output.csv	Number of Records	Negative Responses	Total Negative Responses	Total Responses	Percentage
I Can Build	Strongly disagree	1.000	1.000	1.000	1.500	5.000	20%
	Neither agree nor disagree	1.000	1.000	0.500	1.500	5.000	20%
	Somewhat agree	2.000	2.000	0.000	1.500	5.000	40%
	Strongly agree	1.000	1.000	0.000	1.500	5.000	20%
I Can Use a Variety of Question Types	Neither agree nor disagree	2.000	2.000	1.000	1.000	5.000	40%
	Somewhat agree	3.000	3.000	0.000	1.000	5.000	60%
Qualtrics is Flexible	Somewhat disagree	1.000	1.000	1.000	2.000	5.000	20%
	Neither agree nor disagree	2.000	2.000	1.000	2.000	5.000	40%
	Strongly agree	2.000	2.000	0.000	2.000	5.000	40%

New Field: Gantt Start

(Calculate the horizontal position our bar will start at)

$$-[Total\ Negative\ Responses]/[Total\ Responses]$$

The screenshot shows a Tableau dashboard with a pivot table. The columns are 'Q10 Question' and 'Likert Response'. The rows are categorized by 'Diverging' and 'Qualtrics is Flexible'. The table includes summary metrics: 'Count of 4 Transformed Likert Output.csv', 'Number of Records', 'Negative Responses', 'Total Negative Responses', 'Total Responses', 'Percentage', and 'Gantt Start'. The 'Gantt Start' field is highlighted in green in the Measure Values pane.

Q10 Question	Likert Response	Count of 4 Transformed Likert Output.csv	Number of Records	Negative Responses	Total Negative Responses	Total Responses	Percentage	Gantt Start
I Can Build	Strongly disagree	1.000	1.000	1.000	1.500	5.000	20%	-30.00%
	Neither agree nor disagree	1.000	1.000	0.500	1.500	5.000	20%	-30.00%
	Somewhat agree	2.000	2.000	0.000	1.500	5.000	40%	-30.00%
	Strongly agree	1.000	1.000	0.000	1.500	5.000	20%	-30.00%
I Can Use a Variety of Question Types	Neither agree nor disagree	2.000	2.000	1.000	1.000	5.000	40%	-20.00%
	Somewhat agree	3.000	3.000	0.000	1.000	5.000	60%	-20.00%
Qualtrics is Flexible	Somewhat disagree	1.000	1.000	1.000	2.000	5.000	20%	-40.00%
	Neither agree nor disagree	2.000	2.000	1.000	2.000	5.000	40%	-40.00%
	Strongly agree	2.000	2.000	0.000	2.000	5.000	40%	-40.00%

New Field: Gantt Position

(Calculate the horizontal position each sub-bar will start at)

```
PREVIOUS_VALUE([Gantt Start])+ZN(lookup([Percentage],-1))
```

Filter...

Show Filter

Format...

✓ Include in Tooltip

Edit in Shelf

Compute Using ▶

△ Edit Table Calculation...

Remove

Table (down)

• Pane (down)

Pane (across then down)

Pane (down then across)

Cell

Likert Response

Q10 Question

Q10 Question	Likert Response	Count of 4 Transformed Likert Output.csv	Number of Records	Negative Responses	Total Negative Responses	Total Responses	Percentage	Gantt Start	Gantt Position along Pane (Down)
I Can Build	Strongly disagree	1.000	1.000	1.000	1.500	5.000	20%	-30.00%	-30.00%
	Neither agree nor disagree	1.000	1.000	0.500	1.500	5.000	20%	-30.00%	-10.00%
	Somewhat agree	2.000	2.000	0.000	1.500	5.000	40%	-30.00%	10.00%
	Strongly agree	1.000	1.000	0.000	1.500	5.000	20%	-30.00%	50.00%
I Can Use a Variety of Question Types	Neither agree nor disagree	2.000	2.000	1.000	1.000	5.000	40%	-20.00%	-20.00%
	Somewhat agree	3.000	3.000	0.000	1.000	5.000	60%	-20.00%	20.00%
	Strongly agree	2.000	2.000	0.000	2.000	5.000	40%	-40.00%	20.00%
Qualtrics is Flexible	Somewhat disagree	1.000	1.000	1.000	2.000	5.000	20%	-40.00%	-40.00%
	Neither agree nor disagree	2.000	2.000	1.000	2.000	5.000	40%	-40.00%	-20.00%
	Strongly agree	2.000	2.000	0.000	2.000	5.000	40%	-40.00%	20.00%

Build the Chart



Rows: Q10 Question

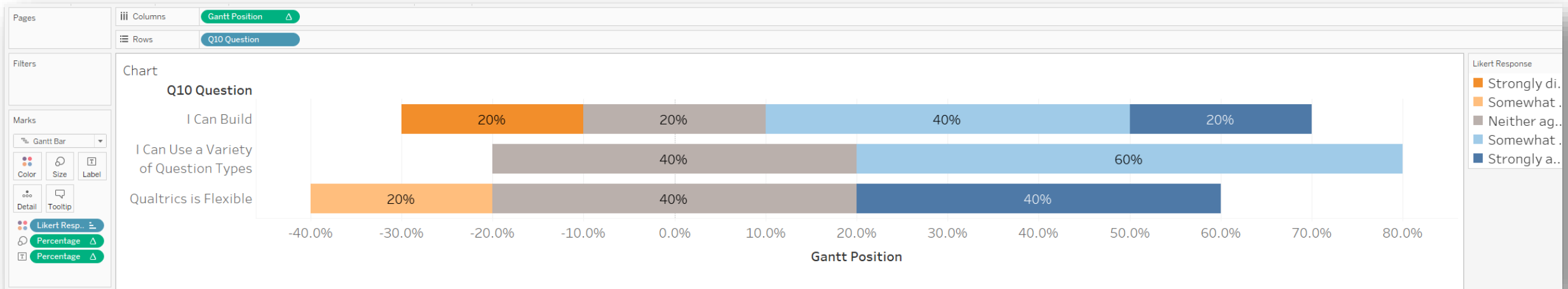
Columns: Gantt Position

- Compute Using: Likert Response

Color: Likert Responses

- Sort by Field, Response (Numeric), Average

Size & Label: Percentage



Resources



BOOK

Data modeling with [tableau](#) : a practical guide to building data models using [tableau prep](#) and [tableau desktop](#)

Munroe, Kirk, author.

2022; 1st ed.

[Online access](#)  >



BOOK

Data storytelling and [visualization with Tableau](#) : a hands-on approach

Joshi, Prachi, author.

2023

[Online access](#)  >



<https://www.tableau.com/learn/whitepapers/visualizing-survey-data>



Steve Wexler: Visualizing Survey Data 2.0 (2016) Tableau Conference.

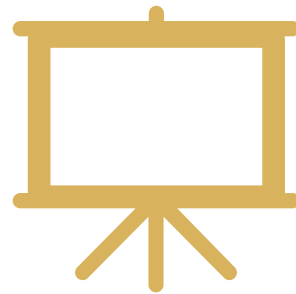
https://www.youtube.com/watch?v=nmr_-1aL1T4

Steve Wexler: What's New in Survey Data (2018) Tableau Conference.

<https://www.youtube.com/watch?v=ORyAZTmQ4nk>



VISUALIZING SURVEY DATA



SLIDES:
[HTTPS://brosz.ca/slides/survey](https://brosz.ca/slides/survey)

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