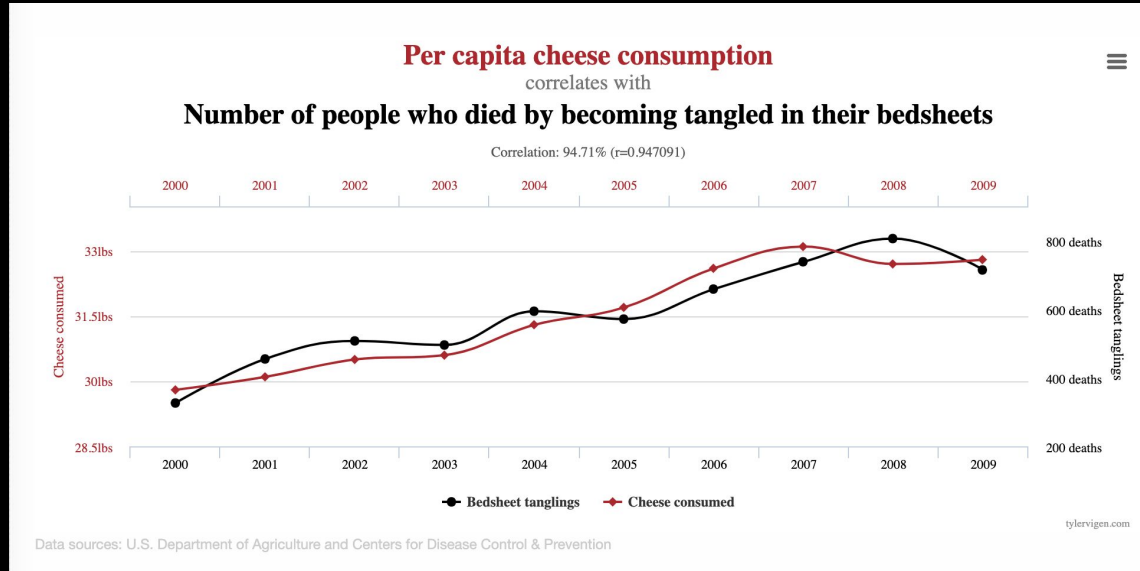


Correlation \neq Causation



<https://www.tylervigen.com/spurious-correlations>

COMP
110

CL08 - Quantified
Shakespeare

Final Exam

- May 2 at 8 am (Locations TBD)
- Make-up on May 3 at 8 am in SN 011
 - **FILL OUT FORM LINKED ON CAMPUSWIRE!**

Challenge Question 05

Draw a memory diagram of this output from `read_csv_rows`

```
x = [{'Day': 'Monday', 'Low': '56', 'High': '75'},  
     {'Day': 'Tuesday', 'Low': '53', 'High': '72'}]
```

Challenge Question 06

Draw a memory diagram of this output from columnar

```
x= {'Day': ['Monday', 'Tuesday'], 'Low': ['56', '53'], 'High': ['75', '72']}
```

Function Writing

function name: `tally`

Parameters: `counts: dict[str, int]` and `key: str`

Returns: `None`

Functionality:

- Mutate (modify) counts
- If key is in counts, increase the number of the value stored at key by 1
- If key is not in counts, add it to counts with the value 1

Function Writing

function name: `count_letters`

Parameters: `lines: list[str]`

Returns: `dict[str, int]`

Functionality:

- Create `dict[str,int]` called `counts`
- Loop through every element (`str`) of `lines`
- For each line, loop through every character in the line and tally character counts in `counts`
- Challenge: only tally *letters*, not numbers or punctuation. (`char.isalpha()`)