Problem: Tables are usually not formatted for convenient analysis in R

Solution: "Tidy" up the table

"Wide"

```
table1
#> # A tibble: 6 x 4
#>   country      year  cases population
#>   <chr>       <int>  <int>      <int>
#> 1 Afghanistan 1999    745   19987071
#> 2 Afghanistan 2000   2666   20595360
#> 3 Brazil      1999  37737  172006362
#> 4 Brazil      2000  80488  174504898
#> 5 China       1999 212258 1272915272
#> 6 China       2000 213766 1280428583
```

"Long"

```
table2
#> # A tibble: 12 x 4
#>   country      year type            count
#>   <chr>       <int> <chr>           <int>
#> 1 Afghanistan  1999 cases             745
#> 2 Afghanistan  1999 population   19987071
#> 3 Afghanistan  2000 cases            2666
#> 4 Afghanistan  2000 population   20595360
#> 5 Brazil       1999 cases           37737
#> 6 Brazil       1999 population  172006362
#> # … with 6 more rows
```

"Gross"

```
table3
#> # A tibble: 6 x 3
#>   country      year rate
#> * <chr>       <int> <chr>
#> 1 Afghanistan  1999 745/19987071
#> 2 Afghanistan  2000 2666/20595360
#> 3 Brazil       1999 37737/172006362
#> 4 Brazil       2000 80488/174504898
#> 5 China        1999 212258/1272915272
#> 6 China        2000 213766/1280428583
```

"Split"

```
table4a  # cases
#> # A tibble: 3 x 3
#>   country      `1999` `2000`
#> * <chr>         <int>  <int>
#> 1 Afghanistan     745   2666
#> 2 Brazil        37737  80488
#> 3 China        212258 213766
table4b  # population
#> # A tibble: 3 x 3
#>   country          `1999`     `2000`
#> * <chr>             <int>      <int>
#> 1 Afghanistan    19987071   20595360
#> 2 Brazil        172006362  174504898
#> 3 China        1272915272 1280428583
```

Useful tidyr functions

Name	Task
`pivot_longer()`	Convert a wide table to a long format
`pivot_wider()`	Convert a long table to a wide format
`separate()`	Split up one column into several
`unite()`	Combine several columns into one
`fill()`	Fill in missing values (NA)