

Making sense of the Marvel Universe

```
> characters %>%
+   transmute(Appearance = map(Appearance, function(x) {
+     x <- unique(x)
+     if (length(x) == 1 && is.na(x)) return(tibble(Thor = NA))
+     do.call(tibble, structure(as.list(rep(1, length(x)))), names = x))
+   })) %>%
+   unnest() %>%
+   mutate_all(~ . %| % 0) %>%
+   as_tbl_graph()
# A tbl_graph: 475 nodes and 17654 edges
#
# An undirected multigraph with 61 components
#
# Node Data: 475 x 0 (active)
#
# Edge Data: 17,654 x 3
  from   to weight
  <int> <int> <dbl>
1     1     1     3
2     1     2     1
3     1     8     1
# ... with 1.765e+04 more rows
```

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```
> characters %>% pull(Allies) %>% head
```

```
[[1]]
```

```
[1] "Rafael_Scarfe" "Claire_Temple" "Colleen_Wing" "Karen_Page" "Luke_Cage" "Jessica_Jones" "Daredevil" "Iron_Fist"
```

```
[[2]]
```

```
[1] "Iron_Man" "Black_Widow" "War_Machine" "Vision" "Black_Panther" "Happy_Hogan"
```

```
[[3]]
```

```
[1] "Heimdall" "Volstagg" "Fandral" "Hogun" "Thor" "Valkyrie" "Loki" "Hulk" "Korg" "Miek"
```

```
[[4]]
```

```
[1] "Captain_America" "Scarlet_Witch" "Hawkeye" "Iron_Man" "Black_Widow" "Vision" "War_Machine"
```

```
[8] "Nick_Fury" "Maria_Hill" "Ant-Man" "Winter_Soldier" "Sharon_Carter"
```

```
[[5]]
```

```
[1] "Nick_Fury" "Maria_Hill" "Victoria_Hand" "Jasper_Sitwell" "Phil_Coulson" "Melinda_May" "Leo_Fitz"
```

```
[8] "Jemma_Simmons" "Grant_Ward" "John_Garrett" "Antoine_Triplett" "Watchdog_Alpha" "Giyera"
```

```
[[6]]
```

```
[1] "Punisher"
```