InterRaterAgreementReproducibility

Purpose

This calculates kappa between an expert and a non-expert for rating availability of code and data for the 28 papers published in BioNLP 2016. I've done two versions: with different numbers of categories for the two raters ("Yes" and "No" for the expert, versus "Yes", "No", and "Maybe" for the non-expert), and with identical numbers of categories for the two raters. In the later case, I added the "Maybe" category for the expert, and left those cells empty. When I calculated Kappa with different numbers of categories, the results made no sense at all, so I'm reporting only the numbers for the same number of categories (i.e., where I added an empty column for "Maybe" for the expert).

Data

See the file XX at XX.github.xx.

```
code.different.categories <- as.data.frame(rbind(c(9, 1), c(0, 13), c(3, 2)))
code.same.categories <-      as.data.frame(rbind(c(9, 1, 0), c(0, 13, 0), c(3, 2, 0)))

data.different.categories <- as.data.frame(rbind(c(15, 3), c(1, 7), c(1, 1)))
data.same.categories <- as.data.frame(rbind(c(15, 3, 0), c(1, 7, 0), c(1, 1, 0)))
```

```
# Cohen's kappa for two raters
cohen.kappa(code.different.categories)
```

```
## Warning in cohen.kappa1(x, w = w, n.obs = n.obs, alpha = alpha): upper or
## lower confidence interval exceed abs(1) and set to +/- 1.
```

```
## Call: cohen.kappa1(x = x, w = w, n.obs = n.obs, alpha = alpha)
##
## Cohen Kappa and Weighted Kappa correlation coefficients and confidence boundaries
##                  lower estimate upper
## unweighted kappa     0     0.00  0.00
## weighted kappa      -1    -0.98 -0.56
##
##  Number of subjects = 3
```

```
cohen.kappa(code.same.categories)
```

```
## Call: cohen.kappa1(x = x, w = w, n.obs = n.obs, alpha = alpha)
##
## Cohen Kappa and Weighted Kappa correlation coefficients and confidence boundaries
##                   lower estimate upper
## unweighted kappa  0.411      0.63  0.85
## weighted kappa   -0.043      0.34  0.72
##
##  Number of subjects = 28
```

```r
cohen.kappa(data.different.categories)
```

```
## Call: cohen.kappa1(x = x, w = w, n.obs = n.obs, alpha = alpha)
##
## Cohen Kappa and Weighted Kappa correlation coefficients and confidence boundaries
##                   lower estimate upper
## unweighted kappa -0.12     0.14  0.40
## weighted kappa   -0.69     0.00  0.69
##
##  Number of subjects = 3
```

```r
cohen.kappa(data.same.categories)
```

```
## Call: cohen.kappa1(x = x, w = w, n.obs = n.obs, alpha = alpha)
##
## Cohen Kappa and Weighted Kappa correlation coefficients and confidence boundaries
##                   lower estimate upper
## unweighted kappa  0.29     0.57  0.85
## weighted kappa    0.13     0.49  0.85
##
##  Number of subjects = 28
```