NAVCO2 Descriptive Statistics

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Abstract

Computing descriptive statistics of the 1726 observations on 57 variables in the NAVCO2.0 data set described by Chenweth and Lewis (2013).

Introduction

In this document, we present R code to look at each variable in the NAVCO2 data.frame. This document summarizes what one statistician did to understand these data and to do so in a way that might help others gain a similar understanding of these data – and R tools that can be used to help obtain that understanding.

NAVCO2 has 1726 rows:

```
library(NAVCO2)
(N2.0 <- nrow(NAVCO2))
```

```
## [1] 1726
```

campaign

The first variable in NAVCO2 is campaign. This is a factor with 250 levels:

```
str(camp <- table(NAVCO2$campaign))
```

```
##  'table' int [1:250(1d)] 3 4 10 1 3 11 2 2 3 1 ...
##  - attr(*, "dimnames")=List of 1
##   ..$ : chr [1:250] "Active Forces" "Afar insurgency" "Afghan Resistance" "Afghans" ...
```

The number of observations per campaign ranges from 1 to 59:

```
quantile(camp)
```

```
##    0%   25%   50%   75%  100%
##  1.00  1.25  4.00  8.75 59.00
```

with a mean of 6.9 = 1726/250:

```
mean(camp)
```

```
## [1] 6.904
```

The standard deviation of the number of observations by campaign is 8.9:

```
sd(camp)
```

```
## [1] 8.873881
```

location

The second variable in NAVCO2 is location = the country in which most of the referenced actions occur:

```
str(campLoc <- with(NAVCO2, table(campaign, location)))
```

```
##  'table' int [1:250, 1:123] 0 0 10 1 0 0 0 0 0 0 ...
##  - attr(*, "dimnames")=List of 2
##   ..$ campaign: chr [1:250] "Active Forces" "Afar insurgency" "Afghan Resistance" "Afghans" ...
##   ..$ location: chr [1:123] "Afghanistan" "Albania" "Algeria" "Angola" ...
```

NAVCO2 documents conflicts in 123 locations (mostly countries).

```
table(campLoc. <- rowSums(campLoc>0))
```

```
##
##   1   2
## 249   1
```

One campaign had operations in two countries; all the others were restricted to a single country:

```
(campLoc2 <- rownames(campLoc)[campLoc.>1])
```

```
## [1] "Kurdish rebellion"
```

The Kurdish rebellion had operations in two countries:

```
table(KurdReb <- (NAVCO2$campaign==campLoc2))
```

```
##
## FALSE  TRUE
##  1704    22
```

```
# 22 TRUE
NAVCO2[KurdReb, 1:3]
```

```
##              campaign location year
## 741 Kurdish rebellion     Iraq 1961
## 742 Kurdish rebellion     Iraq 1962
## 743 Kurdish rebellion     Iraq 1963
## 744 Kurdish rebellion     Iraq 1964
## 745 Kurdish rebellion     Iraq 1965
## 746 Kurdish rebellion     Iraq 1966
## 747 Kurdish rebellion     Iraq 1967
## 748 Kurdish rebellion     Iraq 1968
## 749 Kurdish rebellion     Iraq 1969
## 750 Kurdish rebellion     Iraq 1970
## 751 Kurdish rebellion     Iraq 1971
## 752 Kurdish rebellion     Iraq 1972
## 753 Kurdish rebellion     Iraq 1973
## 754 Kurdish rebellion     Iraq 1974
## 755 Kurdish rebellion     Iraq 1975
## 756 Kurdish rebellion   Turkey 1991
## 757 Kurdish rebellion   Turkey 1992
## 758 Kurdish rebellion   Turkey 1993
## 759 Kurdish rebellion   Turkey 1994
## 760 Kurdish rebellion   Turkey 1995
## 761 Kurdish rebellion   Turkey 1996
## 762 Kurdish rebellion   Turkey 1997
```

in Iraq between 1961 and 1975 (15 years) and in neighboring Turkey between 1991 and 1997 (7 years, totalling 22 years).

Recode (campaign == Kurdish rebellion) into “Iraqi Kurds” and “Turkish Kurds”

```
IQ <- with(NAVCO2, (campaign=='Kurdish rebellion') &
            (location=='Iraq'))
TR <- with(NAVCO2, (campaign=='Kurdish rebellion') &
            (location=='Turkey'))

Campaign <- as.character(NAVCO2$campaign)
Campaign[IQ] <- "Iraqi Kurds"
Campaign[TR] <- "Turkish Kurds"
```

Campaign was added as a new variable to NAVCO2 via:

NAVCO2$Campaign <- as.factor(Campaign)

Which locations (countries) appear most often?

```
table(locObs <- colSums(campLoc))
```

```
##
##  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 19 20 21 22 26 27 28 29
## 10  7 15 11  6  8  5  3  2  2  2  5  6  1  6  2  3  1  1  1  3  2  2  1  1
## 30 31 36 38 39 40 42 43 44 51 57 60 78 96
##  1  1  1  1  4  1  1  1  1  1  1  1  1  1
```

```
locObs[locObs==max(locObs)]
```

```
## Burma
##    96
```

Burma is the big “winner”:

```
NAVCO2[NAVCO2$location=='Burma', 1:3]
```

```
##                        campaign location year
## 166 Burma pro-democracy movement    Burma 1988
## 167 Burma pro-democracy movement    Burma 1989
## 168 Burma pro-democracy movement    Burma 1990
## 590                Kachin rebels    Burma 1961
## 591                Kachin rebels    Burma 1962
## 592                Kachin rebels    Burma 1963
## 593                Kachin rebels    Burma 1964
## 594                Kachin rebels    Burma 1965
## 595                Kachin rebels    Burma 1966
## 596                Kachin rebels    Burma 1967
## 597                Kachin rebels    Burma 1968
## 598                Kachin rebels    Burma 1969
## 599                Kachin rebels    Burma 1970
## 600                Kachin rebels    Burma 1971
## 601                Kachin rebels    Burma 1972
## 602                Kachin rebels    Burma 1973
## 603                Kachin rebels    Burma 1974
## 604                Kachin rebels    Burma 1975
## 605                Kachin rebels    Burma 1976
## 606                Kachin rebels    Burma 1977
## 607                Kachin rebels    Burma 1978
## 608                Kachin rebels    Burma 1979
## 609                Kachin rebels    Burma 1980
## 610                Kachin rebels    Burma 1981
## 611                Kachin rebels    Burma 1982
## 612                Kachin rebels    Burma 1983
## 613                Kachin rebels    Burma 1984
## 614                Kachin rebels    Burma 1985
## 615                Kachin rebels    Burma 1986
## 616                Kachin rebels    Burma 1987
## 617                Kachin rebels    Burma 1988
## 618                Kachin rebels    Burma 1989
## 619                Kachin rebels    Burma 1990
## 620                Kachin rebels    Burma 1991
## 621                Kachin rebels    Burma 1992
## 622                Kachin rebels    Burma 1993
## 623                Kachin rebels    Burma 1994
## 624                       Karens    Burma 1948
## 625                       Karens    Burma 1949
## 626                       Karens    Burma 1950
## 627                       Karens    Burma 1951
## 628                       Karens    Burma 1952
## 629                       Karens    Burma 1953
## 630                       Karens    Burma 1954
## 631                       Karens    Burma 1955
## 632                       Karens    Burma 1956
## 633                       Karens    Burma 1957
## 634                       Karens    Burma 1958
## 635                       Karens    Burma 1959
## 636                       Karens    Burma 1960
## 637                       Karens    Burma 1961
## 638                       Karens    Burma 1962
## 639                       Karens    Burma 1963
## 640                       Karens    Burma 1964
## 641                       Karens    Burma 1965
## 642                       Karens    Burma 1966
## 643                       Karens    Burma 1967
## 644                       Karens    Burma 1968
## 645                       Karens    Burma 1969
## 646                       Karens    Burma 1970
## 647                       Karens    Burma 1971
## 648                       Karens    Burma 1972
## 649                       Karens    Burma 1973
## 650                       Karens    Burma 1974
## 651                       Karens    Burma 1975
## 652                       Karens    Burma 1976
## 653                       Karens    Burma 1977
## 654                       Karens    Burma 1978
## 655                       Karens    Burma 1979
```

```
## 656                     Karens    Burma 1980
## 657                     Karens    Burma 1981
## 658                     Karens    Burma 1982
## 659                     Karens    Burma 1983
## 660                     Karens    Burma 1984
## 661                     Karens    Burma 1985
## 662                     Karens    Burma 1986
## 663                     Karens    Burma 1987
## 664                     Karens    Burma 1988
## 665                     Karens    Burma 1989
## 666                     Karens    Burma 1990
## 667                     Karens    Burma 1991
## 668                     Karens    Burma 1992
## 669                     Karens    Burma 1993
## 670                     Karens    Burma 1994
## 671                     Karens    Burma 1995
## 672                     Karens    Burma 1996
## 673                     Karens    Burma 1997
## 674                     Karens    Burma 1998
## 675                     Karens    Burma 1999
## 676                     Karens    Burma 2000
## 677                     Karens    Burma 2001
## 678                     Karens    Burma 2002
## 679                     Karens    Burma 2003
## 680                     Karens    Burma 2004
## 681                     Karens    Burma 2005
## 682                     Karens    Burma 2006
```

Three campaigns have challenged the Burmese establishment:

* Burma pro-democracy movement 1988:1990
* Kachin rebels 1961:1994
* Karens 1948:2006.

A related but different question: Which locations have experienced the most campaigns?

```
table(locCamps <- colSums(campLoc>0))
```

```
##
##  1  2  3  4  5  6
## 58 32 16  8  5  4
```

```
locObs[locCamps==max(locCamps)]
```

```
##     China     India Indonesia      Iraq
##        15        78        57        31
```

China, India, Indonesia, and Iraq have each experienced six different campaigns.

year

There is one row in NAVCO2 for each year a campaign is sufficiently active…

```
quantile(NAVCO2$year)
```

```
##   0%  25%  50%  75% 100%
## 1945 1970 1983 1992 2006
```

… between 1945 and 2006.

How many campaigns are intermittent, i.e., have years without activity then resume?

```
table(campSum <- rowSums(campLoc))
```

```
##
##  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 21 22 23 25 28 30
## 63 41 17 20 20 17  5  4  3  7 10  3  4  5  2  3  1  3  3  3  2  1  1  1  1
## 34 35 36 39 43 59
##  2  2  1  2  2  1
```

```
str(campStart <- with(NAVCO2, tapply(year, campaign, min)))
```

```
##  int [1:250(1d)] 1991 1991 1979 1978 1989 1952 1990 1992 1990 2006 ...
```

```
##  - attr(*, "dimnames")=List of 1
##   ..$ : chr [1:250] "Active Forces" "Afar insurgency" "Afghan Resistance" "Afghans" ...
```

```
campEnd <- with(NAVCO2, tapply(year, campaign, max))
campDur <- (campEnd-campStart+1)
table(campDens <- (campSum/campDur))
```

```
##
## 0.594594594594595                 1
##                 1               249
```

Conclusion: No campaigns are intermittent: The one campaign for which campDens < 1 is the Kurdish rebellion, which occurred in two different countries at two different times, as noted above:

```
campDens[campDens<1]
```

```
## Kurdish rebellion
##         0.5945946
```

Confirm that year is sequential within Campaign

```
table(seqBreaks <- with(NAVCO2, tapply(year, Campaign,
                function(x)sum(diff(x)!=1) ) ))
```

```
##
##   0
## 251
```

All good.

cyear

The variable “cyear” = “campaign year” = 0 for the start, 1 for a continuation, and 2 for the end (if different from the start), plus 3 for major “post campaign” activities:

```
cyearChk <- with(NAVCO2, tapply(cyear, Campaign,
                  function(x){
                    nx <- length(x)
                    if(nx<2)return(x==0)
                    if(nx<3)return(all(x==c(0, 2)))
                    ix <- c(0, rep(1, nx-2), 2)
                    return(all(x==ix))
                    } ) )
table(cyearChk)
```

```
## cyearChk
## FALSE  TRUE
##     4   247
```

Four campaigns were found that seemed to violate the standard cyear pattern, 0, 1, …, 1, 2 rule.

```
(camPblms <- names(cyearChk)[!cyearChk])
```

```
## [1] "Anti-Gayoom"
## [2] "Front for the Liberation of Mozambique"
## [3] "Thai communist rebels"
## [4] "Zimbabwe African People's Union"
```

```
NAVCO2[NAVCO2$Campaign %in% camPblms, 1:4]
```

```
##                                    campaign   location year cyear
## 50                              Anti-Gayoom   Maldives 2003     0
## 51                              Anti-Gayoom   Maldives 2004     1
## 52                              Anti-Gayoom   Maldives 2005     1
## 53                              Anti-Gayoom   Maldives 2006     1
## 386  Front for the Liberation of Mozambique Mozambique 1963     0
## 387  Front for the Liberation of Mozambique Mozambique 1964     1
## 388  Front for the Liberation of Mozambique Mozambique 1965     1
## 389  Front for the Liberation of Mozambique Mozambique 1966     1
## 390  Front for the Liberation of Mozambique Mozambique 1967     1
## 391  Front for the Liberation of Mozambique Mozambique 1968     1
```

```
## 392  Front for the Liberation of Mozambique Mozambique 1969     1
## 393  Front for the Liberation of Mozambique Mozambique 1970     1
## 394  Front for the Liberation of Mozambique Mozambique 1971     1
## 395  Front for the Liberation of Mozambique Mozambique 1972     2
## 396  Front for the Liberation of Mozambique Mozambique 1973     1
## 397  Front for the Liberation of Mozambique Mozambique 1974     2
## 1521                 Thai communist rebels   Thailand 1966     0
## 1522                 Thai communist rebels   Thailand 1967     1
## 1523                 Thai communist rebels   Thailand 1968     1
## 1524                 Thai communist rebels   Thailand 1969     1
## 1525                 Thai communist rebels   Thailand 1970     1
## 1526                 Thai communist rebels   Thailand 1971     1
## 1527                 Thai communist rebels   Thailand 1972     1
## 1528                 Thai communist rebels   Thailand 1973     1
## 1529                 Thai communist rebels   Thailand 1974     1
## 1530                 Thai communist rebels   Thailand 1975     1
## 1531                 Thai communist rebels   Thailand 1976     1
## 1532                 Thai communist rebels   Thailand 1977     1
## 1533                 Thai communist rebels   Thailand 1978     1
## 1534                 Thai communist rebels   Thailand 1979     1
## 1535                 Thai communist rebels   Thailand 1980     1
## 1536                 Thai communist rebels   Thailand 1981     1
## 1721        Zimbabwe African People's Union   Zimbabwe 1974     0
## 1722        Zimbabwe African People's Union   Zimbabwe 1975     1
## 1723        Zimbabwe African People's Union   Zimbabwe 1976     1
## 1724        Zimbabwe African People's Union   Zimbabwe 1977     1
## 1725        Zimbabwe African People's Union   Zimbabwe 1978     1
## 1726        Zimbabwe African People's Union   Zimbabwe 1979     1
```

The “Anti-Gayoom” Campaign appears legitimate: The ending “1” is for 2006, the last year in this data set. This suggests that this campaign may have continued beyond 2006.

The other three appear to violate the naive interpretation of the “cyear” rules: The Campaign of the Front for the Liberation of Mozanbique ends 2, 1, 2. Is this correct, and I don’t understand their coding standard? Or is this an error, and cyear for this Campaign should end 1, 1, 2?

The Campaigns of the Thai communist rebels (1966:1981) and the Zimbabwe African People’s Union (1974:1979) end in 1. Shouldn’t that be 2?

Note that “3” appears in the documentation, NAVCO 2.0 Appendix. However it does not appear in the data.

lccode

The variable lccode is a location code (integer) with 120 levels v. 123 for location:

```
str(lc <- table(NAVCO2$lccode))
```

```
##  'table' int [1:120(1d)] 4 1 1 15 44 15 13 1 3 51 ...
##  - attr(*, "dimnames")=List of 1
##   ..$ : chr [1:120] "40" "41" "42" "70" ...
```

Check matching between lccode and location:

```
str(LC <- with(NAVCO2, table(location, lccode)))
```

```
##  'table' int [1:123, 1:120] 0 0 0 0 0 0 0 0 0 0 ...
##  - attr(*, "dimnames")=List of 2
##   ..$ location: chr [1:123] "Afghanistan" "Albania" "Algeria" "Angola" ...
##   ..$ lccode  : chr [1:120] "40" "41" "42" "70" ...
```

```
quantile(LCr <- rowSums(LC>0))
```

```
##   0%  25%  50%  75% 100%
##    1    1    1    1    2
```

```
(lcr <- LCr[LCr>1])
```

```
##    Hungary   Pakistan     Russia    Vietnam Yugoslavia
##          2          2          2          2          2
```

Five locations appear with two different values of lccode:
Hungary, Pakistan, Russia, Vietnam, and Yugoslavia.

```
NAVCO2[NAVCO2$location=='Hungary', 1:5]
```

```
##                         campaign location year cyear lccode
## 465         Hungary Anti-Communist  Hungary 1956     0    265
## 466 Hungary Anti-Soviet Occupation  Hungary 1956     0    310
## 467       Hungary pro-dem movement  Hungary 1989     0    310
```

In the COW Country Codes table, 265 refers to the German Democratic Republic (the former Communist East Germany), while 310 is Hungary.

QUESTION: Might the 265 in this context be a coding error and should be 310?

```
NAVCO2[NAVCO2$location=='Pakistan', 1:5]
```

```
##                      campaign location year cyear lccode
## 57                   Anti-Khan Pakistan 1968     0    769
## 58                   Anti-Khan Pakistan 1969     2    769
## 125             Baluchi rebels Pakistan 1973     0    770
## 126             Baluchi rebels Pakistan 1974     1    770
## 127             Baluchi rebels Pakistan 1975     1    770
## 128             Baluchi rebels Pakistan 1976     1    770
## 129             Baluchi rebels Pakistan 1977     2    770
## 139                   Bengalis Pakistan 1971     0    770
## 914                    Mohajir Pakistan 1994     0    770
## 915                    Mohajir Pakistan 1995     2    770
## 1099 Pakistan pro-dem movement Pakistan 1983     0    770
```

Pakistan has lccode = 769 in 1968:1969 and 770 later. Code 769 does not appear in the current COW Country Codes table, where it has the code 770. The Bangladesh Liberation War of 1971 split Pakistan (lccode = 769) into two: the new, smaller Pakistan (lccode = 770) and Bangladesh (lccode = 771). (The Bangladesh Liberation War is not itself included in NAVCO2.)

```
NAVCO2[NAVCO2$location=='Russia', 1:5]
```

```
##                    campaign location year cyear lccode
## 197      Chechen separatists   Russia 1994     0    365
## 198      Chechen separatists   Russia 1995     1    365
## 199      Chechen separatists   Russia 1996     1    365
## 200      Chechen separatists   Russia 1997     1    365
## 201      Chechen separatists   Russia 1998     1    365
## 202      Chechen separatists   Russia 1999     1    365
## 203      Chechen separatists   Russia 2000     1    365
## 204      Chechen separatists   Russia 2001     1    365
## 205      Chechen separatists   Russia 2002     1    365
## 206      Chechen separatists   Russia 2003     1    365
## 207      Chechen separatists   Russia 2004     1    365
## 208      Chechen separatists   Russia 2005     1    365
## 209      Chechen separatists   Russia 2006     2    365
## 1274 Russia pro-dem movement   Russia 1990     0    364
## 1275 Russia pro-dem movement   Russia 1991     2    364
```

Russia appears with lccode = 364 for the “Russia pro-dem movement” of 1990-91 and 365 for the “Chechen separatists” from 1994:2006. Only one of these two codes (365) appears in the current COW Country Codes table.

QUESTION: Might the 364 be a coding error and should be 365?

```
NAVCO2[NAVCO2$location=='Vietnam', 1:5]
```

```
##                                                    campaign location
## 517                                          Indochina revolt  Vietnam
## 518                                          Indochina revolt  Vietnam
## 519                                          Indochina revolt  Vietnam
## 520                                          Indochina revolt  Vietnam
## 521                                          Indochina revolt  Vietnam
## 522                                          Indochina revolt  Vietnam
## 523                                          Indochina revolt  Vietnam
## 524                                          Indochina revolt  Vietnam
## 525                                          Indochina revolt  Vietnam
## 526                                          Indochina revolt  Vietnam
## 1036    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1037    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1038    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1039    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1040    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1041    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1042    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1043    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1044    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1045    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
```

```
## 1046    North Vietnam (National Liberation Front) Anti-Occupation  Vietnam
## 1047 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1048 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1049 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1050 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1051 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1052 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1053 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1054 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1055 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1056 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1057 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1058 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1059 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1060 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1061 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1062 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1063 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
## 1064 North Vietnam (National Liberation Front) Anti-South Vietnam  Vietnam
##      year cyear lccode
## 517  1945     0    818
## 518  1946     1    818
## 519  1947     1    818
## 520  1948     1    818
## 521  1949     1    818
## 522  1950     1    818
## 523  1951     1    818
## 524  1952     1    818
## 525  1953     1    818
## 526  1954     2    818
## 1036 1963     0    817
## 1037 1964     1    817
## 1038 1965     1    817
## 1039 1966     1    817
## 1040 1967     1    817
## 1041 1968     1    817
## 1042 1969     1    817
## 1043 1970     1    817
## 1044 1971     1    817
## 1045 1972     1    817
## 1046 1973     2    817
## 1047 1958     0    817
## 1048 1959     1    817
## 1049 1960     1    817
## 1050 1961     1    817
## 1051 1962     1    817
## 1052 1963     1    817
## 1053 1964     1    817
## 1054 1965     1    817
## 1055 1966     1    817
## 1056 1967     1    817
## 1057 1968     1    817
## 1058 1969     1    817
## 1059 1970     1    817
## 1060 1971     1    817
## 1061 1972     1    817
## 1062 1973     1    817
## 1063 1974     1    817
## 1064 1975     2    817
```

The “Indochina revolt” from 1945 to 1954 in Vietnam has lccode = 818, which is not in the COW Country Codes table. The more recent North Vietnam (National Liberation Front) “Anti-Occupation” campaign (1963:1973) and the contemporaneous “Anti-South Vietnam” both have lccode = 817, which is in the current COW Country Codes table.

QUESTION: Should 818 be recoded as 817?

```
NAVCO2[NAVCO2$location=='Yugoslavia', 1:5]
```

```
##                               campaign   location year cyear lccode
## 233               Croatian nationalists Yugoslavia 1970     0    345
## 234               Croatian nationalists Yugoslavia 1971     2    345
## 235                             Croats Yugoslavia 1991     0    345
## 236                             Croats Yugoslavia 1992     2    345
## 720                   Kosovo Albanian Yugoslavia 1989     0    347
## 721                   Kosovo Albanian Yugoslavia 1990     1    347
## 722                   Kosovo Albanian Yugoslavia 1991     1    347
## 723                   Kosovo Albanian Yugoslavia 1992     1    347
## 724                   Kosovo Albanian Yugoslavia 1993     1    347
## 725                   Kosovo Albanian Yugoslavia 1994     1    347
```

```
## 726                      Kosovo Albanian Yugoslavia 1995     1    347
## 727                      Kosovo Albanian Yugoslavia 1996     1    347
## 728                      Kosovo Albanian Yugoslavia 1997     1    347
## 729                      Kosovo Albanian Yugoslavia 1998     1    347
## 730                      Kosovo Albanian Yugoslavia 1999     2    347
## 731  Kosovo Albanian nationalist movement Yugoslavia 1981     0    345
## 1715          Yugoslavia student protests Yugoslavia 1968     0    345
```

In the COW Country Codes table, Croatia is 344, Yugoslavia is 345, and Kosovo is 347.

QUESTIONS: There are five campaigns here. The NAVCO2 data includes a variable for target distinct from location; the latter is the "Country in which the campaign takes place". Shouldn't the first two capaigns here have location = Croatia with lccode = 344, not 345? Also, shouldn't the next two have location = Kosovo with lccode = 347? Only the last row here seems to be properly coded.

We next look for lccodes appearing with multiple locations:

```
quantile(LCc <- colSums(LC>0))
```

```
##   0%  25%  50%  75% 100%
##    1    1    1    1    3
```

```
(lcc <- LCc[LCc>1])
```

```
## 265 347 364 600 678 710 850
##   2   2   2   2   2   2   3
```

Six codes appearing in two countries each and one in three (265, 347, 364, 600, 678, 710, and 850). Let's start with the three-country lccode:

```
NAVCO2[NAVCO2$lccode==850, 1:5]
```

```
##                            campaign   location year cyear lccode
## 92                       Anti-Suharto  Indonesia 1997     0    850
## 93                       Anti-Suharto  Indonesia 1998     2    850
## 245                       Darul Islam  Indonesia 1949     0    850
## 246                       Darul Islam  Indonesia 1950     1    850
## 247                       Darul Islam  Indonesia 1951     1    850
## 248                       Darul Islam  Indonesia 1952     1    850
## 249                       Darul Islam  Indonesia 1953     1    850
## 250                       Darul Islam  Indonesia 1954     1    850
## 251                       Darul Islam  Indonesia 1955     1    850
## 252                       Darul Islam  Indonesia 1956     1    850
## 253                       Darul Islam  Indonesia 1957     1    850
## 254                       Darul Islam  Indonesia 1958     1    850
## 255                       Darul Islam  Indonesia 1959     1    850
## 256                       Darul Islam  Indonesia 1960     1    850
## 257                       Darul Islam  Indonesia 1961     1    850
## 258                       Darul Islam  Indonesia 1962     2    850
## 356                         Freitilin East Timor 1974     0    850
## 357                         Freitilin East Timor 1975     1    850
## 358                         Freitilin East Timor 1976     1    850
## 359                         Freitilin East Timor 1977     1    850
## 360                         Freitilin East Timor 1978     2    850
## 398                               GAM  Indonesia 1976     0    850
## 399                               GAM  Indonesia 1977     1    850
## 400                               GAM  Indonesia 1978     1    850
## 401                               GAM  Indonesia 1979     1    850
## 402                               GAM  Indonesia 1980     1    850
## 403                               GAM  Indonesia 1981     1    850
## 404                               GAM  Indonesia 1982     1    850
## 405                               GAM  Indonesia 1983     1    850
## 406                               GAM  Indonesia 1984     1    850
## 407                               GAM  Indonesia 1985     1    850
## 408                               GAM  Indonesia 1986     1    850
## 409                               GAM  Indonesia 1987     1    850
## 410                               GAM  Indonesia 1988     1    850
## 411                               GAM  Indonesia 1989     1    850
## 412                               GAM  Indonesia 1990     1    850
## 413                               GAM  Indonesia 1991     1    850
## 414                               GAM  Indonesia 1992     1    850
## 415                               GAM  Indonesia 1993     1    850
## 416                               GAM  Indonesia 1994     1    850
## 417                               GAM  Indonesia 1995     1    850
## 418                               GAM  Indonesia 1996     1    850
## 419                               GAM  Indonesia 1997     1    850
## 420                               GAM  Indonesia 1998     1    850
## 421                               GAM  Indonesia 1999     1    850
```

```
## 422                              GAM  Indonesia 2000     1    850
## 423                              GAM  Indonesia 2001     1    850
## 424                              GAM  Indonesia 2002     1    850
## 425                              GAM  Indonesia 2003     1    850
## 426                              GAM  Indonesia 2004     1    850
## 427                              GAM  Indonesia 2005     2    850
## 527                  Indonesian Revolt  Indonesia 1945     0    850
## 528                  Indonesian Revolt  Indonesia 1946     1    850
## 529                  Indonesian Revolt  Indonesia 1947     1    850
## 530                  Indonesian Revolt  Indonesia 1948     1    850
## 531                  Indonesian Revolt  Indonesia 1949     2    850
## 532  Indonesian leftists / Anti Sukarno  Indonesia 1956     0    850
## 533  Indonesian leftists / Anti Sukarno  Indonesia 1957     1    850
## 534  Indonesian leftists / Anti Sukarno  Indonesia 1958     1    850
## 535  Indonesian leftists / Anti Sukarno  Indonesia 1959     1    850
## 536  Indonesian leftists / Anti Sukarno  Indonesia 1960     2    850
## 916                          Moluccans  Indonesia 1950     0    850
## 1572               Timorese resistance East Timor 1988     0    850
## 1573               Timorese resistance East Timor 1989     1    850
## 1574               Timorese resistance East Timor 1990     1    850
## 1575               Timorese resistance East Timor 1991     1    850
## 1576               Timorese resistance East Timor 1992     1    850
## 1577               Timorese resistance East Timor 1993     1    850
## 1578               Timorese resistance East Timor 1994     1    850
## 1579               Timorese resistance East Timor 1995     1    850
## 1580               Timorese resistance East Timor 1996     1    850
## 1581               Timorese resistance East Timor 1997     1    850
## 1582               Timorese resistance East Timor 1998     1    850
## 1583               Timorese resistance East Timor 1999     2    850
## 1648        West Papua Anti-Occupation West Papua 1964     0    850
## 1649        West Papua Anti-Occupation West Papua 1965     1    850
## 1650        West Papua Anti-Occupation West Papua 1966     1    850
## 1651        West Papua Anti-Occupation West Papua 1967     1    850
## 1652        West Papua Anti-Occupation West Papua 1968     1    850
## 1653        West Papua Anti-Occupation West Papua 1969     1    850
## 1654        West Papua Anti-Occupation West Papua 1970     1    850
## 1655        West Papua Anti-Occupation West Papua 1971     1    850
## 1656        West Papua Anti-Occupation West Papua 1972     1    850
## 1657        West Papua Anti-Occupation West Papua 1973     1    850
## 1658        West Papua Anti-Occupation West Papua 1974     1    850
## 1659        West Papua Anti-Occupation West Papua 1975     1    850
## 1660        West Papua Anti-Occupation West Papua 1976     1    850
## 1661        West Papua Anti-Occupation West Papua 1977     1    850
## 1662        West Papua Anti-Occupation West Papua 1978     1    850
## 1663        West Papua Anti-Occupation West Papua 1979     1    850
## 1664        West Papua Anti-Occupation West Papua 1980     1    850
## 1665        West Papua Anti-Occupation West Papua 1981     1    850
## 1666        West Papua Anti-Occupation West Papua 1982     1    850
## 1667        West Papua Anti-Occupation West Papua 1983     1    850
## 1668        West Papua Anti-Occupation West Papua 1984     1    850
## 1669        West Papua Anti-Occupation West Papua 1985     1    850
## 1670        West Papua Anti-Occupation West Papua 1986     1    850
## 1671        West Papua Anti-Occupation West Papua 1987     1    850
## 1672        West Papua Anti-Occupation West Papua 1988     1    850
## 1673        West Papua Anti-Occupation West Papua 1989     1    850
## 1674        West Papua Anti-Occupation West Papua 1990     1    850
## 1675        West Papua Anti-Occupation West Papua 1991     1    850
## 1676        West Papua Anti-Occupation West Papua 1992     1    850
## 1677        West Papua Anti-Occupation West Papua 1993     1    850
## 1678        West Papua Anti-Occupation West Papua 1994     1    850
## 1679        West Papua Anti-Occupation West Papua 1995     1    850
## 1680        West Papua Anti-Occupation West Papua 1996     1    850
## 1681        West Papua Anti-Occupation West Papua 1997     1    850
## 1682        West Papua Anti-Occupation West Papua 1998     1    850
## 1683        West Papua Anti-Occupation West Papua 1999     1    850
## 1684        West Papua Anti-Occupation West Papua 2000     1    850
## 1685        West Papua Anti-Occupation West Papua 2001     1    850
## 1686        West Papua Anti-Occupation West Papua 2002     1    850
## 1687        West Papua Anti-Occupation West Papua 2003     1    850
## 1688        West Papua Anti-Occupation West Papua 2004     1    850
## 1689        West Papua Anti-Occupation West Papua 2005     1    850
## 1690        West Papua Anti-Occupation West Papua 2006     2    850
```

Nine campaigns have lccode = 850 with locations Indonesia, East Timor, and West Papua; East Timor and West Papua are part of the Indonesian archipelago. East Timor was a Portuguese colony from the 16th century until independence in 1975. This was followed immediately by forceable annexation by its larger neighbor, Indonesia. Two of these nine campaigns were eforts by East Timorese to gain their independence from Indonesia; the second ended in success in 1999. The COW Country Codes table downloaded in 2015 provides lccode = 860 for East Timor.

The term “West Papua” appears with different meanings in different contexts. Here, it presumably refers to the western half of the island of New Guinea, which has an indegenous population that has been pushing for

independence from the Duch until 1969 and from Indonesia since 1969.

```
NAVCO2[NAVCO2$lccode==265, 1:5]
```

```
##                         campaign     location year cyear lccode
## 315   East Gemany Worker Uprising East Germany 1953     0    265
## 316 East Germany pro-dem movement East Germany 1989     0    265
## 465        Hungary Anti-Communist      Hungary 1956     0    265
```

East German and Hungary share lccode 265. There's more to learn here.

```
NAVCO2[NAVCO2$lccode==347, 1:5]
```

```
##            campaign   location year cyear lccode
## 61   Anti-Milosevic     Serbia 1996     0    347
## 62   Anti-Milosevic     Serbia 1997     1    347
## 63   Anti-Milosevic     Serbia 1998     1    347
## 64   Anti-Milosevic     Serbia 1999     1    347
## 65   Anti-Milosevic     Serbia 2000     2    347
## 720 Kosovo Albanian Yugoslavia 1989     0    347
## 721 Kosovo Albanian Yugoslavia 1990     1    347
## 722 Kosovo Albanian Yugoslavia 1991     1    347
## 723 Kosovo Albanian Yugoslavia 1992     1    347
## 724 Kosovo Albanian Yugoslavia 1993     1    347
## 725 Kosovo Albanian Yugoslavia 1994     1    347
## 726 Kosovo Albanian Yugoslavia 1995     1    347
## 727 Kosovo Albanian Yugoslavia 1996     1    347
## 728 Kosovo Albanian Yugoslavia 1997     1    347
## 729 Kosovo Albanian Yugoslavia 1998     1    347
## 730 Kosovo Albanian Yugoslavia 1999     2    347
```

The Anti-Milosevic campaign, 1996:2000, has location Serbia, while the concurrent Kosovo Albanian campaign (1989:1999) has location Yugoslavia. It seems appropriate to compare this with the previous observation that Yugoslavia has campaigns with two lccodes: 345 and 347.

```
NAVCO2[NAVCO2$lccode==364, 1:5]
```

```
##                    campaign location year cyear lccode
## 1274 Russia pro-dem movement   Russia 1990     0    364
## 1275 Russia pro-dem movement   Russia 1991     2    364
## 1635     Ukrainian rebellion     USSR 1946     0    364
## 1636     Ukrainian rebellion     USSR 1947     1    364
## 1637     Ukrainian rebellion     USSR 1948     1    364
## 1638     Ukrainian rebellion     USSR 1949     1    364
## 1639     Ukrainian rebellion     USSR 1950     2    364
```

USSR and Russia. Recall, however, that Russia also occurs with lccode 365, as noted above.

```
NAVCO2[NAVCO2$lccode==600, 1:5]
```

```
##                                       campaign       location year cyear
## 508                                   Ifni war        Morocco 1957     0
## 509                                   Ifni war        Morocco 1958     2
## 930                   Moroccan Independence War        Morocco 1953     0
## 931                   Moroccan Independence War        Morocco 1954     1
## 932                   Moroccan Independence War        Morocco 1955     1
## 933                   Moroccan Independence War        Morocco 1956     2
## 1691 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1975     0
## 1692 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1976     1
## 1693 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1977     1
## 1694 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1978     1
## 1695 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1979     1
## 1696 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1980     1
## 1697 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1981     1
## 1698 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1982     1
## 1699 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1983     1
## 1700 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1984     1
## 1701 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1985     1
## 1702 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1986     1
## 1703 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1987     1
## 1704 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1988     1
## 1705 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1989     1
## 1706 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1990     1
## 1707 Western Sahara Freedom Movement (POLISARIO) Western Sahara 1991     2
##      lccode
## 508     600
```

```
## 509    600
## 930    600
## 931    600
## 932    600
## 933    600
## 1691   600
## 1692   600
## 1693   600
## 1694   600
## 1695   600
## 1696   600
## 1697   600
## 1698   600
## 1699   600
## 1700   600
## 1701   600
## 1702   600
## 1703   600
## 1704   600
## 1705   600
## 1706   600
## 1707   600
```

Morocco and Western Sahara share lccode 600. The Polisario Front might conclude from this that the NAVCO2 researchers are implicitly recognizing Moroccan claims to their country, in spite of official United Nations policy to the contrary.

```
NAVCO2[NAVCO2$lccode==678, 1:5]
```

```
##                campaign            location year cyear lccode
## 343   FLOSY, NLF in Aden               Yemen 1963     0    678
## 344   FLOSY, NLF in Aden               Yemen 1964     1    678
## 345   FLOSY, NLF in Aden               Yemen 1965     1    678
## 346   FLOSY, NLF in Aden               Yemen 1966     1    678
## 347   FLOSY, NLF in Aden               Yemen 1967     2    678
## 1266          Royalists Yemen Arab Republic 1962     0    678
## 1267          Royalists Yemen Arab Republic 1963     1    678
## 1268          Royalists Yemen Arab Republic 1964     1    678
## 1269          Royalists Yemen Arab Republic 1965     1    678
## 1270          Royalists Yemen Arab Republic 1966     1    678
## 1271          Royalists Yemen Arab Republic 1967     1    678
## 1272          Royalists Yemen Arab Republic 1968     1    678
## 1273          Royalists Yemen Arab Republic 1969     2    678
## 1708 Yahya Family revolt Yemen Arab Republic 1948     0    678
## 1710   Yemeni insurgency               Yemen 1955     0    678
## 1711   Yemeni insurgency               Yemen 1956     1    678
## 1712   Yemeni insurgency               Yemen 1957     1    678
## 1713   Yemeni insurgency               Yemen 1958     1    678
## 1714   Yemeni insurgency               Yemen 1959     2    678
```

The Wikipedia article on the Yemen Arab Republic says it “was a country from 1962 to 1990 in the northwestern part of what is now Yemen”. This description does not match the coding here with 1948 Yahya Family revolt having targeted the Yemen Arab Republic.

```
NAVCO2[NAVCO2$lccode==710, 1:5]
```

```
##                          campaign location year cyear lccode
## 241  Cultural Revolution Red Guards    China 1966     0    710
## 242  Cultural Revolution Red Guards    China 1967     1    710
## 243  Cultural Revolution Red Guards    China 1968     2    710
## 259              Democracy Movement    China 1976     0    710
## 260              Democracy Movement    China 1977     1    710
## 261              Democracy Movement    China 1978     1    710
## 262              Democracy Movement    China 1979     2    710
## 463        Hundred Flowers Movement    China 1956     0    710
## 464        Hundred Flowers Movement    China 1957     2    710
## 1431               Sino-Tibetan war    Tibet 1950     0    710
## 1432               Sino-Tibetan war    Tibet 1951     2    710
## 1499               Taiwanese Revolt    China 1947     0    710
## 1550                     Tiananmen     China 1989     0    710
## 1551               Tibetan Uprising    Tibet 1987     0    710
## 1552               Tibetan Uprising    Tibet 1988     1    710
## 1553               Tibetan Uprising    Tibet 1989     2    710
## 1554             Tibetan resistance    China 1956     0    710
## 1555             Tibetan resistance    China 1957     1    710
## 1556             Tibetan resistance    China 1958     1    710
## 1557             Tibetan resistance    China 1959     2    710
```

Tibet is identified separately from China within lccode 710 in 1950:1951 and 1987:1989 but not 1956:1959. The reasons for this change are less than obvious.

target

target is a factor with 179 levels. This is similar to location, which has 123 levels, and lccode, which has 120, as just discussed.

```
str(table(NAVCO2$target))
```

```
##  'table' int [1:179(1d)] 7 5 1 8 15 1 1 28 1 1 ...
##  - attr(*, "dimnames")=List of 1
##   ..$ : chr [1:179] "Afghan government" "Afghan regime" "Akayev regime" "al-Sallal regime" ...
```

This is the governmental entity targeted by the campaign. As previously discussed, there are 123 levels for location and 120 for lccode. Clearly some locations were home to multiple campaigns with different targets.

tccode

The target codes (tccode) are similar to lccode above. However, some tccodes are not used in lccode:

```
table(t.lccode <- with(NAVCO2, tccode %in% lccode))
```

```
##
## FALSE  TRUE
##    34  1692
```

```
NAVCO2[!t.lccode, 1:9]
```

```
##                                                  campaign    location
## 527                                   Indonesian Revolt   Indonesia
## 528                                   Indonesian Revolt   Indonesia
## 529                                   Indonesian Revolt   Indonesia
## 530                                   Indonesian Revolt   Indonesia
## 531                                   Indonesian Revolt   Indonesia
## 541                                    Iraqi insurgency        Iraq
## 542                                    Iraqi insurgency        Iraq
## 543                                    Iraqi insurgency        Iraq
## 544                                    Iraqi insurgency        Iraq
## 1036 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1037 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1038 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1039 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1040 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1041 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1042 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1043 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1044 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1045 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1046 North Vietnam (National Liberation Front) Anti-Occupation     Vietnam
## 1276                                  Rwandan independence      Rwanda
## 1277                                  Rwandan independence      Rwanda
## 1278                                  Rwandan independence      Rwanda
## 1279                                  Rwandan independence      Rwanda
## 1280                                  Rwandan independence      Rwanda
## 1281                                  Rwandan independence      Rwanda
## 1465                          Somalia militia insurgencies     Somalia
## 1466                          Somalia militia insurgencies     Somalia
## 1500                                    Taliban Resistance Afghanistan
## 1501                                    Taliban Resistance Afghanistan
## 1502                                    Taliban Resistance Afghanistan
## 1503                                    Taliban Resistance Afghanistan
## 1504                                    Taliban Resistance Afghanistan
## 1505                                    Taliban Resistance Afghanistan
##      year cyear lccode                    target tccode
## 527  1945     0    850           Dutch occupation    210
## 528  1946     1    850           Dutch occupation    210
## 529  1947     1    850           Dutch occupation    210
## 530  1948     1    850           Dutch occupation    210
## 531  1949     2    850           Dutch occupation    210
## 541  2003     0    645           Iraqi government      2
## 542  2004     1    645           Iraqi government      2
## 543  2005     1    645           Iraqi government      2
## 544  2006     2    645           Iraqi government      2
## 1036 1963     0    817            U.S. occupation      2
```

```
## 1037 1964     1    817            U.S. occupation      2
## 1038 1965     1    817            U.S. occupation      2
## 1039 1966     1    817            U.S. occupation      2
## 1040 1967     1    817            U.S. occupation      2
## 1041 1968     1    817            U.S. occupation      2
## 1042 1969     1    817            U.S. occupation      2
## 1043 1970     1    817            U.S. occupation      2
## 1044 1971     1    817            U.S. occupation      2
## 1045 1972     1    817            U.S. occupation      2
## 1046 1973     2    817            U.S. occupation      2
## 1276 1956     0    517          Belgain occupation    211
## 1277 1957     1    517          Belgain occupation    211
## 1278 1958     1    517          Belgain occupation    211
## 1279 1959     1    517          Belgain occupation    211
## 1280 1960     1    517          Belgain occupation    211
## 1281 1961     2    517          Belgain occupation    211
## 1465 1993     0    520 U.S. and UN relief missions      2
## 1466 1994     2    520 U.S. and UN relief missions      2
## 1500 2001     0    700           Afghan government      2
## 1501 2002     1    700           Afghan government      2
## 1502 2003     1    700           Afghan government      2
## 1503 2004     1    700           Afghan government      2
## 1504 2005     1    700           Afghan government      2
## 1505 2006     2    700           Afghan government      2
##      navco1designation camp_orgs
## 527                  0         5
## 528                  0         0
## 529                  0         0
## 530                  0         1
## 531                  0         0
## 541                  0         9
## 542                  0         7
## 543                  0         8
## 544                  0         3
## 1036                 0         4
## 1037                 0         0
## 1038                 0         0
## 1039                 0         0
## 1040                 0         0
## 1041                 0         0
## 1042                 0         1
## 1043                 0         0
## 1044                 0         0
## 1045                 0         0
## 1046                 0         0
## 1276                 0         1
## 1277                 0         2
## 1278                 0         0
## 1279                 0         1
## 1280                 0         0
## 1281                 0         0
## 1465                 0         1
## 1466                 0         0
## 1500                 0         4
## 1501                 0         0
## 1502                 0         0
## 1503                 0         0
## 1504                 0         0
## 1505                 0         0
```

Dutch, Belgian and U.S. occupations were targeted in other countries; no conflicts were recorded in the Netherlands, Belgium and the U.S.

navco1designation

This is the code for the general violent (0) or nonviolent (1) nature of the campaign per NAVCO1.1.

… mostly:

```
navco1sd <- with(NAVCO2, tapply(navco1designation, campaign,
  function(x){
    if(length(x)<2) 0 else sd(x)
  }
))
range(navco1sd)
```

```
## [1] 0.0000000 0.5773503
```

Which campaigns are not constant for navco1designation?

```
(navco1.oops <- which(navco1sd>0))
```

```
##     Anti-Ceaucescu rebels    Palestinian Liberation
##                        11                       163
## Salvadoran Civil Conflict
##                       189
```

```
NAVCO2[NAVCO2$campaign %in% names(navco1.oops), c(1:8, 57)]
```

```
##                       campaign                location year cyear lccode
## 41       Anti-Ceaucescu rebels                 Romania 1987     0    360
## 42       Anti-Ceaucescu rebels                 Romania 1988     1    360
## 43       Anti-Ceaucescu rebels                 Romania 1989     2    360
## 1100    Palestinian Liberation Palestinian Territories 1973     0    665
## 1101    Palestinian Liberation Palestinian Territories 1974     1    665
## 1102    Palestinian Liberation Palestinian Territories 1975     1    665
## 1103    Palestinian Liberation Palestinian Territories 1976     1    665
## 1104    Palestinian Liberation Palestinian Territories 1977     1    665
## 1105    Palestinian Liberation Palestinian Territories 1978     1    665
## 1106    Palestinian Liberation Palestinian Territories 1979     1    665
## 1107    Palestinian Liberation Palestinian Territories 1980     1    665
## 1108    Palestinian Liberation Palestinian Territories 1981     1    665
## 1109    Palestinian Liberation Palestinian Territories 1982     1    665
## 1110    Palestinian Liberation Palestinian Territories 1983     1    665
## 1111    Palestinian Liberation Palestinian Territories 1984     1    665
## 1112    Palestinian Liberation Palestinian Territories 1985     1    665
## 1113    Palestinian Liberation Palestinian Territories 1986     1    665
## 1114    Palestinian Liberation Palestinian Territories 1987     1    665
## 1115    Palestinian Liberation Palestinian Territories 1988     1    665
## 1116    Palestinian Liberation Palestinian Territories 1989     1    665
## 1117    Palestinian Liberation Palestinian Territories 1990     1    665
## 1118    Palestinian Liberation Palestinian Territories 1991     1    665
## 1119    Palestinian Liberation Palestinian Territories 1992     1    665
## 1120    Palestinian Liberation Palestinian Territories 1993     1    665
## 1121    Palestinian Liberation Palestinian Territories 1994     1    665
## 1122    Palestinian Liberation Palestinian Territories 1995     1    665
## 1123    Palestinian Liberation Palestinian Territories 1996     1    665
## 1124    Palestinian Liberation Palestinian Territories 1997     1    665
## 1125    Palestinian Liberation Palestinian Territories 1998     1    665
## 1126    Palestinian Liberation Palestinian Territories 1999     1    665
## 1127    Palestinian Liberation Palestinian Territories 2000     1    665
## 1128    Palestinian Liberation Palestinian Territories 2001     1    665
## 1129    Palestinian Liberation Palestinian Territories 2002     1    665
## 1130    Palestinian Liberation Palestinian Territories 2003     1    665
## 1131    Palestinian Liberation Palestinian Territories 2004     1    665
## 1132    Palestinian Liberation Palestinian Territories 2005     1    665
## 1133    Palestinian Liberation Palestinian Territories 2006     2    665
## 1326 Salvadoran Civil Conflict             El Salvador 1977     0     92
## 1327 Salvadoran Civil Conflict             El Salvador 1978     1     92
## 1328 Salvadoran Civil Conflict             El Salvador 1979     1     92
## 1329 Salvadoran Civil Conflict             El Salvador 1980     1     92
## 1330 Salvadoran Civil Conflict             El Salvador 1981     1     92
## 1331 Salvadoran Civil Conflict             El Salvador 1982     1     92
## 1332 Salvadoran Civil Conflict             El Salvador 1983     1     92
## 1333 Salvadoran Civil Conflict             El Salvador 1984     1     92
## 1334 Salvadoran Civil Conflict             El Salvador 1985     1     92
## 1335 Salvadoran Civil Conflict             El Salvador 1986     1     92
## 1336 Salvadoran Civil Conflict             El Salvador 1987     1     92
## 1337 Salvadoran Civil Conflict             El Salvador 1988     1     92
## 1338 Salvadoran Civil Conflict             El Salvador 1989     1     92
## 1339 Salvadoran Civil Conflict             El Salvador 1990     1     92
## 1340 Salvadoran Civil Conflict             El Salvador 1991     2     92
##                      target tccode navco1designation prim_method
## 41          Ceacescu regime    360                1           1
## 42          Ceacescu regime    360                1           1
## 43          Ceacescu regime    360                0           0
## 1100     Israeli occupation    666                0           0
## 1101     Israeli occupation    666                0           0
## 1102     Israeli occupation    666                0           0
## 1103     Israeli occupation    666                0           0
## 1104     Israeli occupation    666                0           0
## 1105     Israeli occupation    666                0           0
## 1106     Israeli occupation    666                0           0
## 1107     Israeli occupation    666                0           0
## 1108     Israeli occupation    666                0           0
## 1109     Israeli occupation    666                0           0
## 1110     Israeli occupation    666                0           0
## 1111     Israeli occupation    666                0           0
```

```
## 1112     Israeli occupation    666                0          0
## 1113     Israeli occupation    666                0          0
## 1114     Israeli occupation    666                1          1
## 1115     Israeli occupation    666                1          1
## 1116     Israeli occupation    666                1          1
## 1117     Israeli occupation    666                1          1
## 1118     Israeli occupation    666                1          1
## 1119     Israeli occupation    666                1          1
## 1120     Israeli occupation    666                1          1
## 1121     Israeli occupation    666                0          0
## 1122     Israeli occupation    666                0          0
## 1123     Israeli occupation    666                0          0
## 1124     Israeli occupation    666                0          0
## 1125     Israeli occupation    666                0          0
## 1126     Israeli occupation    666                0          0
## 1127     Israeli occupation    666                0          0
## 1128     Israeli occupation    666                0          0
## 1129     Israeli occupation    666                0          0
## 1130     Israeli occupation    666                0          0
## 1131     Israeli occupation    666                0          0
## 1132     Israeli occupation    666                0          0
## 1133     Israeli occupation    666                0          0
## 1326          Mil/civ junta     92                1          1
## 1327          Mil/civ junta     92                1          1
## 1328 El Salvador government     92                1          1
## 1329 El Salvador government     92                0          0
## 1330 El Salvador government     92                0          0
## 1331 El Salvador government     92                0          0
## 1332 El Salvador government     92                0          0
## 1333 El Salvador government     92                0          0
## 1334 El Salvador government     92                0          0
## 1335 El Salvador government     92                0          0
## 1336 El Salvador government     92                0          0
## 1337 El Salvador government     92                0          0
## 1338 El Salvador government     92                0          0
## 1339 El Salvador government     92                0          0
## 1340 El Salvador government     92                0          0
```

This seems to contradict the documentation for navco1designation in these cases.

In other cases, navco1designation differs from prim_method, per the documentation:

```
with(NAVCO2, table(navco1designation==prim_method))
```

```
##
## FALSE  TRUE
##   103  1623
```

camp_orgs

Number of new named organizations involved in the campaign each year:

```
table(NAVCO2$camp_orgs, exclude=NULL)
```

```
##
##  -99    0    1    2    3    4    5    6    7    8    9   10   11 <NA>
##    4  852  345  118   60   24   12   12   11    9    6    3   21  249
```

There are three things to note here:
* “11” means 10 or more * “-99” means that a concerted effort was made to find the data to no avail. * NA means that a search for this number is continuing and might be added in a future update to NAVCO2.

To simplify further analysis, a new variable campOrgs was added to NAVCO2, being camp_orgs with “-99” recoded as NA:

campOrgs <- NAVCO2$camp_orgs$campOrgs[$campOrgs == -99] <- NA$NAVCO2campOrgs <- campOrgs

camp_size

Campaign size categories:

```
campSz <- ordered(NAVCO2$camp_size,
      c(0:5, -99, NA),
      c('1-999', '1000-9,999',
        '10,000-99,999', '100,000-499,999',
        '500,000-1 million', '> 1 million',
```

```
        'cannot find', 'not adequately researched'),
      exclude=NULL)
table(campSz)
```

```
## campSz
##                     1-999                1000-9,999
##                       161                       587
##             10,000-99,999           100,000-499,999
##                       599                       129
##         500,000-1 million               > 1 million
##                        30                        44
##               cannot find not adequately researched
##                         4                       172
```

We might expect correlation between camp_orgs and campSize:

```
table(campSz, NAVCO2$camp_orgs, exclude=NULL)
```

```
##
## campSz                      -99   0   1   2   3   4   5   6   7   8   9
##   1-999                       0  92  33   9   3   3   0   0   0   0   0
##   1000-9,999                  1 335 111  37  16   1   0   3   5   0   2
##   10,000-99,999               0 307 106  48  29   9   5   5   4   5   0
##   100,000-499,999             0  62  35   5   2   6   3   2   1   3   2
##   500,000-1 million           3  10  12   1   0   0   2   0   0   0   0
##   > 1 million                 0  16  12   6   1   1   0   0   0   1   0
##   cannot find                 0   0   2   0   0   0   0   0   0   0   0
##   not adequately researched   0  30  34  12   9   4   2   2   1   0   2
##   <NA>                        0   0   0   0   0   0   0   0   0   0   0
##
## campSz                      10  11 <NA>
##   1-999                      0   0   21
##   1000-9,999                 0   2   74
##   10,000-99,999              2   5   74
##   100,000-499,999            1   6    1
##   500,000-1 million          0   1    1
##   > 1 million                0   6    1
##   cannot find                0   1    1
##   not adequately researched  0   0   76
##   <NA>                       0   0    0
```

```
with(NAVCO2, cor(camp_orgs, camp_size,
        use="complete.obs", method='spearman'))
```

```
## [1] 0.1424892
```

campSz. <- NAVCO2
$camp_sizecampSz.[campSz. == -99] < -NAcampSize < -ordered(campSz., 0:5, c('1-999','1000-9,999','10,000-99
<- campSize

camp_size_est

camp_size_est is a slightly courser estimate than camp_size of the number of people involved:

```
with(NAVCO2, table(camp_size, camp_size_est, exclude=NULL))
```

```
##          camp_size_est
## camp_size -99   0   1   2   3 <NA>
##      -99    1   1   1   0   0    1
##      0      0 152   0   0   0    9
##      1      0 572  14   1   0    0
##      2      0   7 591   1   0    0
##      3      0   0   0 129   0    0
##      4      0   0   0  30   0    0
##      5      0   0   0   0  44    0
##      <NA>   0  13   1   1   0  157
```

The two campaign size variables are highly correlated, but camp_size_est has fewer missing values (both -99 and NA)

campSizeEst is camp_size_est as an ordered factor with -99 recoded as NA

```
campSzE <- NAVCO2$camp_size_est
campSzE[campSzE==-99] <- NA
campSizeEst <- ordered(campSzE, 0:3,
```

```
    c('small', 'medium', 'large', 'veryLarge'))
#NAVCO2$campSizeEst <- campSizeEst
```

camp_conf_intensity

Intensity of Conflict Within the Campaign:

```
table(NAVCO2$camp_conf_intensity, exclude=NULL)
```

```
##
##    0    1    2    3 <NA>
##  577  481  325  321   22
```

This variable appears as an ordered factor as campConflict:

```
campConf <- NAVCO2$camp_conf_intensity
campConf[campConf==-99] <- NA
campConfI <- ordered(campConf, 0:3,
      c('united', 'moderate',
        'competition', 'violent') )
table(campConfI, exclude=NULL)
```

```
## campConfI
##      united    moderate competition     violent        <NA>
##         577         481         325         321          22
```

```
#NAVCO2$campConflict <- campConfI
```

rad_flank

Existence of a radical flank.

```
table(NAVCO2$rad_flank, exclude=NULL)
```

```
##
##    0    1    2 <NA>
## 1381  191  143   11
```

This is recoded as an ordered factor in radFlank

```
radF <- NAVCO2$rad_flank
radF[radF==-99] <- NA
radFlank <- ordered(NAVCO2$rad_flank,
    c(1:2, 0), c('nonviolent', 'radical flank',
                 'violent') )
#NAVCO2$radFlank <- radFlank
```

resis_meth

Change in Primary Resistance Method

```
table(NAVCO2$resis_meth, exclude=NULL)
```

```
##
##    0    1    2 <NA>
## 1643   41   21   21
```

This is recoded as a factor in resisChg

```
resCh <- NAVCO2$resis_meth
resCh[resCh==-99] <- NA
resChg <- factor(resCh, 0:2,
      c('no change', 'nonviolent->violent',
        'violent->nonviolent') )
#NAVCO2$resisChg <- resChg
```

Campaign diversity variables

NAVCO2 includes a series of dummy variables that looks at whether a campaign contains “diversity” by spanning two or more sub-categories of the population. These are as follows:

cdivers_gender, cdivers_age, cdivers_class, cdivers_urbrural, cdivers_ideol, cdivers_party, cdivers_regional, cdivers_ethnic.

These are coded as follows:

0=not diverse,

1=diverse

-99=unknown after research

NA = currently unknown, might change in a future update of NAVCO2

```
table(NAVCO2$cdivers_gender, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  396 1178  146
```

```
table(NAVCO2$cdivers_age, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  161 1432  127
```

```
table(NAVCO2$cdivers_class, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  285 1299  136
```

```
table(NAVCO2$cdivers_urbrural, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  339 1240  141
```

```
table(NAVCO2$cdivers_ideol, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  602 1020   98
```

```
table(NAVCO2$cdivers_party, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  700  855  165
```

```
table(NAVCO2$cdivers_regional, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  391 1223  106
```

```
table(NAVCO2$cdivers_ethnic, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    6  792  800  128
```

```
table(NAVCO2$cdivers_religion, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
```

```
##    6  814  689  217
```

These are also available as logicals:

```
asLogical <- function(x){
  x[x==-99] <- NA
  as.logical(x)
}
#NAVCO2$diverseGender <- asLogical(NAVCO2$cdivers_gender)
#NAVCO2$diverseGender <- asLogical(NAVCO2$cdivers_gender)
#NAVCO2$diverseAge <- asLogical(NAVCO2$cdivers_age)
#NAVCO2$diverseClass <- asLogical(NAVCO2$cdivers_class)
#NAVCO2$diverseUrbrural <- asLogical(NAVCO2$cdivers_urbrural)
#NAVCO2$diverseIdeol <- asLogical(NAVCO2$cdivers_ideol)
#NAVCO2$diverseParty <- asLogical(NAVCO2$cdivers_party)
#NAVCO2$diverseRegional <- asLogical(NAVCO2$cdivers_regional)
#NAVCO2$diverseEthnic <- asLogical(NAVCO2$cdivers_ethnic)
#NAVCO2$diverseReligion <- asLogical(NAVCO2$cdivers_religion)
```

Campaign Goals: camp_goals

```
table(NAVCO2$camp_goals, exclude=NULL)
```

```
##
##    0    1    2    3    4    5 <NA>
##  714   21  117  348  153  357   16
```

This integer variable was recast as ordered as follows:

```
campG <- NAVCO2$camp_goals
campG[campG==-99] <- NA
campGoals <- ordered(campG, c(2, 1, 4, 3, 5, 0),
    c("policy change", "significant institutional reform",
      "greater autonomy", "territorial secession",
      "anti-occupation", "regime change") )
#NAVCO2$campGoals <- campGoals
```

campGoals was cast as ordered, because at least from some perspectives, “policy change” is a more modest goal than “significant institutional reform”, which is arguable more modest than “greater autonomy”, etc., and “regime change” is arguably the most extreme goal on this list.

Conveniently, this ordering is reflected in the coding:

```
str(campG)
```

```
##  int [1:1726] 0 0 0 0 0 0 0 0 5 5 5 ...
```

```
str(campGoals)
```

```
##  Ord.factor w/ 6 levels "policy change"<..: 6 6 6 6 6 6 6 5 5 5 ...
```

NAVCO2$camp_goals for the first 7 observations is 0 = “regime change”, followed by 5 = “anti-occupation”. These observations are coded on campGoals as 6 and 5, the most extreme and second most extreme of the six goals.

goalschange

This is 1 if there is a substantive change in the goals of organizations pushing for change in a given year.

```
table(NAVCO2$goalschange, exclude=NULL)
```

```
##
##    0    1 <NA>
## 1663   45   18
```

This is recoded as logical in goalsChange:

```
#NAVCO2$goalsChange <- asLogical(NAVCO2$goalschange)
```

camp_structure

Is campaign organization and decision making hierarchical?

```
table(NAVCO2$camp_structure, exclude=NULL)
```

```
##
##    0    1 <NA>
##  604 1101   21
```

As before, recode this as logical:

```
#NAVCO2$campStructure <- asLogical(NAVCO2$camp_structure)
```

Parallel Institutions

To what extents do the campaigns create parallel institutions for services that are either not provided by the official government or are considered inadequate or inappropriate?

```
table(NAVCO2$pi_educ, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15  727  604  380
```

```
table(NAVCO2$pi_socwel, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15  710  597  404
```

```
table(NAVCO2$pi_tradmedia, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15  442 1004  265
```

```
table(NAVCO2$pi_newmedia, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15 1094   85  532
```

```
table(NAVCO2$pi_police, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15  821  458  432
```

```
table(NAVCO2$pi_army, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15  224 1379  108
```

```
table(NAVCO2$pi_dispute, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   15  847  365  499
```

Logical versions of these were created as for other variables:

```
#NAVCO2$piEduc <- asLogical(NAVCO2$pi_educ)
#NAVCO2$piSocwel <- asLogical(NAVCO2$pi_socwel)
#NAVCO2$piTradmedia <- asLogical(NAVCO2$pi_tradmedia)
#NAVCO2$piNewmedia <- asLogical(NAVCO2$pi_newmedia)
```

```
#NAVCO2$piPolice <- asLogical(NAVCO2$pi_police)
#NAVCO2$piArmy <- asLogical(NAVCO2$pi_army)
#NAVCO2$piDispute <- asLogical(NAVCO2$pi_dispute)
```

media_outreach

Did the campaign spend significant resources on public relations, publicity and traditional media coverage?

```
table(NAVCO2$media_outreach, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   39  326 1227  134
```

Also available as a logical with -99 recoded as NA:

```
#NAVCO2$mediaOutreach <- asLogical(NAVCO2$media_outreach)
```

repression

Degree of state repression:

```
table(NAVCO2$repression, exclude=NULL)
```

```
##
##  -99    0    1    2    3 <NA>
##    2  120   41  135 1405   23
```

Recode this as an ordered factor:

```
Rep <- NAVCO2$repression
Rep[Rep==-99] <- NA
Repr <- ordered(Rep, 0:3,
    c("none", "mild", "moderate", "extreme") )
#NAVCO2$Repression <- Repr
```

discrim

Is regime repression indiscriminate (1) or targeted?

```
table(NAVCO2$discrim, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##    7  402 1196  121
```

And recoded as logical so indiscriminate is FALSE

```
#NAVCO2$Discrim <- !asLogical(NAVCO2$discrim)
```

Audience backlash

ab_domestic_con is 1 if there is substantive backlash by domestic leaders. ab_inter_con is 1 if there is substantive international condemnation. ab_inter_reper is 1 if there are material economic sanctions.

```
table(NAVCO2$ab_domestic_con, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   62  607  587  470
```

```
table(NAVCO2$ab_inter_con, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   62  593  650  421
```

```
table(NAVCO2$ab_inter_reper, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   62  806  353  505
```

These also available as logicals with -99 combined with NAs:

```
#NAVCO2$abDomesticCon <- asLogical(NAVCO2$ab_domestic_con)
#NAVCO2$abInterCon <- asLogical(NAVCO2$ab_inter_con)
#NAVCO2$abInterReper <- asLogical(NAVCO2$ab_inter_reper)
```

camp_backlash

Campaign Backlash Against State Repression

```
table(NAVCO2$camp_backlash, exclude=NULL)
```

```
##
##  -99    0    1    2    3 <NA>
##    9  133   80  396 1030   78
```

Recode as an ordered factor with “no repression” between decrease and increase:

```
campB <- NAVCO2$camp_backlash
campB[campB==-99] <- NA
cB <- ordered(campB, c(1:2, 0, 3),
    c('suppressed', 'decreased',
      'no repression', 'increased') )
#NAVCO2$campBacklash <- cB

table(NAVCO2$campBacklash, exclude=NULL)
```

```
##
##    suppressed     decreased no repression     increased          <NA>
##            80           396           133          1030            87
```

Major defections or loyalty shifts

```
table(NAVCO2$sec_defect, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##  315  883  262  266
```

```
table(NAVCO2$state_defect, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##  344  937  179  266
```

and recoded as logicals:

```
#NAVCO2$secDefect <- asLogical(NAVCO2$sec_defect)
#NAVCO2$stateDefect <- asLogical(NAVCO2$state_defect)
```

dom_media

Domestic media coverage of the campaign:

```
table(NAVCO2$dom_media, exclude=NULL)
```

```
##
##  -99    0    1    2 <NA>
##   27  285  288  906  220
```

Also available as an ordered factor:

```
domM <- NAVCO2$dom_media
domM[domM==-99] <- NA
dM <- ordered(domM, 0:2,
     c('little', 'moderate', 'high') )
#NAVCO2$domMedia <- dM
```

Support variables

```
# formal support from other states
table(NAVCO2$regime_support, exclude=NULL)
```

```
##
##    0    1 <NA>
##  611  892  223
```

```
# other states have withdrawn support from the regime
table(NAVCO2$wdrwl_support, exclude=NULL)
```

```
##
##    0    1 <NA>
## 1356   77  293
```

```
# campaign has formal overt support from other states
table(NAVCO2$camp_support, exclude=NULL)
```

```
##
##    0    1 <NA>
##  721  913   92
```

```
# campaign has formal support from
# international NGOs and societal actors
table(NAVCO2$ingo_support, exclude=NULL)
```

```
##
##    0    1 <NA>
## 1352  210  164
```

```
#campaign has support from diasporas
#living in countries other than the target state
table(NAVCO2$dias_support, exclude=NULL)
```

```
##
##    0    1 <NA>
##  806  778  142
```

These support variables are also available as logicals:

```
#NAVCO2$regimeSupport <- asLogical(NAVCO2$regime_support)
#NAVCO2$wdrwlSupport <- asLogical(NAVCO2$wdrwl_support)
#NAVCO2$campSupport <- asLogical(NAVCO2$camp_support)
#NAVCO2$ingoSupport <- asLogical(NAVCO2$ingo_support)
#NAVCO2$diasSupport <- asLogical(NAVCO2$dias_support)
```

Sanctions

```
# international sanctions imposed on the regime
# for cracking down on opposition
table(NAVCO2$sdirect, exclude=NULL)
```

```
##
##    0    1 <NA>
## 1432  258   36
```

```
# international sanction are lifted
table(NAVCO2$slifted, exclude=NULL)
```

```
##
##    0    1 <NA>
## 1561   39  126
```

Recast as logical:

```
#NAVCO2$sDirect <- asLogical(NAVCO2$sdirect)
#NAVCO2$sLifted <- asLogical(NAVCO2$slifted)
```

in_media

International traditional media coverage of the campaign

```
table(NAVCO2$in_media, exclude=NULL)
```

```
##
##  -99    0    1    2 <NA>
##    3  487  586  603   47
```

Also available as an ordered factor:

```
inM <- NAVCO2$in_media
inM[inM==-99] <- NA
iM <- ordered(inM, 0:2,
     c('little', 'moderate', 'high') )
#NAVCO2$inMedia <- iM
```

success

```
table(NAVCO2$success, exclude=NA)
```

```
##
##    0    1
## 1593  117
```

progress

```
table(NAVCO2$progress, exclude=NA)
```

```
##
##    0    1    2    3    4
## 1158  174  127  135  117
```

Recode as ordered:

```
Prog <- NAVCO2$progress
Prog[Prog==-99] <- NA
Prg <- ordered(Prog, 0:4,
    c('status quo', 'gains, no concessions',
      'limited concession',
      'significant concessions',
      'complete success') )
#NAVCO2$Progress <- Prg
```

pop_opinion

```
table(NAVCO2$pop_opinion, exclude=NULL)
```

```
##
##  -99    0    1 <NA>
##   71  779  434  442
```

Recast as logical:

```
#NAVCO2$popOpinion <- asLogical(NAVCO2$pop_opinion)
```

reliability

```
table(NAVCO2$reliability, exclude=NULL)
```

```
##
##    1    2    3 <NA>
##   35  686  972   33
```

Recode as an ordered factor:

```
rel <- ordered(NAVCO2$reliability, 1:5,
    c('low', 'some', 'adequate',
      'substantial', 'wealth') )
#NAVCO2$Reliabilty <- rel
```

id

Campaign id code

```
str(id <- table(NAVCO2$id))
```

```
##  'table' int [1:250(1d)] 3 4 10 1 3 11 2 2 3 1 ...
##  - attr(*, "dimnames")=List of 1
##   ..$ : chr [1:250] "1" "2" "3" "4" ...
```

250 unique codes

```
sum(is.na(NAVCO2$id))
```

```
## [1] 0
```

No missing values ;-)

prim_method

Primary campaign method each year

```
table(NAVCO2$prim_method, exclude=NULL)
```

```
##
##    0    1 <NA>
## 1381  345    0
```

References

[1] E. Chenweth and O. A. Lewis. “Unpacking nonviolent campaigns: Introducing the NAVCO 2.0 dataset”. In: *Journal of Peace Research* 59 (2013), pp. 415-423.