Alliance Networks Datasets

General. The alliance network datasets were generated from the Alliance Treaty Obligations and Provisions Project (Leeds 2005). Anyone wishing to use these datasets should cite the ATOP project's data should cite it as:

Leeds, Brett Ashley, Jeffrey M. Ritter, Sara McLaughlin Mitchell, and Andrew G. Long. 2002. Alliance Treaty Obligations and Provisions, 1815-1944. *International Interactions* 28: 237-260, as well as:

Leeds, Brett Ashley 2005. Alliance Treaty Obligations and Provisions Codebook. http://atop.rice.edu/data.

Alliance Types in the ATOP dataset.

The ATOP project lists six types of alliances:

0 No alliance of any type

1 Shared obligations. This is coded if the two states in the dyad are members of the same alliance but have no obligations to one another. This occurs most commonly when two states jointly promise to defend a third state

2 Consultation pacts do not specifically commit the members to active military support of one another in the event of conflict, but they do commit the members to attempt to develop coordinated action Consultation pacts obligate members to communicate with one another in the event of crises that have the potential to result in military conflict with the goal of creating a joint response. While more vague in their commitments to joint action than defense pacts and offense pacts, consultation pacts do announce formally the intention of the allies to cooperate against military threats

3 Nonaggression pact is coded if the alliance member promises not to use force against one or more alliance partners to settle disputes. The member must promise specifically to refrain from the use of force in relations with the alliance partner, to refrain from participating in any action against the alliance partner and/or to settle all disputes peacefully in relations with the alliance partner.

4 Neutrality pact is coded if the alliance member promises not to join a conflict between one or more alliance partners and a third party on the side of the ally's adversary. This promise implies both that the state will not participate actively in the conflict on the side of the adversary and will not facilitate the effort of the partner's adversary in any way.

5 Offense pact is coded if the alliance member promises to provide active military support under any conditions not precipitated by attack on the sovereignty or territorial integrity of an alliance partner, regardless of whether the goals of the action are to maintain the status quo.

6 Defense pact is coded if the alliance member promises to provide active military support in the event of attack on the sovereignty or territorial integrity of one or more alliance partners. A promise to treat such an attack on one alliance member as an attack on all alliance members qualifies as a promise of defensive support

I our datasets we ignore the shared obligations category because it reflects an indirect alliance, and this will be picked up in the analyses anyway.

Contents of the Alliance Webpage.

The alliance webpage contains three groups of datasets:

1. Binary alliance data: Entries in these datasets are marked as 1 if dyad *ij* had any type of alliance, and zero otherwise.
2. Binary defense pact data: Entries in these datasets are marked as 1 if dyad *ij* had an offensive or defensive pact, and zero otherwise.
3. Relative commitment data: Entries in these datasets has a value of $0 \leq relcom_{ij} \leq 1$. These entries reflect the value of the total commitment that state *i* has towards state *j*. The relative commitment score takes into account the fact that two states may have multiple obligations at any given time. It also takes into account the possibility that two states will share all possible obligations at a given point in time. Finally, it assumes that a state has a complete set of obligations towards itself. The types of alliances are converted into a relative commitment score such that,

$$relcom_{ij} = \frac{\sum_{t=2}^{6} com_{ij}}{2.65}$$

And com_{ij} is defined as:

$$com_{ij} = \begin{cases} 0 & if\ at_{ij} = 0 \\ 0.25 & if\ at_{ij} = 2 \\ 0.45 & if\ at_{ij} = 3 \\ 0.55 & if\ at_{ij} = 4 \\ 0.65 & if\ at_{ij} = 5 \\ 0.75 & if\ at_{ij} = 6 \end{cases}$$

And at_{ij} is the type of alliance commitment of state *i* towards state *j*. A more elaborate explanation of this coding is given in Maoz (2010: 41-42, 204-210).

Note that ATOP contains a number of asymmetric alliance obligations (about 0.29 of one percent of all obligations). For that reason, each group of network data contains two versions. A directed network and an undirected network. The latter is a symmetrized version of the directed network such that the highest value of x_{ij}, x_{ji} is selected (*x* is the specific value of a relationship in that network).

The data in the webpage consists of the following files:

1. atopally.csv: This is a binary alliance file. The dataset is formatted as a dyadic dataset with four columns:
   a. Year (this is the network ID variable).
   b. State *i* (this is the row label).
   c. State *j* (this is the column label).
   d. Alliance. $a_{ij} = 1$ if state *i* had any type of obligation towards state *j*, and zero otherwise.

2. atopallymat.csv: This is a matrix format outlay of the atopally.csv file. It contains a series of matrices of size $n_t \times n_n$, with n_t being the number of states that existed in year t. Its format is as follows:
    a. Year (network ID provided on the top-left cell of each matrix).
    b. First row—Column Labels—State j in the atopally.csv file.
    c. First column—Row Labels—State i in the atopally.csv file.
    d. Matrix entries—equivalent to the a_{ij} entry in atopally.csv
3. symatopally.csv: An undirected (symmetrized) version of atopally.csv
4. symatopallymat.csv: undirected (symmetrized) version of atopallymat.csv
5. defoff.csv: This is also a dyadic file with entries d_{ij} receiving the value of 1 if state i had either a defense pact or an offense pact obligation to state j, and zero otherwise. This file picks up the alliances with actionable commitments among states.
6. defoffmat.csv: The matrix version of defoff.csv
7. symdefoff.csv: The undirected version of deoff.csv
8. symdefoffmat.csv: The matrix version of symdefoff.
9. relcommit.csv: The dyadic version with valued commitment data.
10. relcommitmat.csv: The matrix version of relcommit.csv
11. symcommit: The undirected version of relcommit.csv
12. symcommitmat: The matrix version of symcommit.

Codebook. The ATOP codebook is also placed on the alliance Webpage.