Security Force Ethnicity (SFE) Dataset v1.0
MENA Region

CODEBOOK

April 2017

Materials to be distributed with this codebook:

1. "Gleditsch and Ward Independent States" text file, available here.
2. "EPR 2014" CSV file, available here.
3. "SFE sources masterlist" Google Sheet, available here.
4. "SFE country template" Google Sheet, available here.

1 Basic outline of instructions for coders

1. After you have been assigned a country to work on, make a copy of the "SFE country template" sheet and rename it as "SFE data for ___", filling in the blank with the name of the country you are working on (referred to hereafter as the country-specific spreadsheet). Under the *evidence: sorted* tab, in the leftmost column create a separate heading for each portion and EPR period for which you will be entering data and leave a few rows under each heading to be filled in later.

2. Search for hard-copy and electronic sources for that country, and when you obtain a source that looks like it might have data, enter the source's bibliographical information on *country sources* tab of the country-specific spreadsheet.

3. Look through the source for evidence. If there is no evidence in the source at all, mark it as "eliminated" on the *country sources* tab, and go back to step 2. If you find evidence, move to step 4.

4. On the *evidence: raw* tab, enter from the source each quotation that contains evidence on a separate row. Each quotation on each row should only apply to one set of values for STYEAR_GIVEN and ENDYEAR_GIVEN and to one PORTION, so if you have a passage that refers to two different time frames or to two different force portions, then enter that quotation twice, once under each value. Go to step 5.

5. Fill in the rest of the variables on the *evidence: raw* tab based on the information given in the quotation. Each quotation may have multiple values entered for it on APPLY_PERIOD and on GROUP: just separate them with commas. Go to step 6.

6. Once the whole row is filled out for that quotation, copy the entire row and paste it under the heading that you have created on the *evidence: sorted* tab for the appropriate portion and period. If a quotation has multiple values listed for APPLY_PERIOD, then paste the quotation under each heading to which it belongs by period. Go back to the source, and if you find more evidence, repeat steps 4-6 until you have entered all of the evidence that the source contains. If you have finished collecting all available evidence from the source, move to step 7.

7. For the group of quotations under each portion-period heading on the *evidence: sorted* tab, check whether you have enough information to generate codings for any ethnic group for that portion and period with high confidence. If so, go to step 8. Otherwise, go back to step 2.

8. Generate codings for that group on the *data: group-level* tab by drawing from all of the quotations that are now under the relevant heading in the *evidence: sorted* tab. Some of the quotations in that pile will directly apply to the group you are making coding decisions for, and some of them will serve as indirect evidence to help you deduce the information for that group. Once you have entered the coding for that group, check whether you have enough information on the *evidence: sorted* tab to generate any other codings, and if so, generate those codings following this same step. If not:

(a) if there are any other group that still remain to be coded due to lack of sufficient evidence, and you have not exhausted the supply of available sources, go back to step 2;

(b) if all group have been coded, or if you have exhausted the supply of available sources, go to step 9.

9. Write the narrative for that country explaining all of your coding decisions and referencing the original data sources using in-text citations.

2 Setup and Sources

For this project, we use two spreadsheets for each country on which data is to be collected, a Sources Masterlist spreadsheet containing the bibliographic information for all of our sources, and a spreadsheet specific to that country. The country-specific spreadsheet is titled with the name of the country, and a new country-specific spreadsheet is created for each country to be covered.

The country-specific spreadsheet has four tabs:
country sources
evidence: raw
evidence: sorted
data: group-level.

In addition, once data collection has been completed for each country, the coder writes a synopsis containing a brief overview of the history of ethnic representation in the military of that country, making specific reference to every source used, as well as providing verbal justification for the coding decisions made in the aggregation stage.

We focus on gathering data for the period of 1945 onward, although we enter any data from earlier years that we encounter.[1]

2.1 Acceptable Sources and Evidence

Acceptable sources include any primary or secondary source that provides information that can help in establishing estimates for an ethnic group's degree of representation within the military, including books, articles, journalistic sources. Given that governments at least in developing countries may not be trustworthy with official estimates provided on such a politically sensitive subject as ethnic representation in the military, we would tend to view information published by the country's own government very skeptically, although in any case official estimates are almost never publicly available.

Any evidence from such sources that may help in establishing estimates is acceptable: this includes explicit figures like a group's percentage within the military or the number of its members in the military, qualitative descriptions like "over-represented" or "under-represented," and even indirect evidence, such as a statement about changes in a group's share following a purge.

Because conscription laws often explicitly or intentionally exclude specific ethnic groups in practice or even within the text of the law, information about conscription use is insufficient without

[1] For version 1 of this dataset, we only publish data covering the 1946+ time period.

additional confirmatory evidence about the *de jure* or the *de facto* application of the conscription policy.

If the source cites a previous source for the statement or evidence that it provides about a group's share in the military, we attempt to track down that original source and rely on it instead of the current source. If the original source cannot be obtained, it is acceptable to use the current source in its place, under the assumption that the author of the current source is endorsing the statement as still accurate.

We attempt to consult sources from a range of decades within larger EPR time periods, such as for countries (like Turkey or Jordan) that only have a single EPR period covering many decades. This allows us in the aggregation stage to better determine whether the EPR time-periods serve as the proper units of analysis for study or whether they need to be subdivided.

2.2 Entering Source Information

First, the coder enters the bibliographic information about each source used. This information is entered first on the "SFE sources masterlist" spreadsheet that is used for all sources for all countries, and secondly on the *country sources* tab of the country-specific spreadsheet. The variables to be entered on each spreadsheet are described in Tables 1 and 2, respectively.

Table 1: "SFE sources masterlist" spreadsheet

Variable name	Description
sourcecode	A unique identifier for each source.
sourcebib	Another unique identifier, a character string to represent bibliographic info on the source, used for convenience.
sourceyear	Publication year of the source.
sourcename	Title of the source.
sourceweb	URL address of the source, if applicable.
sourcebox	URL address of the source at box.com, if uploaded to our shared folder there.
sourcefind	The source's standardized location identifier: ISBN, DOI, or OCLC number, if it has one.
countries	A note about which countries the source presents data about.
notes	Any brief, useful notes about the source as it relates to any of the countries we are collecting data on.

The description of the variables on the *country sources* tab of the country-specific spreadsheet is found in Table 2. As the first six variables are identical to the first six variables on the "SFE sources masterlist" spreadsheet, these cells should be copied and pasted directly from that spreadsheet. The next three variables are unique to the country-specific spreadsheet.

Table 2: Country-specific spreadsheet: *country sources* tab

Variable name	Description
sourcecode	Same as in Table 1.
sourcebib	Same as in Table 1.
sourceyear	Same as in Table 1.
sourcename	Same as in Table 1.
sourceweb	Same as in Table 1.
sourcebox	Same as in Table 1.
sourcefind	Same as in Table 1.
howused	Either "eliminated" or "data," depending on whether there was any codeable data in the source.
who	The name of the coder assigned to examine that source (to prevent duplication of efforts if more than one coder is assigned to work on the same country).
notes	Any brief, useful notes about the source as it relates to this country specifically.

3 Collecting Evidence

From the secondary sources, the coder extracts relevant information about the relative and absolute levels of representation of ethnic groups within the rank and file as well as the officer corps of the military across time. Salient ethnic groups are identified, evidence is collected, attributed to the relevant units of analysis, cited to its source, and coded to the specific military units to which it applies. For this task, the coder works with the *evidence: raw* and *evidence: sorted* tabs of the country-specific spreadsheet. Tables 3 and 4, respectively, describe the variables on these tabs.

The coder begins by entering in the information in the *evidence: raw* tab, following the guidelines in Table 3.

If the source from which the coder is entering information cites another source as the actual source of the evidence being provided (as opposed to being an original estimate), the three "prevsource" variables should be filled out; otherwise, they should be left blank. The prevsource variables serve two purposes: first, within the variables **prevsource_ref** and **prevsource_page**, to

provide the coder a place to store information about a potentially useful source that can then be tracked down to see if there is further information that can be coded for this project; second, within the variable **prevsource_year**, to flag the publication year of the previous source, so that when determining the applicability of estimates presented as being current we can use the previous source's publication year (minus one) as the correct year, instead of using the current source's publication year, as discussed further below.

Table 3: Country-specific spreadsheet: *evidence: raw* tab

Variable name	Overview
gwid	Gleditsch and Ward (1999) state ID number.
statename	State name.
group	Name of ethnic group.
portion	Code for security force portion (see Table 5).
styear_given	The beginning year to which the evidence is applied by the source.
endyear_given	The end year to which the evidence is applied by the source.
apply_period	The EPR period (in YYYY-YYYY format) to which this statement should be applied; if more than one, separate with commas.
evidence	The quotation or summary of evidence from the source.
info_type	What kind of information the evidence gives us: *relative* (group's relative share), *absolute* (group's absolute share), or *dynamic* (info about changes in the group's share).
sourcecode	Same as in Table 1.
sourcebib	Same as in Table 1.
sourceyear	Same as in Table 1.
sourcename	Same as in Table 1.
sourcepage	The page(s) on which the quotation or evidence is (are) found.
prevsource_ref	The entire reference for the previous source that this source is citing for the information.
prevsource_year	Publication year of previous source.

prevsource_page	Same as sourcepage, but for the previous source that this source is citing for the information.
comments	Any brief, useful notes about the evidence taken from the source.

Next, the coder copies and pastes the entire row from the sheet on the *evidence: raw* tab to the sheet on the *evidence: sorted* tab, to be placed together under the same heading as other quotes pertaining to the same country and portion, forming a block of quotations to be dealt with as a whole to make coding decisions at a later stage.

Table 4: Country-specific spreadsheet: *evidence: sorted* tab

Variable name	Overview
gwid	Same as in Table 3.
statename	Same as in Table 3.
group	Same as in Table 3.
portion	Same as in Table 3.
styear_given	Same as in Table 3.
endyear_given	Same as in Table 3.
apply_period	Same as in Table 3.
evidence	Same as in Table 3.
info_type	Same as in Table 3.
sourcecode	Same as in Table 3.
sourcebib	Same as in Table 3.
sourceyear	Same as in Table 3.
sourcename	Same as in Table 3.
sourcepage	Same as in Table 3.
prevsource_ref	Same as in Table 3.
prevsource_year	Same as in Table 3.
prevsource_page	Same as in Table 3.
comments	Same as in Table 3.

Figure 1 shows a demonstration of how the headings on the *evidence: sorted* tab would operate, using the example of Lebanon, which has EPR periods of 1946-1970, 1971-1991, and 1992-2012. Each row of data copied from the *evidence: raw* tab should be pasted under the appropriate heading(s) based on the period(s) to which the evidence in that row of data applies.

	A	B	C	D	E	F	G	
1	GWID	STATENAME	GROUP	PORTION	STYEAR_GIVEN	ENDYEAR_GIVEN	APPLY_PERIOD	EVIDENCE
2	660	Lebanon		OFFICERS			pre-1946	
3								
4								
5	660	Lebanon		OFFICERS			1946-1970	
6								
7								
8	660	Lebanon		OFFICERS			1971-1991	
9								
10								
11	660	LEBANON		OFFICERS			1992-2012	
12								
13								
14	660	LEBANON		RANK AND FILE			pre-1946	
15								
16								
17	660	LEBANON		RANK AND FILE			1946-1970	
18								
19								
20	660	LEBANON		RANK AND FILE			1971-1991	
21								
22								
23	660	LEBANON		RANK AND FILE			1992-2013	
24								

Figure 1: *evidence: sorted* tab (demonstration)

3.1 Identifying Salient Ethnic Groups

Identifying the salient ethnic groups to be coded is one of the first challenges the coder will face. We define "ethnic group" using the same definition used by the creators of the EPR dataset (Wimmer et al., 325), who, "Following the constructivist, Weberian tradition, ... define ethnicity as a subjectively experienced sense of commonality based on a belief in common ancestry and shared culture."

Because of this common conceptualization of ethnicity and because the process of data collection is easier with a list of groups from which to start, the ethnic groups listed in the EPR dataset is a valuable first reference for identifying salient ethnic groups in a country. EPR specifically includes groups that are "politically salient" which should largely parallel those that would be salient within the military forces.

However, coders should be faithful to the sources consulted in terms of identifying salient ethnic groups. They record data based on the names of groups referenced in the secondary literature. Based on these findings, the coder may eventually wish to expand and or otherwise modify the list of groups from EPR, as will be discussed later in the aggregation stage (see section 4.1).

In particular, there are two areas where this dataset diverges from EPR in how it operationalizes its codings of ethnic groups that are important for coders to keep in mind. The first is the inclusion of expatriates: foreign nationals that either reside within the country or are recruited directly from abroad to serve in the military. In countries that employ foreign nationals in the country's military, we treat these non-citizen groups as having an ethnic identity of their own. This includes cases of mercenaries in the military, soldiers or officers on loan from a former colonial power, and non-citizen soldiers or officers generally. For countries that employ non-citizens in the military, some sources will provide information about these foreign nationals by specifying their nationality, while other sources only provide information about "non-citizens" generally. In either case, when entering the information, the coder enters under **group** the specific label reported in the source.

Another important feature of this dataset is that we allow for nesting of group identities: in other words, it is appropriate to code both a group and a subset of that group that identifies as its own mini-group (e.g., Sunnis vs. Sunni Arabs vs. Tikritis in Iraq) if data are encountered at both levels. Note that any analysis that uses both child groups and parent groups in the analysis will contain double-counting. Also, note that child groups listed are not necessarily the only ones contained within that parent group, just the ones we had data on.

The division dummy variable is a marker that allows the user to identify the most important or salient division within the military during that period. It also allows the data to be quickly broken down into mutually exclusive groups. This variable allows us to account for cases where the most important cleavage changes over time, such as a country where the action was initially between expatriates and nationals of that country, but then the action later was between ethnic groups who are both nationals of that country.

3.2 Attributing Force Portion

Occasionally, the coder will come across evidence specific to other portions of the military or even to other non-military security forces. This could include higher levels of rank, other branches of the military like the navy, or paramilitary forces. Consequently, we provide a coding framework expansive enough to accommodate that information. Even though this version of the dataset only seeks to provide measures of group representation in the rank and file and the officer corps of the army, this allows for the possibility to eventually enlarge the project to systematically cover ethnic groups' shares in state security forces other than the military.

This classification scheme is displayed in Table 5. When the coder encounters data about a group's share in a portion of a security force, he or she finds the code that corresponds to that portion and force and enters that code as the value for the **portion** variable.

Since sources dealing with military ethnicity, particularly in developing countries, tend to conflate the army and the military as a whole, when we encounter evidence about groups' representation in the military, we code this as applying specifically to the army.[2] Only if the source specifies a branch other than the army, or a force other than the military, do we use any other than the four army-specific codes (shown in the first four rows of Table 5).

If the coder encounters data about other security forces within the country, then he or she keeps a catalog of these forces, identifying which force name corresponds to the label "S1," which is S2, etc. In addition, when entering data about a non-military security force, the coder enters the name of that security force in the **comments** cell.

Table 5: Portion codes

Code	Portion
M-AR	army
M-AR-OC	army officers
M-AR-RF	army rank and file / enlisted
M-AR-OC-S	army senior officers
M-F	air force
M-F-OC	air force officers
M-F-RF	air force rank and file / enlisted
M-N	navy
M-N-OC	navy officers
M-N-RF	navy rank and file / enlisted
S1	1st non-military security force
S1-OC	leadership of 1st non-military security force
S1-RF	rank and file of 1st non-military security force
S1-OC-S	senior leadership of 1st non-military security force

[2] In assigning relative or absolute codes for a group's share in the rank and file, we give more weight to statements that specify "rank and file" than "military."

S2	2nd non-military security force
S2-OC	leadership of 2nd non-military security force
S2-RF	rank and file of 2nd non-military security force
S2-OC-S	senior leadership of 2nd non-military security force
S3	(etc.)

3.3 Attributing Temporal Bounds

This dataset seeks to provide time-series data on the ethnic composition of militaries in the Middle East from 1946 through 2013. However, it is not possible to obtain unique evidence for each and every year. Rather, coders will have to triangulate evidence to establish periods of time in which the ethnic balance in the military was relatively constant and critical points or periods in which it changed. Because our final procedure will involve corroborating evidence from various sources with information applied to a specific period, one of the most important tasks is to determine the period to which the statement being coded applies. Part of the difficulty of this task is that our sources very often tend to be vague about the temporal domain of the estimates they are providing.

For each statement from each source, the coder looks to see if the author provides an explicit start or end year, and if so, assigns those years for **styear_given** or **endyear_given**. If there is nothing explicit, but a clear start year or end year from the context of the source can be deduced, the coder uses that year for **styear_given** or **endyear_given**.

Sometimes, the author of the source provides the start year only (such as "after 1966") or the end year only (such as "up to 1950"): in these cases, the coder takes the year explicitly provided as the end-post and leaves the other end-post year unspecified.

In many cases, sources provide the information in a way that indicates that the author thought that this estimate was current, but the author did not provide any further information. When this is the case, the end year is taken as the year that the source was published, minus one, based on the assumption that the author probably had up-to-date knowledge of the case, with a small lag. For instance, the phrase "since 1984" implies that the data were current as of publication, so we would code **styear_given** as 1984 and **endyear_given** as the publication year minus one.

In another example, an estimate without any years specified but that was clearly meant to be current, such as the hypothetical statement "Turks are over-represented in the military," would be marked as a point-estimate with both **styear_given** and **endyear_given** being equal to the publication year minus one.

Note that although we will not be publishing the groups' representation levels prior 1946 or prior to independence, we enter that information when we encounter it, and we make use of it in the aggregation stage to help form a clearer picture of what the various groups'shares in the military were, at least at the start of the initial period.

The variable **apply_period** should be left blank for now, but will be revisited in the aggregation stage.

4 Creating Aggregated Group-level Codings

In this stage, the coder aggregates the evidence into ordinal codings for each group-level unit at both the rank and file (M-AR-RF) and officer (M-AR-OC) portion levels.[3] This task requires using the *data: group-level* tab of the country-specific spreadsheet. The following subsections describe the coding process for, and provide more explanation about, the variables listed on Table 6.

Table 6: Country-specific spreadsheet: *data: group-level* tab

Variable name	Overview	Description of values
gwid	Gleditsch and Ward (1999) state ID number.	–
statename	State name.	–
from	Beginning year of data period.	–
to	End year of data period.	–
group	Ethnic group name.	–
epr_group_id	Does this group correspond to an ethnic group in the EPR dataset?	If yes, enter the value for the EPR variable **gwgroupid**. If not, treat as missing.
mar_group_id	Does this group correspond to an ethnic group in the MAR dataset?	If yes, enter the value for the MAR variable **numcode**. If not, treat as missing.
child_of	Is this group is a proper subset of another group for which you have entered data?	Name of the parent group.
parent_of	Is this group is a proper superset of another group for which you have entered data?	Name of the child group; if more than one, separate them by commas.
division	Is this group located on the then-currently most salient ethnic divide in the military?	0 = no, 1 = yes
officer_relative	How does the group's representation in the officer corps compare with its representation in the population?	1 = excluded, 2 = under-represented, 3 = proportionate, 4 = over-represented, 5 = monopoly, -88 = not applicable, -99 = missing.
officer_sourcequal	Source quality rating for group's representation in the officer corps.	1 = low, 2 = moderate, 3 = high, -88 = not applicable, -99 = missing.

[3] In future versions of this dataset, additional variables will be created to be able to code information about other portions and in other forces.

officer_lower	What is the lowest likely share of the officer corps held by this group?	0 to 100%, by 10% increments, -99 = missing.
officer_upper	What is the highest likely share of the officer corps held by this group?	0 to 100%, by 10% increments, -99 = missing.
rank_file_relative	How does the group's representation in the rank and file compare with its representation in the population?	1 = excluded, 2 = under-represented, 3 = proportionate, 4 = over-represented, 5 = monopoly, -88 = not applicable, -99 = missing.
rank_file_sourcequal	Source quality rating for group's representation in the rank and file.	1 = low, 2 = moderate, 3 = high, -88 = not applicable, -99 = missing.
rank_file_lower	What is the lowest likely share of the rank and file held by this group?	0 to 100%, by 10% increments, -99 = missing.
rank_file_upper	What is the highest likely share of the rank and file held by this group?	0 to 100%, by 10% increments, -99 = missing.

4.1 Finalizing Salient Ethnic Groups

Before proceeding to actual coding decisions on group representation in the military, coders should evaluate the body of evidence collected to re-evaluate whether the correct units of analysis have been identified in terms of the salient ethnic groups and relevant temporal periods. Ethnic groups not cited in EPR but that frequently come up in the military-specific literature should be added. Where nested and cross-cutting identities are present, coders should be sure to include parent and child groups as appropriate. Special attention should be paid to expatriate populations that may play an important role in the military, even if they are not included in other datasets. The coder should assign set the DIVISION variable to "1" for a set of mutually exclusive groups that, based on the available evidence, form the most important basis of collective identity in the military. For example, while Iraq has two cross cutting cleavages on the basis of linguistic (Arab/Kurdish) and sectarian identity (Sunni/Shia), we use the DIVISION variable to identify Shia Arabs, Sunni Arabs, and Sunni Kurds as the set of mutually exclusive groups most salient in the military. "Sunnis," which include both Sunni Arabs and Sunni Kurds is coded as 0.

4.2 Relevant Temporal Periods

Based on the evidence gathered from the sources, the coder should divide the temporal range of the dataset (1946-2013) into timespans relevant to the ethnic dynamics within the military. Timespans

may either be periods of relative stability in the ethnic composition of the military, separated by critical junctures at which a notable shift occurs, or they may be periods of more gradual transition. Whenever the available evidence allows for a longer timespan to be subdivided into smaller ones with more fine-grained and differentiated codings, the coder should do so. However, it is perfectly possible for a single period to span the entire range of the dataset if there is no evidence of changes in the composition of the military during that time. Turkey is in fact just such a case.

As with identifying the salient ethnic groups, EPR provides a useful starting point by dividing the same temporal period into timespans relevant to ethnic power-sharing in politics. Again, this should be a reference point, not the final word, and coders should be faithful to the evidence as collected from the military-specific secondary sources. In many cases, a change in political power relations will not result in any changes within the military. In others, there will be a notable change in the military even when there is no change in groups' access to political power. Often time periods will be demarcated by major historical events, such as a coup that brings in a new leader, or the start of a civil or interstate war. In other cases, the availability of data at a specific point in time may be a deciding factor. For example, evidence that Omanis "reached a majority in the officer corps in 1992," might be cause for creating a new time period beginning in 1992 in which Omanis make up more than 50 percent of the officer corps.

After determining the relevant timespans for a given country, the coder should return to the *evidence: raw* and *evidence: sorted* tabs. The **apply_period** variable requires the coder to determine the relevant period or periods to which each estimate should be applied, based on the **styear_given** and **endyear_given** variables already filled out.

As a result of the inductive process outlined above, the start and end dates may often align with the relevant temporal periods. However, if both the start and end dates are clearly specified but do not both fall within the same defined period, the coder applies the statement to each period that contains years covered by the timespan indicated by the source for this piece of evidence.

If only the start date is specified, as in "after [year]," then the coder applies the estimate to the period containing that year. If that year was within five years of the end of the period, the coder applies it to the following period as well (but no further than the following period).

If only the end date is specified, as in "before [year]," then the coder applies the data to the period containing that year. If that year was within five years of the beginning of the period, the coder applies it to the previous period as well (but no further than the previous period).

Finally, based on the information in the source, if **apply_period** would be coded as covering multiple periods, but the coverage for one of those periods is only a single year, then that period should not be included in the **apply_period** variable.

Decisions about the delimitation of relevant temporal periods should also be clearly explained in the country narratives, as described in Section 5.

4.2.1 Examples

To illustrate these rules for determining temporal coverage, *in a hypothetical country with relevant periods of 1946-1970, 1971-1980, and 1981-2013*, if the quote said:

- "[group name] are over-represented in the military" (without specifying a year), it would apply to the publication year minus one.
- "in 1968," it would apply to the period of 1946-1970.

- "since 1978"
  - it would apply at least to the 1971-1980 period.
  - If the publication date was 1981 or earlier, it would only apply to the 1971-1980 period.
  - If the publication date was 1982, it would still only apply to the 1971-1980 period, since otherwise the coverage for the subsequent EPR period would only be one year. If the publication date was 1983 or later, it would also apply to the 1981-2013 period.
- "from 1986-1990," it would apply to the EPR period of 1981-2013.
- "from 1979-2002," it would apply to both the 1971-1980 and 1981-2013 periods.
- "from 1980-2002," it would only apply to the 1981-2013 period, since the coverage for the 1971-1980 period would be only one year.
- "before 1998," it would apply to the 1981-2013 period.
- "before 1984," it would apply both to the 1981-2013 period and to the 1971-1980 period, since the 5-year rule indicates at least 1979-1984.
- "before 1985," it would only apply to the 1981-2013 period, since although the 5-year rule indicates at least 1980-1985, the coverage for the 1981-2013 period would be only one year.
- "after 1973," it would apply to the 1971-1980 period.
- "after 1977," it would apply both to the 1971-1980 period and to the 1981-2013 period, since the 5-year rule indicates at least 1977-1982.
- "after 1976," it would only apply to the 1971-1980 period, since although the 5-year rule indicates at least 1976-1981, the coverage for the 1981-2013 period would be only one year.

4.3 Relative Ordinal Codes

The process for coding these variables requires taking all of the statements for that group's share, within the given period, from the *evidence: sorted* tab (see Table 4) and aggregating the information in those statements into a coding decision. This section provides rules for how this is to be done.

Estimates of group representation are coded along two ordinal scales. The first scale is "relative" in the sense that it seeks to capture the degree to which a group is represented in the military in proportion to its demographic size in the country at large. That is to say, it is an estimate of the degree to which a group is over-, under-, or proportionately represented in the security force. This coding is assigned to the **officer_relative** and **rank_file_relative** variables.

For relative share, the scale is defined as:

1. Exclusion: The group is almost completely excluded or is completely excluded from the given portion of the security force.

2. Under-represented: The group's representation within the given portion of the force is substantially less than its share of the overall population, though its members are still represented in significant numbers.

3. Proportionate: The group's representation within the given portion of the force is roughly proportionate to to its share of the overall population.

4. Over-represented: The group's representation within the given portion of the force is substantially more than its share of the overall population, though other groups are still represented in significant numbers.

5. Monopoly: The group comprises nearly the entirety, or the entirety, of the given portion of the force, to the exclusion or near-exclusion of all other groups.

In most cases, the data that are available to work with are qualitative evidence, not quantitative estimates. However, occasionally we have quantitative estimates to work with. Quantitative estimates will take the form of either raw numbers (e.g., there are 4,050 members of group A in the officer corps) or a percentage. Since we need percentages to work with to be able to assign relative (and in section 4.3 below, absolute) codings, raw numbers should be translated into percentages, which makes it necessary to find out the numeric size of the portion of the security force to make this calculation.

To work with quantitative estimates, it is necessary to have a threshold to use in translating the quantitative estimate into one of our ordinal codes. We acknowledge that any such threshold will necessarily be somewhat arbitrary. In addition, by establishing a threshold, we are not implying that the authors of our sources mentally apply exactly the same threshold as we do when they provide us with qualitative estimates. To try to minimize these concerns, we chose thresholds – 0.8 and 1.2 – that our own simulations show provide reasonable upper-bound and lower-bound estimates for when a group would no longer be considered proportionately represented. This ratio is calculated as the percentage share of the group in the given portion of the security force divided by its population percentage. The group will be coded as proportionately represented if the ratio falls between 0.8 and 1.2, inclusive; under-represented when the ratio falls below 0.8; and over-represented when the ratio falls above 1.2. For instance, if group A's share of the country's population is 15%, it would be considered proportionately represented in the officer corps if its percentage of the officer corps fell between 12% and 18%, inclusive. Similarly, a group with 70% of the population would be coded as proportionately represented if its share of the officer corps fell between 56% and 84%, inclusive.

With regard to non-citizen groups, occasionally (as with the Persian Gulf states) a non-citizen group or non-citizens as a whole will have a significant population base of permanent residents in the country. In such cases, information should be collected first about that population base of the group, in order to establish proportionality of representation.

In other cases, such as with countries that employed British or French officers after their independence, the population base of these foreign nationalities in the country is negligibly small, so it is not realistic to code proportionality of representation; here, the variables for relative representation would be marked for not applicable (-88), although codings would still be created for their absolute representation (see section 4.2).

The same rule applies to countries with only one ethnic group: relative representation is coded not applicable (-88), and the group is coded according to its absolute representation. We include these homogenous countries in the dataset even though by definition there is not ethnic competition in the population, because there may still be state manipulation of the share of that group in the military through the use of mercenaries.

4.4 Absolute Ordinal Codes

In addition to the relative scale, the coder assigns codes along an "absolute" scale that seeks to capture the degree to which a group is represented in the military in overall terms as a share of that portion of the security force, without reference to the group's population size. Estimates are made at the decile level, with lower and upper bounds assigned (i.e. They can take the value of 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, or 100%). The bounds may cross multiple decile intervals if the available information is insufficient to pin a group to a single decile.

Applied to the officer corps as well as to the rank and file, this creates a series of four variables:

- OFFICER_LOWER
- OFFICER_UPPER
- RANK_FILE_LOWER
- RANK_FILE_UPPER

The following are helpful rules for how to assign codes for these three measures for absolute representation:

- Quantitative data are straightforward. Given a percentage of the force portion that a group comprises, we code the absolute variable based on the decile in which that point estimate falls. e.g. If we have evidence that a group comprises 53% of the rank and file, the lower bound should be 50 and the upper 60.
- In the event that there are multiple point estimates that fall in different deciles, a wider interval should be used. e.g. If there were estimates at both 47% and 53%, the lower bound should be 40 and the upper 60.
- Groups that are either totally excluded or that have a complete monopoly can be assigned intervals of 0 to 0 and 100 to 100 respectively. This should match the respective relative codings for exclusion and monopoly.
- Direct-language references, such as "majority" or "minority" can be used to assign lower or upper bounds of 50, respectively, if more precise information is not available.Language in absolute terms that is vague to some degree, such as "predominantly," "largely," "strongly," etc. should be interpreted according to the context and natural meaning of the words used.
- Relative measures, already assigned, may be converted to absolute measures if the baseline proportion of the population is known (often available from EPR)

- For groups that are proportionately represented, the population percentage can be used as a point estimate. e.g. If a group makes up 53% of the population and is proportionately represented, it should be assigned a lower bound of 50 and an upper bound of 60.

- For groups that are over- or underrepresented, the population baseline can be used to set the lower or upper bounds respectively. e.g. If the group making up 53% of the population is overrepresented, the lower bound should be set at 50.

- For groups that are over- or underrepresented, setting the "outer" bounds may be more difficult. In these cases, the coder may rely on information known about other groups in the country to make a judgement.

As with the relative-representation variables, vague statements suggest marking a lower degree of confidence in the coding assigned, while clear statements suggest rating the coding decision with a higher degree of confidence. Similarly, each piece of evidence should be considered in combination with all the other pieces of evidence. If the available evidence is not enough to clearly support a coding decision, then we apply a missing-value code (-99).

4.5 Source Quality Codes

For the purposes of research transparency, we assign a score measuring the quality and quantity of sources found for the representation of each group in each time period in each force portion. In other words, each row in the dataset includes two source quality codes, OFFICER_SOURCEQUAL and RANK_FILE_SOURCEQUAL. The rating is based on the number of sources from which codeable statements were collected, how vague or explicit the evidence from those sources is, and how consistent the sources are with each other. The three levels on this ordinal scale are as follows:

3 = Highest Confidence: At least three sources, and the sources are explicit, meaning either quantitative estimates or very unambiguous qualitative statements requiring no deduction (for example, “Sunnis are over-represented in the officer corps”), and also consistent, meaning no contradictions between sources.

2 = Moderate Confidence: Only two sources that are explicit and consistent OR three or more sources that are vague – meaning ambiguous statements or evidence that requires more than a little deduction in order to piece together the final picture of proportionate representation – or that are mildly inconsistent, meaning a small fraction of sources suggest a slightly different coding than a clear majority of others (for example, two sources state that a group enjoys an absolute majority, but another suggests only a plurality).

1 = Lower Confidence: Only one explicit source OR two sources that are both vague.

NA = Missing Data: we do not assign a code if there are no sources, only one source and that source is vague, or if sources contradict and there is not a clear majority view.

5 Country Narratives

In the final step in the data collection for a given country, the coder creates a country narrative in which he or she writes a brief overview of that country’s history of ethnic security-force representation and then thoroughly documents the process for how the statements and evidence for

each group-period were pieced together to arrive at the coding decisions made. Although we will be publishing our list of sources for each country separately, the narrative should still contain in-text citations indicating the statements used for the coding decision, including the page numbers, as well as the full bibliographic references for those sources at the end of the narrative. Narratives should follow a common format, divided into sections. The first section, "Salient Ethnic Groups" should provide an overview of the groups in the country, noting how decisions were made regarding which groups to include, some basic demographic information, and the nesting or cross-cutting structure of these identities. When appropriate, this section should highlight any difference between the groups identified for this study and those commonly referred to in other datasets such as EPR and MAR, or in other scholarly works.

Next, each temporal period should have its own section. These sections should provide sufficient historical context to explain why the termporal period was divided as such. It should then describe the ethnic composition of both the officer corps and rank and file, making reference to the sources and quotes consulted, and explaining the final coding decisions reached.

600 Morocco

Salient Ethnic Groups

Morocco's population consists of two major ethno-lingusitic groups: Arabs and Berbers. Expatriate Europeans played an important role in the military in the early years after independence. Additionally, from 1976 onward we include Sahrawis – residents of Western Sahara – who are estimated to comprise only 1.6 percent of the population of Morocco and Western Sahara.

1956-1960

We found reports that Morocco hired a large contingent of Frenchmen as short-term officers immediately following independence until its own military academies were able to produce enough graduates to effect a complete Moroccanization of the officer corps. Estimates vary between 745 (Zartman 1964, 76) and 2000 (Keegan 1979, 480). Given an estimated 3,300 total officers in the military during this period (Zartman 1964, 77), the French share comes to between a third and two-thirds of the officer corps. There appear to have been no Frenchmen in the rank and file, and we also have no evidence of French participation past about 1960. We also found mention of "many" Spanish officers being on loan during this period, but no information about how many (Keegan 1979, 480).

Prior to Moroccan independence, the French had recruited very heavily from the Berbers into both the rank and file and the officer corps. However, the Arab share in the officer corps increased quickly at independence due to a brief conscription drive in 1956 (Gershovich 2000, 218) and due to the introduction of competitive examinations for entrance into the military academies, which the more urbanized, literate Arab population was more likely to pass (Horowitz 1985, 452, 529; Waterbury 1972, 402; Zartman 1964, 68, n. 4). We do have reports that the military was dominated by Berbers until at least the two failed coups in the early 1970s, although these statements may be referring more to the 1960s (Enloe 1980, 32; Maddy-Weitzman 2001, 30; Owen 1992, 208; Tessler 1982, 61). The most explicit quote we have about the relative shares of these two groups is one asserting that in 1960, Berbers had "half of the officers commissioned before independence, and a few of the officers commissioned afterward." Since we know from Zartman (1964, 74-77) that the officer corps was very small at independence, and most of the officers by 1959 were newly commissioned, this suggests that the Berber share may have declined and that Arabs and Berbers may have constituted a roughly equal share of the officer corps at this time. We estimate both of their shares at between 20 and 40 percent based on this information and our previously discussed knowledge of the presence of French officers.

The heavy recruitment of Berbers by the French translated into overrepresentation in the rank and file as well where Berbers were estimated as comprising between 80-90 percent in the 1950s and 60s (Coram 1972, 272; Hurewitz 1969, 341; Nisan 1991, 59-60; Zartman 1964, 68, n. 4).

1961-1971

Recruitment trajectory shifted again in the early 1960s, as the Berber military leadership "began to weed out" many of the new Arab officers (Marais 1972, 281) and also refocused its recruitment on Berber areas (Gershovich 2000, 218, n. 14). As a result, during this period the

Berbers had a "high proportion" of officers (Hurewitz 1969, 341), although there is some disagreement about how high. Sources state that during this period, Berbers had a majority of the officer corps (Keegan 1979, 479), but also that junior officers were primarily Arab (Braun 1978, 66; Waterbury 1972, 406). Given additional statements asserting Berber dominance in the officer corps leading up to the failed coups in 1971 and 1972 (Aslan 2015, 110; Maddy-Weitzman 2001, 30; Tessler 1982, 61), we code Berbers as being overrepresented during this period and constituting 50-70 percent of the officer corps, and Arabs as underrepresented, between 30 and 50 percent. As discussed previously, expatriates were no longer serving in the military at this time.

Horeman and Stolwijk (1998) speculate that the introduction of conscription in 1966 may have been meant to reduce the Berber share in the rank and file by forcing more Arabs to join the military, and that those who are currently conscripted tend be from urban (probably Arab) background. However, later estimates indicate that the effect of conscription on changing the composition of the rank and file was limited, as even by the late 1980s, Berbers made up between 60 and 80 percent of the force (Kurian 1987, 1385; Horeman and Stolwijk 1998). We therefore continue to code Berbers as overrepresented and estimate their share at between 70 and 80 percent during this time period, with Arabs as underrepresented and between 20 and 30 percent.

1972-75

EPR divides Moroccan post-independence history at 1975 due to the acquisition of the territory of Western Sahara and the Sahrawis living there. However, for this dataset, we need to make an additional division after 1971, the year of the first of two successive failed coups. The monarchy responded by purging the senior officers immediately (Horowitz 1985, 473; Waterbury 1972). The evidence we found for the brief period of 1972-1975 suggests that the monarchy initiated changes in the composition of the officer corps generally to reduce the Berber share, a slow process that continued into the 1980s (Aslan 2015, 110; Enloe 1980, 32; Horowitz 1985, 529; Keegan 1979, 486; Tessler 1982, 62; Zartman 1964, 49). However, none of these authors who demonstrate this process of change provide evidence about the extent of the change; as Aslan (2015, 110) says, "no systematic data on the extent of purges are available." On the other hand, two authors writing 24 years apart, assert that Berbers still form a majority of the officer corps (Schaar 2011; Kurian, 1987, 1385), so we code Berbers as still being overrepresented for both the 1972-1975 as well as the 1976-2013 period with their share more precisely confined to the 50-60 percent range with Arabs underrepresented in the 40-50 percent range.

Similarly, the monarchy also made active efforts to promote Arab recruitment in the rank and file following the two failed coups (Zartman 1964, 49). Still, sources indicate that the Berber share remained between 60-80 percent through the 1980s (Kurian 1987, 1385; Horeman and Stolwijk 1998). We therefore code Berbers as overrepresented and having 60-80 percent in the rank and file for both the 1972 to 1975 period as well as the following 1976 to 2013 time period.

1976-2013

Evidence from this period continues to indicate a narrow Berber majority in the officer corps (Schaar 2011; Kurian 1987, 1385) and a 60-80 percent majority in the rank and file (Kurian 1987, 1385; Horeman and Stolwijk 1998) so our codings for both Arabs and Berbers remain unchanged. The only difference for this time period is that Sahrawis are added as an ethnic group. While some

Sahrawis were present in the Moroccan armed forces, we gather from Lippert (1987, 54) that this was relatively rare and that Sahrawis were underrepresented. With a population share of only 1.6 percent they certainly made up less than 10 percent of both the officer corps and rank and file.

615 Algeria

Salient Ethnic Groups

We code Algeria along two salient ethnic groups: Arabs and Berbers (Amazigh), distinguished by differences in spoken language as well as ancestry. The term "Berber" groups together numerous tribes, often with distinct languages, that share the common trait of inhabiting the region prior to the Arab conquests. However, we were not able to collect data to the tribal level, though we find several references to the Kabyle group as playing an especially important role in the military. We believe the grouping of these tribes under the category "Berber" is appropriate as sources indicated the existence of collective identity among the various Berber tribes, as evidenced, for example, in the "Berber Spring" movement for linguistic and cultural rights. We use EPRs estimate of a 72 percent to 28 percent Arab to Berber split as our baseline estimate of the country's overall demographics.

1962-2013

In the war for independence from French colonial rule, two main insurgent groups formed, the so-called "internal" (guerrilla combatants within Algeria) and "external" (traditional military units trained in Tunisia and Morocco) forces. While the external forces, led by Boumedienne, were predominantly Arab, the internal forces contained a high percentage (over half) of Berbers, particularly from the Kabyle group (Horowitz 1985, 517). These forces could take refuge in the mountainous terrain that the Kabyle traditionally inhabited. However, the internal forces took the brunt of French repression during the "Battle of Algiers" leaving them significantly weakened by the end of the war. Upon the French withdrawal from Algeria, the external forces took over the city of Algiers and controlled the new post-colonial government. Remaining internal forces attempted to fight the external army, but were quickly defeated. Upon being named Minister of Defense, Boumedienne filled the elite ranks of the officer corps with mostly Arab loyalists from the external forces and purged Kabyle leaders (Harkness 2012, 80). Some members of other Berber tribes, particularly the Shawiya, were still represented in the elite ranks. One Shawiya general, Tahar Zbiri, was promoted to Chief of Staff. However, after he attempted a coup in 1967, he and other Shawiya leaders were purged from the military (Horowitz 1985, 517). Based on this evidence, we code Arabs as being overrepresented as well as constituting between 70 and 90 percent of the officer corps in the entire post-independence period, while Berbers are both underrepresented and only 10-30 percent.

In 1969, Algeria instituted compulsory military service for all Algerian men. It might therefore be assumed that the Berber minority is more proportionately represented amongst the rank and file than within the officer corps. In fact, recent accounts suggest that the rank and file of the army is broadly inclusive of social, ethnic, and geographic groups within Algeria (Stone 1997, 130). While both groups may be represented proportionately, this still creates a force that is predominantly Arab given its 72 percent share of the population. We code Arabs as comprising 70-80 percent of the rank and file with Berbers between 20 and 30 percent.

616 Tunisia

Salient Ethnic Groups

Tunisia is unique among the Arab countries of North Africa both in terms of its ethnic and military history. Tunisia is nearly ethnically homogenous. While other countries of the Magreb maintain groups with distinct Berber ancestry, language, and culture, the Berber and Arab populations of Tunisia have so thoroughly mixed so as to be largely indistinguishable (Gaaloul 2011; Nelson 1986, xvii). Most Tunisians claim Arab ancestry, Islam, speak Arabic, and only small traces of Berber heritage remain. All demographic data encountered on Tunisia treated Arabs/Berbers as a single ethnic identity comprising roughly 98 percent of the population.

1956-2013

With the national population consisting almost entirely of a single ethnic group, the state security forces can be considered to be mostly representative of the population at large. The total size of the Tunisian military is 35k of which 23.4k are conscripts (Cordesman 2005, 37). Conscripts serve for a 12 month period between the ages of 20 and 23 (Cordesman 2005, 38; Nelson 1986, xvii). However, exemptions and deferments are possible for those who pursue alternative forms of national service, such as teaching or entering the bureaucracy. Upper and middle class families are more likely to take advantage of these exemptions, making the lower classes and southern regions of the country disproportionately represented in the military rank and file (Ware 1985, 39).

Meanwhile, the officer corps, many of whom received training at elite Western military institutions, draws more heavily from middle and upper class families in the northern, urban, and coastal zones of Tunisia (Ware 1985, 38). Because these group subdivisions go beyond the scope of this dataset, we code Arabs in Tunisia as a single ethnic group that is proportionately represented and that makes up 100 percent of both the officer corps and rank and file.

620 Libya

Salient Ethnic Groups

Libya is comprised predominantly of Arabs, with Berber (Amizigh), Tuareg, and Toubou ethnolinguistic groups making up smaller percentages of the population. Within the Arab population, tribal identity remains important in the country's culture and politics. Libya is comprised of an estimated 140 tribes, though only about 30 are considered to be major influential tribes (Hatitah 2011). Three in particular, the Qadhadhafah, Maghara, and Warfalla played an important role in Qadhafi's military and we provide relative estimates for their share during that time period. In addition, the Senussi (which can refer both to a religious order as well as a kinship group related to the order's founder Sidi Mohammed ben Ali es-Senussi) played an outsized role in the military under King Idris.

1951-1969

Under the monarchy of King Idris, from 1951 to 1969, the military was kept small, consisting of about only 6,500 volunteers, who were drawn from Idris' own Sanussi religious sect and geographically from the region of Cyrenaica. (Gaub 2013, 225). We thus code Arabs, and Senussi in particular, as overrepresented and comprising 90-100 percent of both the officer corps and rank and file. All other groups are coded as underrepresented and less than 10 percent of the military.

1970-2011

Since taking over Libya via coup in 1969, Muammar Qaddafi used tribal alliances to maintain power and loyalty within the state security forces. In an effort to reduce the threat of a coup, Qaddafi kept the military weak and built a set of paramilitary organizations that would act as rivals to the military and serve as a check on any one security institution gaining sufficient power to threaten Qaddafi's personal leadership.

After a coup attempt in 1975, he increasingly limited access to the highest military ranks to members of his own and allied tribes. His closest advisors and military leaders come from his own Qadhadhafa tribe. However, his own tribe is relatively small, and he relied on alliances with the larger Warfalla and Magarha tribes. He placed leaders of those tribes in prominent positions within the state security forces to help secure and maintain their loyalty (Haddadt 2011, 4). Under the Qaddafi regime, senior leadership positions in most security organizations were held by members of the Qadhadhafa, Warfalla, and Magarha tribes. Based on this, we code these tribes as well as Arabs as a whole as overrepresented, with Arabs constituting more than 90 percent of the officer corps. All other groups are less than 10 percent, though we lack sufficient information to know whether some of the smaller groups are under- or proportionately represented. We also are unable to provide absolute estimates at the tribal level.

The rank and file of both military and paramilitary forces come from national conscription (since 1984) and are thus likely more representative of the country's ethnic and tribal demography (Haddadt 2011, 2; Pollack 2002, 361-361). We use this to code Arabs and Berbers as proportionately represented and constituting 80-100 percent and 0-20 percent of the rank and file respectively. We do not believe this information gives us enough evidence to provide relative codes for

the smaller ethnic groups (Touareg, Toubou, Jews) where it may be likely that conscription practices are not evenly enforced. We are able to code these groups as less than 10 percent given their small demographic sizes. We also do not provide either relative or absolute estimates at the tribal level for the rank and file.

2012-2013

The Libyan Army since 2011 remains quite small at an estimated 8,000 troops, of which roughly three-quarters are estimated to be members of the old Qaddafi military (Gaub 2013, 239). Efforts are being made to rebuild an army that is more inclusive of the Eastern populations. However, progress has been limited due to ongoing conflict. Our coding for this period is therefore equivalent for that of the prior one with the exception that we do not provide officer corps estimates for the three tribes allied to Qadhafi, as we believe that their roles in the officer corps are the most likely to have possibly been affected by regime change.

625 Sudan

Salient Ethnic Groups

Sudan is comprised of numerous ethno-linguistic groups, with over 100 languages spoken in the country. Consequently, analyses of identity in Sudan often focus on larger, more aggregated groups by common language, family, and region. Due to the difficulty in obtaining fine-grained information about different sub-groups' representation in the military, this study follows several others in identifying three salient regional groupings that are distinct in their ethnic and religious composition. The first regional group is Northerners, who are almost entirely Muslim and the majority of whom identify as being ethnically Arab. Southerners includes a number of distinct ethnolinguistic groups who identify as being "African," speak languages other than Arabic, and practice Christian or animist faiths. A third group is Westerners, who in many descriptions are a subset of Northerners. Westerners, like Northerners from the Nile river valley, are predominantly Muslim, but unlike other Northerners, they identify as having African ancestry and speak languages other than Arabic.

1956-1972

From the time of the Anglo-Egyptian Condominium, when the foundation of the modern Sudanese army was established in 1925 as the Sudan Defence Force, the army was heavily dominated by northerners. The British recruited northerners into the military due to having a higher education level and knowing Arabic, and they neglected the southerners entirely, only beginning to recruit them for the first time "in the final years of the condominium" (Keegan 1979, 652), which ended with independence in 1956.

In 1955, the rank and file of the Equatorial Corps, the division of the army stationed in the south, was predominantly made up of southerners. This corps was apparently the only force into which they had been recruited substantially to this point. It mutinied in 1955 against the domineering Arab north. The Corps was disbanded and became a rebel military organization, the Anya Nya, which waged a rebellion against the state until 1972 when a peace agreement was signed. This First Civil War was transparently an ethnic conflict, with the state military being nearly entirely an Arab northerner force and the rebel military an African southerner force (Enloe 1980, 204). Any southerners who volunteered to join the state's military during this time were transferred to the north and placed under command of northern officers (Metz 1992, 239). Southern officers were nearly nonexistent: according to one study, only 8 of 718 cadets entering the military academies between the years 1959 and 1969 were Southerners (Alier 1973, 21).

1973-1983

The 1972 Addis Ababa Agreement that ended the First Civil War contained a promise to integrate the Anya Nya soldiers back into the southern division of the army, now called the First Division. The split between northerners and southerners in this division was to be 50-50, with 6,000 soldiers from each side. This promise was largely kept, and although some rebels refused to integrate out of distrust of the state, most rebels rejoined the army in this unit. The leader of the Anya Nya was even promoted to a high rank over the state's army (Keegan 1979, 657). However,

this reflects only the southern division, and we estimate that as a whole, Southerners' share only accounts for between 10 and 40 percent during this period. Participation in the officer corps was even lower, as proficiency in Arabic prevented many Southerners from being promoted. A Library of Congress report estimates that Southerners accounted for only 5 to 10 percent of the officer corps in 1981 (Metz 1992, 238).

1984-2002

In 1983, the state unilaterally abrogated the Addis Ababa Agreement and embarked on a campaign of Arabization and Islamization in the south, as well as undoing the political arrangements that had been made. Once again, the southerners in the military mutinied and forged a rebel army, the SPLA. The northern-dominated military that remained presumably became even more so in the 1990s when the Islamic-fundamentalist government that took over in 1989 used both purges and indoctrination to ensure a thoroughly Islamic military (Metz 1992, 238).

Throughout the Second Civil War that lasted from 1983 to 2005, the state augmented its poorly supplied military by channeling weapons to pro-state tribal militias. After Omar al-Bashir's coup in 1989, the state also founded a Popular Defense Force modeled after the Iranian Revolutionary Guard and eventually used mandatory conscription to fill out the PDF's ranks.

We found only one mention of Westerners in the military, a note that says that in the year 2000, "some 40 percent of the troops in the Sudan army were Afro-Arab westerners whose riverine officers persuaded them that as good Muslims they should wage war against the southern Sudanese kafirin (infidels) in the name of progressive Arabism versus reactionary Africanism" (Collins 2007, 1795-1796, internal quotes omitted). Another source suggests that Westerners made up as much as 60 percent of the rank and file (Metz 1992, 288-289). This is a very large proportion, suggesting the need for further investigation into the westerners' share in years before and after this.

2003-2013

We were not able to find sufficient data to make coding decisions from 2003 onward. Southerners are dropped from the dataset beginning in 2012 due to the independence of South Sudan. It is likely that the salient ethnic groups for Sudan will eventually need to be re-conceptualized to better account for ethnic divisions among Northern groups.

630 Iran

Salient Ethnic Groups

Iranian society features salient social cleavages among both religious and linguistic dimensions. Persians are the dominant ethnic group in Iran and comprise approximately 50 percent of the country's population. They are followed by Azeris, who have been largely integrated into Iranian society and hold positions of power in the government and military, but who face forms of cultural and linguistic discrimination. Many small ethnic groups exist. Those that espouse Shia Islam (Persians, Azeri, most Arabs, and some Kurds) are afforded greater stature in Iran's theocratic regime, with Sunni Muslims (Turkmen, Balochs, most Kurds, and some Arabs) and non-Muslims (Assyrians, Bahai, Jews, and Zoroastrians) facing greater exclusion. We thus identify 12 salient ethnic groups, listed above in parentheses, with Arabs and Kurds disaggregated based on sectarian affiliation. We also include five parent groups, three religious (Sunnis, Shia, and Christians), and two linguistic (Arabs and Kurds).

1946-1979

Under the Pahlavi regime, the Shah was concerned about manpower and military efficacy, and the military in this period was likely less ethnically skewed than it would become under the Islamic Republic. The rank and file was filled through conscription as a national draft was implemented in 1925 and, similar to Ataturk's policy in Turkey, was implemented with the intention of spreading Iranian nationalism among minority ethnic communities (Lenczowski 1978, 94). At more senior levels, Schahgaldian (1987, 40) notes that several of the Shah's most senior officers were Kurds. Furthermore, many sources describing the military after the Iranian revolution, as will be discussed below, make reference to the consequent "Persianization" and exclusion of minorities in contrast to a perception of relative proportionality. Based on this evidence, we code all groups during this period as proportionately represented in the rank and file and assign their absolute intervals based on their share of the population. For the officer corps, we are unable to provide relative codings, but provide absolute measures based on population shares with wide bounds for larger groups (Persians, Azeri, and Kurds) to allow for the possibility of some ethnic stacking that was unreported in our sources. For the many small minorities, it is highly unlikely based on the available evidence that they made up more than ten percent of the officer corps and so they are assigned an interval of between 0 and 10 percent.

1980-2013

After the 1979 revolution, the new Islamist government initiated a series of purges in the military. By 1986, an estimated 23k members of the military were purged–either executed or imprisoned, fled the country, or deserted. 45 percent of all officers were purged, and 68 percent of high level officers (major through colonel) were purged (Schahgaldian 1987, 26). These purges especially targeted ethnic minorities, creating greater homogeneity in the general military as well as the newly created Iranian Revolutionary Guard Corps.

As of the late 1980s, the "overwhelming majority" of senior officers were Persian (Schahgaldian 1987, 40) despite their comprising only about half the overall population. Azeris play an

important role in Iranian politics, hold prominent positions at all levels of the government, and evidence indicates that they are at least proportionately represented in the officer corps (Samii 2000, 133). Other Shia ethnic minorities–Shia Kurds and Shia Arabs–are believed to be overrepresented as well. However, they make up a tiny fraction of the population as a whole and still a tiny fraction of the officer corps. Based on this evidence, along with the baseline populations of these groups, we estimate that the officer corps contains between 60 and 80 percent Persians, between 20 and 30 percent Azeris, and less than 10 percent each of Shia Kurds and Shia Arabs. Combined, we believe Shia represent over 90 percent of the officer corps. Since they are estimated to make up between 80 and 90 percent of the population as a whole, we still code them as proportionately represented.

Meanwhile, Sunni Kurds left the military en masse following a failed secession attempt in the aftermath of the revolution. Sunni and non-Muslim groups' shares in the military are extremely small (Schahgaldian 1987, 40). These groups are all coded as underrepresented and comprising less than 10 percent of the officer corps. The one exception is Armenians, who play a significant role in the Air Force (Schahgaldian 1987, 40). They are coded as proportionately represented but still less than 10 percent.

The general patterns exhibited in the officer corps are also present in the rank and file, though less pronounced as a result of national conscription policies. Still, there is evidence that conscription is not carried out uniformly, as "the failure of the present regime to fully extend its authority to some of the non-Persian populated districts, especially in northern Kurdestan and some areas of Baluchestan, has reduced the proportion of enlisted men coming from these areas" Schahgaldian (1987, 40). We code the Shia groups in the rank and file the same as in the officer corps, with the exception of the range for Persians being expanded to between 50 and 80 percent, as there is less evidence of preferential recruitment of Persians in the rank and file as there was in the officer corps. We code Sunni Kurds and Balochs as underrepresented. We do not provide codings for other minorities, as there is insufficient evidence to determine whether selective conscription practices lead to underrepresentation. However, based on demographics, we are able to determine that all non-Shia groups fall at less than 10 percent.

While beyond the scope of this study, evidence indicates that the ethnic breakdown of the IRGC is similar, but follows even more extreme bias in favor of Shia groups, especially Persians (Schahgaldian 1987, 86).

640 Turkey

Salient Ethnic Groups

Turkey features an ethno-linguistic cleavage between Turks, who make up roughly three-quarters of the population and Kurds who make up an estimated 18 percent.[4] EPR additionally includes Roma as an ethnic group with less than one percent of the population. While we include this as a group in the dataset, we found no mention of their role in the military. Given their tiny demographic size, we presume them to be less than 10 percent of the force but are unable to provide relative codings.

There is also a sectarian cleavage within Turkey between Sunni Muslims and Alevi Muslims. This cleavage cross-cuts the Turkish/Kurdish ethnic differentiation. However, sources indicate that it does not appear to be especially salient in the country's politics or military. Accordingly, we do not provide estimates along this dimension of identity.

1946-2013

Conflict between Turks and Kurds broke out soon after the collapse of the Ottoman Empire. Ataturk's consolidation of rule over the new Turkish state sparked multiple Kurdish rebellions in the 1920s and 1930s, including a 1924 rebellion by Kurdish officers. These rebellions were put down by force, including massacres against civilians (Entessar 2010, 111-116). There were reports ranging from 1948 through the early 2000s of under-representation of Kurds in the officer corps, largely as the result of discrimination (Aydinli, Özcan, and Akyaz 2006, 84; Brown 1989, 395-397; Grigoriadis 2006, 452-453; Hurewitz 1969, 104; Jenkins 2001, 23; Lerner and Robinson 1960, 29; Metz 1996; Roy 2004, 29). However, there were also reports from 1960 through 2013 that there were at least some Kurds within the officer corps, and that the military was willing to admit those Kurds who had assimilated completely (Grigoriadis 2006, 452-453; Jenkins 2001, 23; Lerner and Robinson 1960, 34; Torchia and Israfil 2010).

At the same time as the military was shedding Kurdish officers in response to the Kurdish rebellions of the 1920s and 30s, the state adopted universal military conscription in response to these rebellions as a way to speed up the assimilation of the Kurds into the Turkish state and to help them shed their Kurdish identity (Altinay 2006, 27; Eccarius-Kelly 2011, 82, 134). The policy of conscription appears to have resulted in full Kurdish participation in the rank and file of the military since then and been maintained for the same purpose, even through the years of the recent conflict against the PKK ("Public Statement: Turkey" 1999; Eccarius-Kelly 2011, 141; Ergil 2000, 126; Kedar 2012; Keegan 1979, 722; Metz 1996; "Kurdish Soldiers" 2010; Stack 2011; Torchia and Israfil 2010; QCEA 2005).

While there appears to have been a decrease in Kurdish participation in the officer corps following the 1924 rebellion, we found no evidence of changes in either the officer corps or the rank and file from 1946 onward, thus our measures are constant through the entire temporal range of the dataset.

[4] See EPR Atlas, https://growup.ethz.ch/atlas/Turkey, 1507.

645 Iraq

Salient Ethnic Groups

Iraq is comprised of three politically relevant ethnic groups, defined by a linguistic cleavage between Arabs and Kurds and a religious sectarian cleavage between Sunni and Shia. These groups are treated as nested with Kurds being considered Sunni. There is a small population of non-Sunni Kurds (mostly Shia, some Zoroastrian), though these communities are geographically distinct and most all references to Kurds are in relation to Sunni Kurds.

While reports are sometimes conflicted, it is estimated that Shia Arabs constitute between 60 and 65 percent of the population while Sunni Arabs and Sunni Kurds each make up between 15 and 20 percent.[5])

1946-1958

Despite the Shia demographic majority, Sunnis have held political power from the time of the founding of the Iraqi state until the U.S. invasion in 2003, including privileged positions in the officer corps of the military. As Hoyt writes, throughout Iraq's history of Sunni minority rule, "officer promotion, particularly to the highest ranks, was deeply discriminatory and favored the loyal Sunni population" (Hoyt 2007, 60).

Sunni overrepresentation in the officer corps stemmed from a privileged position in the Ottoman empire that was reinforced in the mandate period and under the monarchy. As a result there were "many more" Sunni officers than Shi'a and Kurdish officers in military at independence (Salih 1997, 162). Al-Marashi and Salama (2008, 69) write that during the monarchy period (1932-1958), "the bulk of the officer corps was drawn from predominantly Sunni Arabs, mostly from the lower middle classes. By 1953 most of the Iraqi officers above the rank of brigadier were Sunnis." The Kurds had held a similarly privileged position in the Ottoman military (p. 14), which we assume they maintained under the monarchy (specifically until the Kurdish rebellions of the 1960s). Thus we code Sunni Arabs as overrepresented with between 50 and 80 percent of the officer corps, Kurds as overrepresented with between 10 and 30 percent, and Shia Arabs as underrepresented with between 10 and 30 percent as well.

While Iraqi leaders were attentive to loyalty concerns within the rank and file, manpower needs prevented a similar degree of ethnic stacking. Conscription was implemented in 1934 despite concerns that it might spark revolt among Shia in the south. Congruent with the country's overall dynamics, a British report in 1935 described the rank and file as being majority Shia (Al-Marashi and Salama 2008, 49). Challenges to state rule, especially from a series of Kurdish mutinies in the 1950s, forced Iraqi leaders to deal with the problem of loyalty, but they were able to do so by recruiting from rival tribes within the ethnic groups (Al-Marashi and Salama 2008, 89). We therefore code all three groups as proportionately represented in the rank and file and with commensurate absolute measures.

1959-1979

[5]See EPR Atlas, https://growup.ethz.ch/atlas/Iraq, 708; CIA World Factbook, https://www.cia.gov/library/publications/the-world-factbook/geos/print_iz.html.

While Ba'athist rule did not immediately change the ethnic composition of the Iraqi military, a series of Kurdish revolts in the 1960s did. According to Pollack, "as time passed and more and more tribes cast their lot with Barzani, the revolt took on the character of a true nationalist uprising, and then urban Kurds began to desert the army in droves. These defections not only served to sap army strength and morale (the 2d Division was largely Kurdish) but also brought much-needed training and weaponry to the Kurdish guerrillas" (Pollack 2002, 157). We therefore code Kurds as underrepesented with between 0 and 20 percent of the rank and file while increasing our estimated ranges for Sunni and Shia Arabs to between 20 and 40 percent and 60 and 80 percent respectively.

A similar decline was seen in the officer corps, where "fewer and fewer Kurds had been admitted to the Staff College" (Batatu 1978, 765), and Kurds made up less than 10 percent of the graduates of the military academies (Al-Marashi and Salama 2008, 89). Shia continued to be underrepresented in the officer corps during this time period, as they made up only 20 percent of academy graduates (Al-Marashi and Salama 2008, 89). Thus we code Kurds as underrepresented for this period with less than 10 percent of the officer corps. Shia representation remains unchanged, while the Sunni share increases to between 60 and 90 percent.

1980-1991

The beginning of Iraq-Iran war in 1980 put new manpower pressures on the Iraqi military, forcing the state to increase recruitment into the rank and file. Given the demographics of the country, this meant primarily Shia conscription. As Hoyt writes, "Iraq rapidly expanded the Regular Army, which reached a million men by the end of the war, and relied increasingly on Shi'a conscripts" (Hoyt 2007, 60-62). This issue of loyalty was particularly problematic for the Sunni Ba'athist leadership as the regime was compelled to rely on Shia conscripts to fight a Shia adversary. Saddam Hussein attempted to compensate by creating a paramilitary side force, the Popular Army that was predominantly Sunni (though militarily ineffective), as well as by concentrating Sunnis in the more elite units of the army, mechanized units, and the elite Republican Guard (Hoyt 2007, 62). The result was that "the new demand for offensive capabilities led to the creation of a three-tiered force [including] a Regular Army composed of large numbers of static infantry divisions (composed predominantly of Shi'a conscripts), [and] a smaller number of Regular Army tank and mechanized divisions with better equipment (with troops of mixed ethnicity) . . ." (Hoyt 2007, 63). We thus elevate our measure of Shia participation in the rank and file to between 70 and 90 percent (still within the range of proportionate representation).

The exigencies of war forced Saddam to be less discriminatory toward Shia in the officer corps. After the initial losses of the Iran-Iraq War, "Saddam began to reward particularly effective commanders, regardless of ethnicity. Over a period of several years, this created a group of competent senior field commanders and staff officers . . . During this time, Shi'a officers were not completely excluded from promotion to higher rank, but they had to prove their loyalty repeatedly" (Hoyt 2007, 67). Saddam was less open to Kurds in the officer corps as the 1983-85 "revolt in the north led to a crackdown on Kurds in the military who were systematically weeded out" (Al-Marashi and Salama 2008, 168; see also Hashim 2003, 38). Based on this, we elevate our absolute estimate for Shia in the officer corps to between 10 and 40 percent (still very underrepresented) while our estimates for Kurds remain constant at between 0 and 10 percent. Sunni Arabs remain constant as well at between 60 and 90 percent.

1992-2003

After the Iran-Iraq War, "Saddam once again both prioritized loyalty and discriminated on the basis of ethnicity in key military appointments" (Hoyt 2007, 67). Sectarian preferentialism increased further after the 1991 war and subsequent Kurdish and Shia uprisings. Nevertheless, Saddam was forced to rely on a rank and file that was predominantly Shia throughout the 1990s. Prior to the 2003 invasion, an estimated 80 percent of enlisted soldiers were Shia (Hashim 2003, 38). This is consistent with our previous estimate for Shia comprising 70 to 90 percent of the rank and file, and so we continue with the same estimate during this time period.

Saddam again worked to offset this demographic advantage by reducing the size of regular units in comparison to elite units that were stacked with loyal tribes, especially Sunni Tikriti and al-Ubaydi tribes (Hoyt 2007, 60-61). This effort was reflected in the officer corps which was roughly 80 percent Sunni (Hashim 2003, 38). Based on this evidence, we narrow our estimate for Sunni Arabs in the officer corps to 70 to 90 as well as our estimate for Shia to between 10 and 30 percent.

2004-2011

The 2003 invasion and subsequent disbanding of the Iraqi army by the Coalition Provisional Authority caused a complete transformation of the military. Nevertheless, the demographics of Iraq resulted in rank and file that is majority Shia (Gaub 2011, 6-7). In the decade since, the composition of the officer corps of the new Iraqi military has been balanced between competing tensions: US pressures for ethnic and sectarian integration, the Shia government's preference to stack the military with loyal co-ethnics especially from sectarian-based militias, and a need for competence that favors Sunnis with prior experience. The result, according to Gaub (2011, 7), is that in the early years after the invasion, "the new Iraqi armed forces contain a larger share of Sunni Arabs in their senior officer ranks, while the junior ranks correspond approximately to the believed share of each group in the population: 60 percent Shi'a Arab, 30 percent Sunni Arab, and 18 percent Kurds." We translated these directly into codings of 60-70, 20-30, and 10-20 respectively for the rank and file. In the officer corps, we extended the upper bound of Sunni Arabs upward to 20-40 to reflect their larger share in the upper ranks. We correspondingly reduced the lower bound for Shia Arabs to 50-70 percent.

2012-2013

Recent evidence suggests that under the premiership of Nouri al-Maliki, and especially since the withdrawal of American forces in 2011, the sectarian balance in the officer corps has begun to strongly favor the Shia. Initially, al-Maliki established parallel and informal chains of command that allowed him to bypass Sunni officers as well as American advisors. More recently, there have been reports of direct purges of Sunnis from the officer corps and their replacement with Shia (Krieg 2014), leading to "a shift in the sectarian composition of officers in senior command positions toward overwhelming Shi'a majorities" (Sullivan 2013, 16). We therefore increase our coding of Shia to overrepresented and between 60 and 80 percent of the officer corps while

reducing Sunnis to underrepresented and between 10 and 20 percent.

651 Egypt

Salient Ethnic Groups

While almost all Egyptians are ethno-linguistically Arab, there is a salient religious cleavage between Sunni Muslims and Coptic Christians. Copts make up between 8 and 12 percent of the Egyptian population (Sharp 2012, 3).

1946-2013

Egypt has a national military draft, and Copts have been required to perform military service since the 1850s (Carter 2013, 9). Evasion of military service is common in Egypt, with wealthier families able to pay bribes or take advantage of loopholes to avoid military service. The rank and file is thus comprised of disproportionately lower- and-middle class families (Meyerle et al. 2011, 9). However, there is little evidence that this class-based bias in the military's rank and file translates into a clear disparity along religious lines. Copts are drafted into the military on an equivalent legal basis as Muslims, and the armed forces are considered to be one of the more representative institutions within Egyptian society (Pennington 1982, 169) although there are numerous claims of religious discrimination and abuse within the armed forces (Meyerle et al. 2011, 9). Consequently, we have coded both Copts and Muslims as being proportionately represented within the rank and file, with Copts making up between 0 and 20 percent and Muslims 80 to 100 percent (a broader range being used given the ambiguity about the underlying population demographics as well as the possibility of some bias in who is able to avoid military service).

While several sources note that Copts are present within the officer corps, there is consensus that they are present in fewer numbers than in the rank in file (Pennington 1982, 169), are often prevented from enrolling in the academies (Zeidan 1999, 58), and are rarely promoted to the most senior levels (Sedra 1999, 222). According to Sharp, "There are few Christians in the upper ranks of the security services and armed forces" (Sharp 2009, 25). We have thus coded Copts as underrepresented in the officer corps with less than a 10 percent share, while Muslims are correspondingly overrepresented with a greater than 90 percent share.

652 Syria

Salient Ethnic Groups

Syria contains several distinct ethnic groups, divided by sectarian as well as ethnolinguistic cleavages. Sunni Arabs make up the majority of the population with between 57 and 65 percent of the population, while Arabs from the Alawi sect make up about 13 percent. Syria also has a sizable Christian population, which constitutes about 10 percent of the country, while Kurds make up 8 percent and Druze 3 percent.[6] We were unable to find reliable data on the participation of Kurds in the military in any of the time periods.

1946-1963

Alawi overrepresentation within the rank and file of the military forces began during the mandate period as a result of both deliberate French policies intended to check Arab nationalism as well as intense poverty within Alawi communities that made military service economically attractive. Bou-Nacklie (1993, 650-651) estimates that the Alawi made up just under 20 percent of *Les Troupes Speciales*, Sunnis about 47 percent, Christians between 25 and 28 percent, and Druze less than 7 percent.

In the first two decades after independence, Syrians could "opt-out" of conscription by paying a fee to the government. This opportunity was disproportionately exercised by middle-class Sunni families and thus furthered the overrepresentation of minorities within the Syrian military. By 1963, Batatu (1981, 340-341) finds that Alawis represented a plurality of the military rank and file, though not a majority. Therefore, we estimate that the Sunni share of the rank and file varied from 30 to 50 percent and the Alawis from 20 to 50, as each group's share moved in opposite directions. We estimate Christians at between 10 and 30 percent and Druze at less than 10 percent.

In the officer corps, Sunnis held an absolute majority from independence until 1963 (Drysdale 1981, 369; Batatu 1981, 340-341). Data from van Dam (1979 208) suggests Alawis made up about 20 percent, Druze 10 percent, and Christians 5 percent.

1964-1966

However, the composition of the officer corps changed dramatically between 1963 and 1966 as a series of coups created fractures among military elites, particularly among Sunni officers. Sunni infighting resulted in a series of purges that left the Alawi with a plurality within the officer corps, setting the stage for the Alawi takeover of power in February 1966 (Batatu 1981, 343). The turbulence of this period prevents us from making precise estimates, so we create bounds based on the shares known prior to 1964 and the shares knows after the Alawi takeover and subsequent purges to capture the changes occurring during this period.

1967-2011

Since 1966, the Alawi have increased their control of the officer corps through an initial purge

[6] See EPR Atlas, https://growup.ethz.ch/atlas/Syria, 1408.

of 700 Sunni officers[7] and subsequently through selective appointment, promotion, and admittance to the military academy. Batatu (1981, 343) estimates that Alawis were already a majority in the officer corps in 1966, while Drysdale (1981, 368) puts Sunnis' share at between 25 and 30 percent. Alawi overrepresentation is greatest at the highest levels of the military and within elite units, such as the saraya al-difaya, designed to defend the regime against internal threats. Droz-Vincent (2014, 702) estimates Alawi make up between 70 and 80 percent of such units. Based on these sources, we estimate Allawis at between 50 and 80 percent of the officer corps and Sunnis at between 20 and 30.

We were unable to find updated data on the presence of Christians and Druze in the officer corps, so we estimate wider bounds for their shares as between 0 and 20 percent.

We were not able to find specific estimates for the rank and file. However, given that the Alawi already held a plurality within the officer corps prior to 1966, we believe it is reasonable to conclude that such patterns of overrepresentation of Alawis (and underrepresentation of Sunnis) continued. We expand the range of our decile bounds, however, to account for the greater uncertainty.

2012-2013

Since the onset of the Syrian civil war, there has likely been an increased skewing of the ethnic composition of the state military, as defections have come disproportionately from Sunnis while Assad has increasingly relied on Alawi co-ethnics remaining loyal to the regime. We are not, however, able to provide reliable data for this most recent time period.

[7] See EPR Atlas, https://growup.ethz.ch/atlas/Syria, 1409.

660 Lebanon

Salient Ethnic Groups

Lebanon has not had a census since 1932, due to the political difficulty that any subsequent census would cause, given that the confessional system is built on a careful balance of representation for each sect. In 1932, Christians outnumbered Muslims by a ratio of 6 to 5, and the fiction that this ratio has remained unchanged was maintained for decades afterward, despite well-known demographic changes that were widely perceived to give Muslims a population majority.

Although EPR lists the ethno-sectarian groups that make up Lebanon's population at a disaggregated level, much of the evidence for group military representation that we found was reported at the aggregated level, Christians and Muslims. We also found evidence for some of the individual sects, although Maronites, Sunnis, and Shi'ites were the only ones for whom we had multiple sources reporting on.

Palestinians in Lebanon, whom EPR estimates have consistently made up 10 percent of the population,[8] were not citizens. Our sources do not deal with them at all, other than two brief statements confirming that Palestinians had "virtually no access to Lebanon's state apparatus" (Enloe 1980, 228) and that they "didn't serve in the security sector, including the LAF."[9] Consequently, in order to be consistent with our sources, which do not include them in any of the estimates we found for the Muslim total, we include Palestinians as separate group, not aggregated under the Lebanese Muslim parent group.[10] Our temporal divisions largely follow those used by Barak (2006) in his analysis of the Lebanese Officer Corps.

1946-1958

The Lebanese army grew out of the French-sponsored *Troupes Speciales du Levant.* Since Christians and Maronites in particular had supported, and Sunnis in particular had opposed, the colonial powers' decision to carve Lebanon out of the Greater Syria of which it had been a part under the Ottomans, Christians and Maronites in particular had joined the *Troupes Speciales* in disproportionate numbers, and Sunnis largely but not completely boycotted it (Keegan 1979, 422; McLaurin 1984, 80-83). Maronites were especially heavily represented at the officer level, while Sunni avoidance and Shi'ite lack of educational qualifications at the time meant that those groups were under-represented, so the army became widely perceived as a Christian- and Maronite-dominated institution (Barak 2006, Table 2; Koekenbier 2005, 4; McLaurin 1984, 80-90). In the period leading up to the Lebanese Civil War, Christians retained an absolute majority in the officer corps, and even though the Christian and Maronite shares were steadily declining throughout this time, Muslims as a whole remained under-represented in the officer corps (Barak 2006, Table 2; Keegan 1979, 425). Point estimates from Barak (2006, Table 2) put the share of Christians in the officer corps during this time period at 66 percent, Maronites at 44 percent, Muslims at 34 percent, Sunnis at 15 percent, and Shia at 9 percent.

In this first period, Muslims comprised the majority of the rank and file, mostly due to strong Shi'ite enlistment that made up for the Sunni boycott, although Maronites were heavily represented

[8] See EPR Atlas, https://growup.ethz.ch/atlas/Lebanon, 819.

[9] Oren Barak, personal communication, 11/6/2015

[10] We also explicitly label the parent group "Lebanese Muslims" to make this distinction clear.

there as well (Koekenbier 2005, 4; McLaurin 1984, 80-88). Altogether, our sources indicated a serious imbalance during the initial EPR period in the officer corps and a lesser imbalance in the rank and file. We did encounter a contrary opinion from Hurewitz (1969, 394), who suggests proportional recruitment and sectarian balance in both rank and file, although this may have been considered in relation to the obsolete population proportions still being used from the 1932 census.

1958-1975

Between 1958 and 1975, there was "a considerable erosion of the dominant Maronite position in the army officer corps" (Keegan 1979, 425), and a roughly corresponding increase in the share of Shia. According to Barak's (2006) estimates, the Christian share fell to 55 percent with Maronites in particular falling to 35 percent, while Muslims increased to 45 percent as the Shia share rose to 15 percent, matching that of Sunnis. Gaub (2007, 7) similarly finds that Christians made up 58 percent of the officer corps on the eve of the civil war. Our estimates of the rank and file remain unchanged, again supported by Gaub's estimate that Christians made up 48 percent of the rank and file (Gaub 2007, 7).

1976-1990

Barak presents figures for the officer corps from 1975 to 1990 that report Christians at 51 percent, Maronites at 32 percent, Muslims at 49 percent, Sunnis at 17 percent, and Shia at 21 percent. Our other sources do not mention the Sunnis and Shi'ite officer shares specifically during this period, but they do provide information about the Muslim/Christian breakdown that closely tracks Barak's percentages for those groups, with estimates for Christians in the 50-60 percent range and Muslims in the 40-50 percent range, apparently with the Christian share continuing to decline through this period (Gaub 2007, 7, 17; Keegan 1979, 431-432; McLaurin 1984, 90-91).

Also during the 1971-1991 period, Muslims comprised a majority in the rank and file with a share between 50-60 percent, making them proportionately represented there (Gaub 2007, 7, 17; McLaurin 1984, 90-91, 103; Keegan 1979, 431). This was primarily due to heavy Shi'ite participation (although we don't know whether Shi'ites themselves held an absolute majority); we had some evidence that Sunnis continued to be under-represented even in the rank and file (Enloe 1980, 229; McLaurin 1984, 90-91). The Muslim enlisted share just quoted implies that Christians were still over-represented in the rank and file with 40-50 percent, which almost certainly included a strong Maronite showing as well, especially if the (abundant) Maronite officers were continuing to be promoted from the ranks.

1991-2013

After 1990, the Maronites and Christians as a whole continued to be over-represented in the officer corps, though Muslims now comprised a majority of officers at 53 percent with Sunnis at 16 percent and Shia at 27 percent. Christians' share declined to 47 percent with Maronites at 30 percent (Barak 2006, Table 2; See also Childs 2012, Table 2; Gaub 2007, 9-10). Barak's estimates for Sunnis and Shi'ites result in ratios of officer share to population share for each that again just barely exceed 0.8. Although by our coding rules that counts as proportionately represented, because Childs (2012, Table 2) suggests in qualitative and explicit terms that both groups are

under-represented we are unable to assign codings for both groups' relative representation in this period due to the lack of consensus among our sources.

Near the start of this third period, Christians had a share in the rank and file that was about 3,000 soldiers short of 50 percent, the attempted post-war recruitment target (Gaub 2007, 9-10). Given an army total size of 40,000 at the time (Gaub 2007, 12),[11] that leaves Christians with just over 40 percent of the rank and file, indicating that they were over-represented, while Muslims were proportionately represented at just under 60 percent. Again, the Christian enlisted share was almost certainly driven in good measure by heavy Maronite participation. Sunnis continued to be under-represented and Shi'ites over-represented (Childs 2012, Table 2), although, again, it was not clear whether Shi'ites comprised an absolute majority.

A Note on Cross-Validation

Lebanon is the only country for which we have the benefit of being able to build on a prior effort (Barak 2006, 2009) to collect quantitative data on military ethnicity over time at the level of the individual officer. Per our coding rules, even though that effort was originally generated based partly on primary sources (Barak 2006, 82), we accord Barak's data the same weight that we give to similarly explicit evidence from our other sources.

Lebanon therefore provides the opportunity, at least for the officer corps, to check for "proof of concept" regarding the reliability of secondary sources by comparing their estimates to those provided by Barak, treating the latter as the closest we can come to the objective truth. By and large, our sources were in harmony with Barak, as described above, which strengthens our confidence in the validity and reliability of secondary sources as a data source. Most sources provided qualitative statements that were generally in line with Barak's estimates and our interpretation of proportionate representation as reflecting a share in the military that is between 80 and 120 percent of a group's overall population share. This was encouraging evidence in favor of the reliability of our secondary sources and the validity of our coding rules. However, we did have a couple of qualitative statements (for 1971-1991, see Enloe 1980, 92, 227-229; for 1992-2013, see Childs 2012, Table 2) suggesting a different coding than what the percentage-based estimates had recommended. While is not uncommon for us to have a dissenting source from time to time, the difference may also have been attributable to the fact that the Muslim percent-based estimates were higher because of the inclusion of the Lebanese Druze, a syncretic sect that since mandate time has at least legally been considered Muslim. Observers who were only focused on the demographically, and to some extent politically, more significant Sunni and Shi'ite groups might be led to different conclusions than those who counted Druze as well in their totals. On the other hand, it might suggest that our bounding definition of proportional representation as ranging from 80 to 120 percent of a group's demographic share of the population potentially errs slightly on the side of being too broad. In this case, despite a force-to-population ratio a little greater than 0.8, Muslims were still described in language suggestive of underrepresentation in other sources.

[11] See the IISS publication *Military Balance*, 1993 ed., 121.

663 Jordan

Salient Ethnic Groups

The major ethnic division in Jordan is between Transjordanian and Palestinian Arabs, each of whom make up approximately one half of the population, though the Palestianian share is likely higher than the Transjordanian share.[12]

There was also some evidence suggesting the utility of subdividing Transjordanians into Bedouins – including nomadic Bedouin, sedentary Bedouin descendants, and other tribal groups like rural fallahs (Gubser 1988, 92) – and hadari (non-tribal townsmen), since the former have always been heavily over-recruited in Jordan (Keegan 1979, 392-393, 397; Zahran 2011; Brand 1995, 48), but the low availability and low consistency of base population figures for these two subgroups, as well as our sources' loose and inconsistent reference to these Transjordanian subgroups, made this unfeasible at the present. There was also some evidence of a regional south-north cleavage as well (Vatikiotis 1967, 131), certainly in the colonial period but also somewhat in the early years of Jordanian independence, with southern tribes being the most heavily recruited, but there was not enough attention to this division by our sources collectively to be able to generate time-series data for northerner versus southerner composition. Additionally, there is a religious cleavage between Muslims and Christians, the latter of whom make up approximately 6 percent of the population and who may be of either Palestinian or Transjordanian origin. However, evidence from secondary sources indicates that this religious cleavage is not particularly salient in the military and that patterns of representation are influenced primarily by the Transjordanian/Palestinian distinction. Therefore, we do not subdivide these ethnic groups on the basis of religion.

Finally, we include British expatriates who played an important role in the officer corps until March 1, 1956, when they were summarily dismissed by King Hussein.

While patterns of access to political power remained relatively constant from 1946-2013, according to EPR, we found evidence justifying dividing that period into six periods to reflect changes in military composition.

1946-1949

When Transjordan was initially created by Britain after WWI, British agents created and sponsored the Arab Legion as a local military force in 1921. Headed entirely by British officers prior to independence (Keegan 1979, 392; Metz 1991, 235, 251-252), it was initially recruited entirely from the hadari Transjordanians to the exclusion of the Bedouin (Gubser 1988, 101), who refused to join anyway, out of distrust (Metz 1991, 234). In 1930, Major John Bagot Glubb (a.k.a. "Glubb Pasha") created a Desert Mobile Force under the Legion that specifically targeted the Bedouin for recruitment, and by WWII the Legion's rank and file consisted almost entirely of southern Bedouin tribesmen (Brand 1995, 155; Hurewitz 1969, 316; Gubser 1988, 101; Keegan 1979, 392; Metz 1991, 235, 251-252).

After independence in 1946, many British officers continued on in the same capacity, now on contract, including Glubb. We have little information about these officers, other than the following: they monopolized the army's senior officer posts (Hurewitz 1969, 316; Owen 1992, 208); there

[12] See EPR Atlas, https://growup.ethz.ch/atlas/Jordan, 754.

was an effort to gradually replace them with locals (Keegan 1979, 392); the officer corps expanded rapidly between 1948 and 1956 (Hurewitz 1969, 316), presumably with new posts filled by locals; and finally, they were dismissed wholesale by King Hussein on March 1st, 1956 (Hurewitz 1969, 320; Keegan 1979, 392).

The only evidence we were able to find for the British proportion was Hurewitz's (1969, 316) estimate of 65-70 British, compared to 300 total officers in 1948 and 1,500 total officers in 1956. Consequently, we code the British absolute share as between 20 and 30 percent in the 1946-49 period and below 10 percent in the 1950-56 period. Since the Palestinian influx into Jordan mainly took place as a result of the 1948-49 civil war and the 1950 Jordanian annexation of the West Bank, we do not list Palestinians as one of the groups in Jordan during the 1946-49 period. This means that by default, the Transjordanians made up the entire rank and file.

1950-1956

At the time of the 1950 annexation, other than the British officers, the military was entirely Transjordanian and still largely southern Bedouin (Abu-Odeh 1999, 51; Vatikiotis 1967, 133), but northern Bedouins, hadari Transjordanians, and – after initial restrictions to their recruitment were soon lifted (Fathi 1994, 135-136) – Palestinians joined in large numbers during the 1950s (Abu-Odeh 1999, 51; Brand 1988, 155; Hurewitz 1969, 316; Metz 1991, 252). Bedouins, and by implication Transjordanians, held a majority of the rank and file in the 1950s, and combat units specifically were dominated by Transjordanians (Abu-Odeh 1999, 51; Axelrod 1978, 29; Metz 1991, 30). However, Palestinians and hadari Transjordanians were desperately needed for their higher literacy rates, education levels, and technical skills that made them indispensable for non-combat functions (Keegan 1979, 392-393, 397; Vatikiotis 1967, 133-135). We therefore code Transjordanians as overrepresented in the rank and file with between 70 and 100 percent and Palestinians as underrepresented with between 0 and 30 percent during this period of rapid transition.

In the officer corps, as mentioned above, the British share had dropped to less than 10 percent (Hurewitz 1969, 316). It is possible that some Palestinians made it into the officer corps, though we were unable to find concrete evidence of this. We believe it highly unlikely that they would have exceeded 20 percent, which leaves Transjordanians with between 70 and 100 percent of the officers.

1957-1965

After the 1956 Jordanization of the army, the new chief of staff Abu Nuwwar laid the ground for a coup attempt the next year by dismissing many loyal Bedouin officers and forming a fourth infantry brigade that was officered and manned by Palestinians and hadari Transjordanians (Axelrod 1978, 30; Hurewitz 1969, 320; Keegan 1979, 393). After the coup attempt failed the next year, the new chief of staff al-Majali purged 50-70 dissident officers, recommissioned the previously discharged Bedouin officers, broke up the Fourth Infantry Brigade and discharged many of its soldiers and officers, and strengthened the Bedouin dominance in the combat units and the Palestinian confinement to technical and auxiliary units (Abu-Odeh 1999, 51; Axelrod 1978, 30; Hurewitz 1969, 323; Keegan 1979, 393; Owen 1992, 209). However, Hurewitz (1969, 324) affirms that Palestinians still participated in the military all the way up the ranks, and during this period, "political reliability – not religious or geographic credentials – still constituted the overriding cri-

terion for the acceptance of applicants in the career establishment." Thus we drop British from the dataset beginning in this period and increase the Palestinians' estimated share in the officer corps to between 10 and 30 percent. Our codings for the rank and file are identical.

1966-1972

After the 1950 annexation, Jordan had conscripted the West Bank Palestinians into a National Guard force to protect against Israeli raids. This force appears to have been brought under army jurisdiction in 1956 (Hiro 1982, 100). It was formally disbanded due to concerns over its political reliability nine years later in 1965, with its members either discharged or, as happened to about 40 percent of them, spread among the army's combat units, which had the effect of increasing the Palestinian share to 40 percent of the military, with "substantial" (Axelrod 1978, 30) numbers in the officer corps, and decreasing the Bedouin share to a minority, possibly about one-third (Axelrod 1978, 30, 35, 38; Hurewitz 1969, 323; Keegan 1979, 393; Metz 1991, 236, 252-253). Note that Jordan instituted conscription in 1966 in response to Palestinian demands to be able to arm themselves against Israeli raids (Abu-Odeh 1999, 131), but this was repealed shortly afterward due to resistance to attempts to draft Palestinian guerrillas (Axelrod 1978, 35, 38). Between 1965 and 1970, despite an intensified Bedouin recruitment drive (Axelrod 1978, 33), the Palestinian share rose, although it is not clear how much; Gubser (1988, 101) estimates the 1970 Palestinian share at 45 percent, while Axelrod (1978, 35, 38) places it at a full majority. If we combine a separate estimate (Metz 1991, 253) for the total number of Palestinians in the military during the 1970-71 civil war, 25,000, with information on the total size of the military at this time,[13] we end up with a second estimate in the 40-50 percent range, giving further weight to that side. Given the EPR base population shares of 40 percent and 50 percent for Transjordanians and Palestinians, respectively,[14] a Palestinian share in the military of about 45 percent and a corresponding Transjordanian share of about 55 percent would suggest that Palestinians were proportionately represented (military-to-population ratio of 0.9) while Transjordanians were overrepresented (ratio of 1.38).

The integration of the Palestinian National Guard force into the regular army in 1966 also appears to have increased the Palestinian share in the officer corps. Vatikiotis (1967, 135), for example, writes that "the operational mobile forces – infantry and armour – will continue to be predominantly tribal-beduin and generally Transjordanian. The more technical branches and support units will probably increase in strength and they will continue to be predominantly townsman in composition, and increasingly come from the West Bank."

King Hussein attempted to purge Palestinian officers after the 1967 war but was then obliged to dismiss a few loyal Bedouin officers who opposed PLO policies in 1969-70 to placate the Palestinians (Keegan 1979, 393). Overall, Transjordanians were still overrepresented in the officer corps, but we estimate their share at between 60 and 70 percent with Palestinians between 30 and 40 percent (informed in part by estimates coming from the later period below).

1973-1992

During the 1970-71 civil war, most Palestinian soldiers and officers remained loyal, including

[13] See the IISS publication *Military Balance*, 1971 ed., 29.

[14] See EPR Atlas, https://growup.ethz.ch/atlas/Jordan, 754.

those in combat units, although Bedouin-manned combat units did most of the fighting against the PLO guerrillas (Axelrod 1978, 35, 38; Hiro 1982, 101; Metz 1991, 4, 41, 240, 253; Zahran 2012). However, as a result of the political instability of the early 1970s, which also included the assassination of the prime minister in 1971, a Palestinian-sponsored failed coup attempt in 1972, and a failed Fatah raid in 1973, a slow purge of Palestinians officers that had begun after the 1967 war with Israel intensified and expanded to include Palestinian enlisted men (Abu-Odeh 1999, 199-200; Fathi 1994, 140; Hiro 1982, 101; Keegan 1979, 393; Metz 1991, 253; Sayigh 1997, 310). As a result, the Palestinian share in the military as a whole in the 1970s fell to around 15 percent while their share in the officer corps was estimated at one third (Metz 1991, 253). However, the regime responded with a new conscription drive starting in 1976 that specifically targeted Palestinians in an attempt to replenish its dwindling supply of highly educated, skilled personnel (Brand 1988, 155; Fathi 1994, 141; 1979, 397; Metz 1991, 254). Bedouins, and by implication Transjordanians, continued to dominate despite the new conscription measure, although the Palestinian share rose to 30-40 percent by 1986 (Fathi 1994, 141; Gubser 1988, 90; Hiro 1982, 100; Metz 1991, 85, 230, 240, 253, 255).

The back and forth waves of purges and re-enlistments of the Palestinians make it difficult to pin down their precise share. There is not enough data to break the time period apart on the basis of these waves. Instead, we base our interval measures on the highest and lowest estimates we are able to find for this period. For the officer corps, we code Palestinians as between 20 and 40 percent based on two estimates that put their share in the 30-40 range and the possibility that the share may have dipped below 30 percent between 1973 and 1976. In the rank and file, we have an estimate as low as 15 percent and another between 30 and 40 percent, so we assign a wider interval of between 10 and 40 percent.

1993-2013

The final period begins with the abolition of conscription in 1992, following which the Palestinian share appears to have declined until the present, in the officer corps as well as the rank and file (Minorities at Risk 2006; Ryan 2002, 127-28), accompanied by an increase in Bedouin dominance (Zahran 2011, 2012). A 1999 estimate (Abu-Odeh 1999, 196-98) described the Palestinian share at the time as "insignificant." Sometime toward the latter end of the final 1992-2013 period, King Abdullah banned Palestinians from joining the military entirely and engaged in a purge that sought to weed them out even from the auxiliary services ("Jordan's King Abdullah" 2009; Zahran 2012). Consequently, we code Palestinians as underrepresented in both the officer corps and the rank and file for this period with between 0 and 40 percent (reflecting a declining trend over this period), with a corresponding overrepresentation designation given to the Transjordanians with between 60 and 100 percent.

666 Israel

Salient Ethnic Groups

The most prominent social cleavage in Israel is between Jews and Arabs, with each comprising roughly half the population since 1967. Each of these broad ethnic categories includes additional salient divisions. Within Israel's Jewish population, scholars of ethnicity note a salient difference between those who immigrated to Israel from central Europe (Ashkenazi Jews), and those who immigrated from elsewhere within the Middle East (Oriental, or Mizrahi Jews; for the purposes of this study and consistent with the EPR dataset, this group includes Sephardi Jews). EPR also includes Russian Jews beginning in 1992. We found no evidence of this being a salient division within the military and thus have not included Russian Jews as a group in our analysis.

Meanwhile, Arabs include both "Israeli Arabs"–those who have Israeli citizenship–and, since 1967, "Palestinian Arabs" who reside in the occupied territories and do not possess citizenship. This latter disaggregation is contentious, as many Arabs with Israeli citizenship self-identify as "Palestinian." However, the distinction has important legal ramifications within the Israeli state, including the ability to participate in the military. "Israeli Arabs" also includes groups such as Druze and Bedouins who have additional unique ethnic identities. Additionally, there is a population of Muslim but non-Arab Circassians. However, the small size of these groups along with limited available evidence makes it impossible for us to assign codings at such a fine-grained level.

1949-1967

Soon upon the founding of the state of Israel, the new country implemented national conscription as a means of ensuring adequate manpower to provide for its national defense. The state's Defense Service Law requires a period of military service for all "ordinary citizens" (Røislien 2013, 217). However, as Cohen notes, "adherence to the principle of universal conscription has never been entirely rigid . . . At no point in its history did the composition of the IDF ever precisely mirror the demographic profile of the country at large" (Cohen 1997, 89).

Specifically, Israel's non-Jewish population was exempted from military service: this included the entire Arab population that lived within Israel's 1948 borders (including groups that were religiously Sunni Muslim, Christian, or Druze, as well as groups that identified as Palestinian and/or Bedouin), as well as the much smaller group of Circassian non-Arab Muslims. In the 1950s, conscription was expanded, with service being required of Druze citizens in 1955 (Horowitz 1974, 265) and Circassians in 1958 (Røislien 2013, 218). While Druze, Circassian, and even Bedouin participation in the military is encouraged by the Israeli state, with Bedouins even forming their own units (Kanaaneh 2003, 8), participation from Muslim Arabs is viewed more skeptically "on the grounds that they would be confronted with an impossible dilemma were they ever called upon to participate in a war against other Arabs" (Cohen 1997, 90). The cumulative effect is that while Jews make up about three quarters of Israel's citizens (i.e. not including "Palestinian Arabs"), they constitute an estimated 97 percent of the military (Cohen 2014, 114).

Mizrahi Jews, especially in earlier years, were far less likely to be proficient in the Hebrew language than Ashkenazi Jews. While both groups were conscripted into the rank and file, this linguistic barrier made promotion of Mizrahi Jews into the officer corps relatively rare. Drawing on recruitment data from 1953, Peled shows that while Mizrahi Jews made up roughly half of a

recruiting class, only 8 percent of the graduating officer class were Mizrahi (Peled 2000, 596).

1968-2013

The expansion of Israel to include the occupied territories of the West Bank and Gaza after the 1967 war brought with it a substantial population of Palestinian Arabs now living within the effective Israeli state but without legal citizenship. Palestinian residents of the occupied territories are not eligible for enlistment in the IDF, as they are not citizens of Israel. (While Israel does offer the opportunity for non-citizens to serve in the military on a voluntary basis, these recruitment programs are restricted to Jews.)

We also broaden our range for the shares of Ashkenazi and Mizrahi Jews in the officer corps, as qualitative statements indicate that the presence of Mizrahi Jews increased over time. However, they are still believed to be relatively underrepresented, especially at the most elite ranks (Peled 2000, 601; Cohen 1997, 91).

670 Saudi Arabia

Salient Ethnic Groups

Saudi Arabian society is almost entirely Arab with the most significant identity cleavage being that between the Sunni and Shia religious sects. There are further divisions within each sect: between Wahhabi Sunnis of the interior and the Hijazi Sunnis of the country's west, and between the Jaafari Shia of the Gulf coast and the much smaller Ismaili ("Twelver") Shia of the mountainous southern border with Yemen. We do not find evidence of these intra-sectarian divisions as being salient in the military, though we include the groups in the dataset given EPR's finding that these cleavages are politically salient and the possibility that future research may find important differences between these groups' roles in the military, especially between Wahhabi and Hijazi Sunnis.

Furthermore, Saudi Arabia's military includes a number of expatriates, many of whom are Pakistani. We thus include expats as a group with Pakistani expats as a subset.

1946-2013

According to numerous sources, Shia participation in Saudi state institutions, including the military, is rare, and promotion to positions of leadership is nearly nonexistent. For example, a State Department International Report on Religious Freedom ("Saudi Arabia 2012 International" 2012, p. 6) finds that Shia face discrimination in the military as well as other professions, but are represented. An International Crisis Group report ("The Shiite Question," 2005) states that "Jobs in the security apparatus–police and military–are rare and promotion prospects for those who get them virtually nonexistent," while Human Rights Watch (Wilcke 2009, 13) reports that "Few if any Shia manage to enroll in military training colleges or serve in the army." Finally Majidyar (2013, 2) writes, "Saudi Shi'ites are also denied basic civil rights and are barred from senior positions in the government. At present, there is no single Shi'ite cabinet member, deputy minister, ambassador, head of a university, or even girls' school principal."

Based on this evidence, we code Shia (including both subgroups) as underrepresented in the rank and file with less than 10 percent share and excluded from the officer corps. Sunnis are overrepresented in the rank and file with between 80 and 90 percent share and overrepresented in the officer corps with between 90 and 100 percent. We are unable to determine the breakdown between Hijazi and Wahhabi Sunnis.

The remaining share of the military is made up of expatriates. The Saudi military has relied on foreign mercenaries, such as a unit of 10,000 Pakistanis embedded in Saudi armored brigade. Foreign "technicians" were thought to total 20,000 before 1990 (Kechichian 1999, 250). Given that the total size of the Saudi military is just over 200,000 (INSS 2016, 7), this puts the share of expats at just under 10 percent. We presume that few of these mercenaries are officers, though we cannot rule out the possibility that at least some of them are.

678-680 Yemen

Salient Ethnic Groups

Yemeni society is characterized first by a regional cleavage between the residents of the the former North and South Yemens, which had been mostly independent until their unification in 1990. Meanwhile, in the North, a sectarian cleavage distinguishes Zaydi Muslims (an offshoot of Shi'ism, though distinct in its jurispridence), Shafi'i Sunni Muslims, and a racial/caste cleavage distinguishes a group known as the "al-Akhdam" who may have ancestry in Ethiopian invaders who were expelled from the Arabian peninsula in the sixth century.

Tribal identities play an important role in Yemeni society and are particularly salient among the Zaydi population that inhabits the mountainous northern region of the country. Two tribal confederations, the Hashid and Bakil, dominate the north. This dataset is unable to comprehensively assess the representation of tribal groups within the Yemeni military, though where evidence is available it will be noted in this narrative. Following EPR, we also do not include Houthis as an ethnic group, as the basis of their distinction appears to be primarily political.

South Yemen, 1968-1990

From its independence from Britain in 1968 until its unification with North Yemen in 1990 (the Yemen Arab Republic), South Yemen (the Yemen People's Democratic Republic) was an independent state with its own military. It is coded as such, though the analysis is included in this section. South Yemen was predominantly Shafi'i Sunni with no politically relevant social cleavages.

North Yemen, 1946-1990

North Yemen was ruled as a Zaydi Imamate until 1962. The modern army was built under the rule of Imam Yahya following the first World War. Yahya filled both the rank and file and the officer corps with members of loyal Zaydi tribes, many of whom had fought with him against the Ottomans (Fattah 2010, 26; Brown 1963, 353). Yahya and his successor Ahmad sought to professionalize the military by recruiting Turkish trainers to come to Yemen, and by sending officers to Iraq and Egypt for military education (Fattah 2010, 27). This effort likely backfired as international exposure caused officers to see the Imamate as anachronistic. In 1962, a group of Egyptian-trained Zaydi officers led a coup against the Imamate. Tribes loyal to the Imam fought back, leading to a civil war with heavy involvement from external powers. The ultimate stalemate resulted in a government led by the officers, but over which the Zaydi tribes retained significant power.

Despite this massive upheaval, there was little change in the social composition of the military. While Shafi'is had largely supported the rebellious officers over the Imam, the leaders of the revolution were predominantly Zaydi, and there is little evidence to suggest that the composition of the military changed following the civil war. In fact, according to the International Crisis Group ("Yemen's Military-Security Reform" 2013, 3), over the course of the 1960s conservative Zaydis marginalized leftists within the military, who were mostly Shafi'i. This marginalization continued during the 30 year rule of President Ali Abdullah Saleh, who increasingly stacked the military with not only fellow Zaydis, but particularly members of the Hashid confederation (Makara 2013, 351), and his own Sanhan clan. According to a former officer interviewed by International Crisis Group

("Yemenï¿œs Military-Security Reform" 2013, 2), "The most important factor in the appointment and promotion of officers was loyalty to Saleh. The next factor was hailing from the Sanhan. Look at all of the highest-ranking commanders. They were all Sanhan."

Based on this evidence, we are confident that Zaydis are overrepresented and make up a majority of the officer corps and rank and file. However, it is hard to determine just how dominant their position was. We are therefore forced to assign wide intervals, estimating their share in the officer corps at between 50 and 90 percent and in the rank and file at between 50 and 80 percent. Shafii Sunnis are therefore pegged at between 10 and 50 and 20 and 50 in the officer corps and rank and file respectively. Al-Akhdam are severely underrepresented and most likely non-existent in the officer corps, though we could not find sufficient information to justify a categorization of complete exclusion.

Unified Yemen, 1991-1994

Upon unification of the two Yemens in 1990, the armies of the two countries integrated in name only. The larger Zaydi-dominated northern army remained intact, as did the southern army ("Yemen's Military-Security Reform" 2013, 5). According to Fattah (2010, 37), the Southern army consisted of 27,000 soldiers while the northern army had 37,000. This gives Southerners a 42 percent share, making them underrepresented given their estimated 55 percent of the total population. Because the armies were largely separate, we can assume the rank and file and officer corps shares to be roughly similar. Furthermore, we presume that the breakdown of Northerners (constituting 58 percent of the overall army) follows a similar division between Zaydis and Shafii Sunnis as before unification. This produces a range of 30-50 percent for Zaydis and 0-30 for Shafii Sunnis in the officer corps. The lower bound for Shafii Sunnis in the rank and file is estimated slightly higher at 20 percent for the rank and file. (These ranges are all estimated by multiplying the pre-unification ranges by 0.58.) Zaydis are still overrepresented, while Northern Shafi'i Sunnis are proportionally represented, as their diminished share within the Northern army is balanced by the North's larger share versus the South.

1995-2011

Following the victory of North Yemen in 1994, the state instituted an official policy of conscription to expand the size of the force, though the northern Zaydi tribes provided recruits in far greater numbers (Knights 2013, 269). Moreover, southern units were largely disbanded with southern officers forced to retire. An estimated 100,000 southern civil and military employees lost their jobs (Novak 2008), and according to one former southern officer, only about 30 percent of the South's military remained intact ("Yemen's Military-Security Reform" 2013, 6). Saleh became even more aggressive in his efforts to place members of his own family and Sanhan clan in positions of senior leadership (Phillips 2011). The relative estimates for all groups remain the same in this period of time, however the absolute estimates reflect the attrition of Southerners to 30 percent of their former size. Given their former share was estimated at 42 percent of the total military, this produces a new estimate of 12 percent, or between 10 and 20 percent for the rank and file. Because the armies are now more highly integrated, we can no longer assume that the share in the military overall reflects share in the officer corps. We therefore estimate a lower bound of zero for Southerners in the officer corps.

Northerners therefore now comprise between 80 and 90 percent of the rank and file. Following a similar logic to that used for the prior period to produce the breakdown of Zaydis and Shafii, we get 0-40 percent Shafii Sunni in the officer corps and 10-40 in the rank and file, with Zaydis representing 40-90 percent and 40-80 percent respectively.

2012-2013

These imbalances contributed to the popular demonstrations in 2011 and the armed conflict that followed. However, it is too early to assess what changes may have occurred in the composition of the military since that time; thus we do not provide data for 2012-2013.

690 Kuwait

Salient Ethnic Groups

Kuwait's population is divided between Kuwaiti nationals, who benefit from full citizen rights, and a large number of Expats. The resident population in 2009 was 3.5 million, of whom 2.2 million were expats.[15] Among the population of Kuwaiti nationals, there is a sectarian division between Sunnis and Shia, with Sunnis outnumbering Shia by a little more than two to one. Finally, Kuwait hosts a large population of former nomads who never applied for or received citizenship after the country's independence in 1961. These are known as the "Bedoon ," from the Arabic phrase *bidoun jinsiyya*, meaning "without nationality" (Longva 2000, 188). Estimates of the Bedoon population range from 200,000 in the late 1980s (Longva 2000, 189) to 100,000 in 2009.[16]

1961-1991

While Kuwait technically requires 1-2 years of compulsory military service, exemptions are frequently granted. As such, Kuwaiti nationals are highly underrepresented in the rank and file of the military, comprising between 20 and 30 percent prior to the 1991 Gulf War (Metz 1994, 345). Instead, Kuwait turned to the Bedoon population to compensate for the shortage of military manpower. Prior to 1990, Al-Najjar (2004, 5) estimates that the Bedoon comprised around 80 percent of the army rank and file. Gasperini (1991) provides a similar estimate of 70 percent. Bedoon, however, were rarely promoted to the officer corps (Al-Najjar 2004, 5). We therefore code Bedoon during this period as overrepresented in the rank and file with between 70 and 80 percent but underrepresented in the officer corps with between 0 and 10 percent.

After the Iranian revolution and during the Iran-Iraq war, the regime purged many Shiites from government and military service due to fears of disloyalty (Metz 1994, 345; Longva 2000; Rubin 2013, 3). "Most Kuwaiti officers," according to Metz (1994, 346), "came from the royal family or related tribal groups." Knowing that the rank and file only consisted of between 20 and 30 percent Kuwaiti nationals to begin with, we code Kuwaiti Sunnis at between 20 and 30 percent (proportionately represented) and Kuwaiti Shia between 0 and 20 percent (underrepresented). In the officer corps, we code Kuwaiti Sunnis as overrepresented with between 70 and 100 percent and Kuwaiti Shia as between 0 and 30 percent. We are unable to offer a relative coding for Shia for this period given this degree of uncertainty. While sources indicate that Shia are clearly underrepresented in comparison to Sunnis, Kuwaiti nationals are overall overrepresented in comparison to the overall resident population. It is therefore unclear whether Kuwait Shia representation in the officer corps is proportionate or not with their share of the resident population.

We were unable to find specific evidence of the role of expatriates in the military during this period. However, the data obtained about the share of the rank and file made up by both Kuwaiti nationals and the Bedoon suggest that the share of expats is likely less than 10 percent.

1992-2013

[15] See EPR Atlas, https://growup.ethz.ch/atlas/Kuwait, 790.
[16] See EPR Atlas, https://growup.ethz.ch/atlas/Kuwait, 790.

After the Gulf War, the government of Kuwait began to see the Bedoon population as a potential threat and both prevented many who had fled during the war from returning and expelled others who had stayed (Ali 2006, 63). Al-Najjar (2004, 5) estimates that they now comprise only 40 percent of army's 16k forces. Furthermore, the passage of new legislation after the Gulf War explicitly prohibits Bedoon from entering the officer corps, while allowing expatriates to do so (Al-Najjar 2004, 5). We therefore code Bedoon as still overrepresented in the rank and file, but with only a 30 to 50 percent share, and excluded from the officer corps.

Cordesman (2006, 92) estimates that there are between 1,600 and 3,700 expatriates in the officer corps. Given that Al-Najjar (2004, 5) puts the size of the Kuwaiti military at 16,000, this would give Expats between a 10 percent and 30 percent share. We do not have specific data on the breakdown between Kuwaiti Sunni and Shia in the officer corps, but based on the figures above, we can deduce that Kuwaiti nationals as a whole constitute only between 30 and 50 percent of the rank and file. Given that we know from Kamrava (2000, 8) that Shia face some discrimination in entering the military and are very unlikely to outnumber Sunni, we code Shia as between 0 and 30 percent and Sunnis as between 20 and 50.

Evidence of the breakdown of the officer corps is even more scarce, other than knowledge that Bedoon are excluded entirely. Metz's (1994, 346) assertion that most officers are from the royal family or related tribes allows us to code Sunni as overrepresented and between 50 and 100 percent. Knowing nothing about how the remainder of the officer corps might be divided between Kuwaiti Shia and Expats, we are forced to code both at between 0 and 50 percent. This allows us to code Expats as underrepresented, but we are not able to make any inferences about the relative representation of Shia.

692 Bahrain

Salient Ethnic Groups

Bahrain is a predominantly Arab country with significant populations of expatriates, especially from Asia (Bahrain Census 2010). The Arab population is divided between Bahrainis and Arabs from elsewhere in the region. The most salient cleavage within Bahrain, however, is sectarian, with roughly three-quarters of Bahrainis being Shia Muslims and one-quarter Sunni. However, Sunnis hold nearly all political power under the Khalifa family monarchy. This sectarian division is especially prominent in the military where Bahraini Shia are prohibited from serving and where the regime has turned to Sunni mercenaries from other countries to make up for shortages in manpower. We thus include codings for Bahraini Sunnis, Bahraini Shia, Expat Sunnis, Expat Shia, and Expat Other, with cross-cutting parent groups Bahraini, Expat, Sunni, and Shia.

1971-2013

Because of the political dynamic of sectarian minority rule, the state security forces consist almost exclusively of Sunni Arabs, both from Bahrain and from abroad. There is no conscription, and Shia are in fact prohibited from joining the military (Barany 2011, 35-36; Lutterbeck 2013, 42-43).

Bahrain also relies heavily on foreigners to fill the ranks of its military and internal security forces. These foreigners are again almost entirely Sunni and from other Arab states in the region such as Syria, Jordan, and Yemen (Lutterbeck 2013, 43).

Despite knowing that Shia (both Bahraini and Expat) are completely excluded from the military and that both the officer corps and rank and file are almost entirely Sunni (with perhaps a tiny number of non-Muslim expats), we were unable to find data on the breakdown of Bahrainis versus Expats, leaving us with significant amounts of missing data. The data coverage is strongest for the overall Sunni versus Shia cleavage, as well as for the Shia subgroups, as we know that all Shia groups are completely excluded and that Sunnis (combined Bahraini and Expat) account for more than 90 percent of both the officer corps and rank and file.

694 Qatar

Salient Ethnic Groups

Non-Qatari permanent residents (non-citizens) have outnumbered Qataris in Qatar since at least 1970. The Qatari share of the population went from 40.5 percent in 1970 (Cordesman 1997, 234) to between 20 and 26 percent during the years from 1986 to 1995 (Cordesman 1997, 234; Metz 1994, xxv) to between 12 and 18 percent in the years since 2010 (Gray 2013, 222; "Qatar 2013 International" 2013, 1; Adiong 2012, 333) – one of the highest ratios in the world of non-citizens to citizens.

We have no data on the base population of the Bedouins – who, it should be noted, are citizens in Qatar (Beydoun and Baum 2012, 10). There is also sufficient evidence to include under the "Bedouin" label other terms used in our sources, such as "leading tribes" or "leading desert tribes."

The ruling Al-Thani tribe was estimated in 2013 to number between 10,000-15,000 (Kamrava 2013, 5), and given an estimated 280,000-300,000 citizens in 2010 (Gray 2013, 222), this would approximate to 3.5 to 5.5 percent of the citizenry.

Among the expatriates, recent estimates place Pakistanis at between 4 to 18 percent of the population, although the 18 percent figure is the one most cited (Beydoun and Baum 2012, 10; Snoj 2013; Orr 2008, 59).[17] In addition, we code British expatriates who served in the officer corps, as well as Omanis and Yemenis who are recruited as mercenaries through targeted recruiting drives in those countries.

Even for a very small country, at just over 2 million inhabitants, Qatar has an exceptionally small military: currently, only about 12,000 soldiers (Gray 2013, 191; Kamrava 2013, 88).

1971-1986

The ruling al-Thani tribe appears to have always been over-represented in the officer corps; this is also true of the Bedouin / leading tribes. There were also reports of British officers in the Qatari military, although recruitment efforts consciously targeting Qataris appear to be increasing the Qatari share in the officer corps (Cordesman 1988, 171; 1997, 273; Keegan 1979, 586; Metz 1994, 355-357). We have no indication from our sources as to the degree of absolute representation by any group in the officer corps during the 1970s.

While the rank and file of the Qatari military has always relied on significant numbers of expats, according to Keegan's estimate (Keegan 1979, 586) Bedouins accounted for a majority of the rank and file.

1987-2013

We chose to divide up the post-independence timeframe into two periods, 1971-1986 and 1987-2013, based on evidence that the Bedouin share of the rank and file had decreased from a majority in the former period (Keegan 1979, 586) to less than a majority in the latter (Cordesman

[17] See also CIA World Factbook 2017, "Qatar," https://www.cia.gov/library/publications/the-world-factbook/geos/qa.html.

1988, 171).[18] We have no indication as to the specific date that this shift took place, so we make 1986/87 the division marker based on the year of applicability of the Cordesman quotation cited immediately above.

Even though the military has been heavily foreigner-dominated (e.g., Gause 1994, 76), since the Bedouins lost their majority in the rank and file, based on calculating the ratio of the Qatari proportion in the military to the Qatari proportion of the population, it appears that Qataris are over-represented. Even if we take the lowest estimates we found of Qataris comprising only 25-30 percent of the military (Cordesman 1997, 273; Gray 2013, 191; Metz 1994, 355-357), this share is still overly large compared to the very small Qatari population proportion. This appears to be due to the relatively high military participation rates of the ruling al-Thani family and the Bedouins / leading tribes in both the officer corps and the rank and file (Cordesman 1988, 171; 1997, 273; Ferdinand 1993, 50, 359; Herb 1999, 245; Keegan 1979, 586; Metz 1994, 355-357). Because of the general difficulty in attracting young Qatari men to the military (Gray 2013, 191; Kamrava 2013, 88), though, there have been efforts by the regime to increase the Qatari share, including at least two conscription programs in the last 20 years that only applied to Qataris (Cordesman 1997, 273; Badawi 2014).

Although the only non-Qatari groups that we had enough evidence to code were British and Pakistanis, we found reference to participation by non-Qatari groups of many different nationalities, especially from Arab countries. Qatar maintains recruitment drives in Oman, and our sources asserted that Pakistanis, especially from Baluchistan, and Yemenis were disproportionately highly represented in the ranks (Cordesman 1988, 171; 1997, 273; Kamrava 2013, 88; Keegan 1979, 586; Metz 1994, 355-357).

[18] See also other statements, cited below, about the non-Qatari share being a majority.

696 United Arab Emirates

Salient Ethnic Groups

Due to high levels of immigration from South and Southeast Asia as well as from other countries in the Arab world, Emiratis comprise only about 20 percent of the country's overall population. Other Arabs make up 23 percent, and South Asians comprise 50 percent (INSS 2012, 2).

1971-1997

Due to this lack of local manpower and high levels of privilege among ethnic Emirati, the military has relied highly on expatriates, particularly those from other Arab states such as Oman, Egypt, and Jordan, but also Pakistan and Britain. This practice began prior to independence as the British formed the "Trucial Oman Levies," which consisted of only about 40 percent local Arabs while the rest were Omanis, Iranians, Pakistanis and Indians (Metz 1994, 361). As the Emirates expanded their military forces in the decades after independence, they increasingly relied on expatriates. By the 1980s, these expatriates accounted for between 80 and 85 percent of enlisted soldiers (Anthony 1981, 7; Peterson 1988, 216). This ratio implies roughly proportionate representation for Expatriates and Emiratis.

While sources refer to the presence of expatriates in significant numbers in the officer corps (especially Jordanians, British, and Pakistanis), there is insufficient data to determine either the absolute percentage or relative proportionality of expats and emirati nationals at the officer level.

1998-2013

In the mid 1990s, the UAE underwent a major restructuring and build-up of its armed forces, merging state-specific forces, such as those of Dubai and Abu Dhabi (in 1997), into the unified national military entity controlled by Abu Dhabi. Since that time, estimates of expatriate Arabs in the armed forces have been more moderate, between 27 and 33 percent (Davidson 2009, 435; Foley 1999, 26).

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Salient Ethnic Groups

For most of Oman's post-1945 history, the most salient division has been expatriate versus citizen. Prior to the start of our data collection for the country in 1946, Oman had a centuries-long tradition of relying on mercenaries, mainly Baluchi recruited from the Gwardar port on the Makran coast in Pakistan, for its military forces. During the late 1800s and much of the 1900s, Oman continued this tradition and also relied on British officers to staff the military.

In addition to the Baluchis who served as mercenaries in the military, Oman has a resident Baluchi population, many of whom have become Omani citizens (referred to hereafter as Omani Baluchi to distinguish them from Pakistani Baluchi). Its population rose from 30,000 in the mid-1980s (Allen 1987, 12) to 200,000 by the end of our data-collection timeframe (Valeri 2014, 182).

The expatriate community in Oman also includes numerous other immigrants from South Asia and from Africa, mainly Zanzibar. We were only able to obtain estimates for the non-citizen resident population size from the 1990s onward, since the first national census was taken in 1993. As shown by the 1993 census (cited in Cordesman 1997, 136) and the 2010 census ("Oman's Population" 2011), their share of the total population has remained fairly steady at between 25-30 percent. Given that Oman's economic opening took place under Qaboos, the non-citizen resident share was likely much smaller prior to this period. Consequently, we only include "other expatriates" as an ethnic category for the final period, 1993-2013.

Our sources occasionally refer to some tribal and regional differences within Oman's Arab population, though the evidence was too scant to develop codings at this level. Additionally, according to both EPR and the sources we consulted, sectarian divisions between Ibadhi and Sunni Muslims are not highly salient in either politics or the military. In any event, this cleavage is largely congruent with other ethnic cleavages, as the vast majority of Sunni Omanis are Ibadhi, while Baluchis (both national and non-national) are Sunni. Accordingly, we interpret EPRs identification of "Ibadhi Muslim (Arabs)" as being generally correspondent with our grouping of Omani Arabs. Some addtional information about regional, tribal, and sectarian cleavages are included at the end of this synopsis.

Thus, our group categorization for Oman includes two macro identities–Expatriates and Omanis–which are then subdivided into British, Pakistani Baluchi, and other expatriates; and Omani Arabs and Omani Baluchis. We also code "Baluchis" as a cross-cutting group that includes both Omani Baluchis and Pakistani Baluchis due to their common ancestral ties. We divide the post-1946 history of Oman into 5 periods to reflect the changing composition of the officer corps and the rank and file.

1946-1957

In its current incarnation as the Sultan's Armed Forces (SAF), the Omani military was inaugurated in 1958 (Metz 1994, 367). Prior but still modern versions of the military included an all-Baluchi army unit established in 1921 (Peterson 2007, 79) and a few forces established in the 1950s with British aid and apparently staffed entirely by British officers. For the latter forces, the Sultan imposed a recruitment quota of 70 percent / 30 percent Baluchi-to-Arab in the rank and file (Allen 1987, 79). This avoidance of recruiting Omanis was deliberate: Sultan Sa'id bin Taimur

was "morbidly suspicious of his subjects" (Kaylani 1979, 574).

1958-1970

The post-1958 army included Pakistani Baluchi officers as well as British. While the Library of Congress country study for Oman (Metz 1994, 370) indicates that most officers were Pakistani Baluchi, with a few British, other sources (Allen 1987, 79; Keegan 1979, 524) affirm that most were British, with a few Pakistani Baluchi. Initially, there were no Omani officers, but by 1968-70 there were between 16-31 Omani officers, all of them Omani Baluchi (Allen 1987, 79; Keegan 1979, 524; Peterson 2014, 237-238). True to the previously established quota, 70 percent of the rank and file were Pakistani Baluchi, while the remaining 30 percent was divided between Omani Arabs and foreign mercenaries of various nationalities (Allen 1987, 79; Kaylani 1979, 574).

1971-1992

Sultan Sa'id bin Taimur's son, now-Sultan Qaboos bin Sa'id al-Sa'id, overthrew his father in a 1970 coup with British support. He immediately began a program of Omanization that involved replacing the British and Pakistani-Baluchi with Omani Arabs in the officer corps and the ranks (Allen 1987, 88). Very soon, Omanis, and presumably Omani Arabs specifically, obtained a majority in the rank and file, although building up the Omani share of the officer corps took some time despite the accelerated promotions (Keegan 1979, 526-527). From what we were able to deduce it appears that the British share of the officer corps exceeded 50 percent until approximately the early 1990s, when the Omani officer share overtook it (Metz 1994, 254, 370). We use 1993 as the dividing year between periods to mark this change based on the estimate just cited. It is possible that the Omani share reached a majority somewhat earlier, though, but it is difficult to calculate relative shares to determine this, as our sources differ widely as to the number of British and Omani officers at various points during this period (Allen 1987, 88; Keegan 1979, 526-527; Owtram 1999, 189, 226; Valeri 2009, 177-178). British officers continue to be used to the present, although mostly in an advisory role, and their share continues to slowly decrease (Allen and Rigsbee 2000, 78-79; Cordesman 1997, 167-168, 180; Katzman 2016, 14; Metz 1994, 254, 370; Owtram 1999, 252)

Beside changes in the officer corps, in the 1970-1992 period we have our first report of British personnel being used in the rank and file (Owtram 1999, 189; Valeri 2009, 177-178). Sources differed as to how long Pakistani Baluchi continued to be recruited into the military, whether ending in the 1980s or continuing through the 1990s, but they still had a significant share at least in the 1970s and 80s (Cordesman 1997, 167-168, 180; Keegan 1979, 526; Valeri 2009, 158, 177). Omani Baluchi have still been recruited at a high rate from 1970 until the present (Allen 1987, 12, 88; Peterson 2014, 237; Valeri 2009, 158, 177), although information needed for calculating their absolute share is not available.

1993-2013

There were 3,700 expatriates total in the military in the late 1990s (Allen and Rigsbee 2000, 78-79; Cordesman 1997, 167-68, 180) out of a manpower total for the military of over 40,000,[19]

[19]See IISS publication *The Military Balance*, 2013 ed., 337.

resulting in a share in the rank and file below 10 percent for other expatriates (compared to a population share of 25-30 percent). Other expatriates (besides the British and Pakistani Baluchi) therefore appear to be under-represented in the rank and file. From this, we also deduce that Omanis were over-represented in the 1993-2013 period. There was no mention of other expatriates at all as officers, and given their second-class status, we can probably safely assume that they played no significant role at all in the officers corps.

Tribal, Religions, and Sectarian Considerations

Although, due to limited information from our sources, we did not code identity groups down to the level of the region or tribe, we did encounter occasional statements about recruitment policy targeted at these levels, which we summarize here. There was somewhat of a salient division between coastal Omanis (from the northern strip along the Gulf of Oman, which includes Muscat), inner Omanis (from the highlands region separated from the northern coast by the Hajar mountain range), and Dhofaris (from the southern Dhofar region). Sultan Sa'id prohibited recruitment among inner Omanis, only allowing coastal tribes to serve (Allen 1987, 79). His son reversed this, not only allowing inner Omanis to serve but also heavily recruiting from certain inner Omani tribes that had traditionally been allied to the sultan, including the Hawasina, the Bani Kalban / Kalbani, and the Bani 'Amr / Ma'amari (Allen and Rigsbee 2000, 92; Valeri 2009, 158, 177; 2014, 205). However, certain tribes like the Harthi and, surprisingly, the royal-family al-Sa'id tribe are under-recruited (Allen and Rigsbee 2000, 92). Also, the Dhofari rebellion collapsed in the mid-1970s partly because of Sultan Qaboos' amnesty policy that also integrated at least 2,000 former rebels into the military (Metz 1994, 304; Peterson 2007, 416).

Finally, even though religion is not currently salient, it is worth noting the changing religious composition in the military over the decades. Pakistani Baluchi and Omani Baluchi are overwhelmingly Sunni (Peterson 2007, 79); besides the Dhofar region, most Sunnis in Oman live along the northern coast (Walsh and Darke 2016, 30); and inner Oman is the traditional Ibadhi stronghold. The decreased reliance on Baluchi and coastal Omani Arabs and increased reliance on Arab tribes from inner Oman very likely indicates a shift from Sunni dominance in the military to Ibadhi dominance over the years, although this conclusion is not solid enough to be codeable.

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