The DEPTEMPO database shows “tempo” days aggregated on a unit basis. However, it does not permit us to track the specific individuals who deployed, the locations to which they deployed, or the length and number of deployments experienced by a given soldier. Data on individuals are needed to address some key questions that play a prominent role in the debate about tempo. For example:

- Has there been a sharp rise in the number of soldiers deployed?
- Are the same soldiers being deployed repeatedly?
- Do soldiers spend a large amount of time deployed year after year?

To address such questions, we examined deployment information captured by the Army’s personnel system, which allows us to track individual soldiers and draw inferences about their experiences over a career. The personnel system also covers deployments back to 1994, permitting us to examine trends over a longer period.

One important limitation of the individual data must be emphasized, however. The personnel system covers only some types of deployments; until very recently, it focused primarily on major operational deployments and training exercises. To maintain consistency in trends, this chapter restricts analysis to those “major” deployments. Because of data limitations outlined below, we had to omit deployments arising from local overnight training or CTC rotations. Thus, the personnel data do not permit us to examine a soldier’s total “time
Deployments and Army Personnel Tempo

Nevertheless, the personnel data do cover the events most likely to add stress in soldiers’ lives, and they considerably expand our understanding of deployment effects.

In this chapter we first describe the data collected in the personnel system, known in the Army as the Standard Installation and Division Personnel System (SIDPERS). We then examine what the data tell us about major deployments in the Army over the seven-year period from 1994 through 2000.

TEMPO DATA REPORTED THROUGH SIDPERS

The Army has been collecting data on selected aspects of individual deployments for a number of years. But until the period following the Gulf War, the data were collected solely for other purposes and do not provide a reliable or complete picture for an analysis of tempo. Only after 1993 did the Army become sufficiently concerned with deployment tempo to adapt its systems to build a more comprehensive tracking methodology. (This situation characterizes the other military services as well.) We have repeatedly been told by personnel system operators that the data are not reliable before the mid-1990s, and our analysis is consistent with those reports.

The Army staff began reporting soldier deployment activity in its “SKILLTEMPO” reports to the Army leadership. The SKILLTEMPO data are so named because they are aggregated and reported by occupational specialty. The data for the SKILLTEMPO reports originate in SIDPERS at the installation level. This chapter uses the same source data that the Army uses for its SKILLTEMPO reports, although we have performed extensive edits on the data that should improve accuracy.

One important limitation of the SIDPERS data is their omission or underreporting of “intratheater” deployments. By intratheater we

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1What fraction of the total deployment picture is covered by the personnel system? A precise answer is not available because of conflicting definitions and changes over time (see the discussion below). An estimate can be made, however, by considering Categories C and D in the DEPTEMPO data system, which appear to roughly correspond to the events captured by the personnel system. Together, those two categories cover about 35 percent of total reported DEPTEMPO.
mean, for example, off-post training within the same country (such as deployment from a U.S. base to another CONUS post or Combat Training Center, or a similar deployment from a base in Germany to a training area within Germany). Except for the past year or so, SIDPERS data do not track either on-post overnight training or deployments to local training areas off the installation. CTC rotations were added to the reporting requirement in February 1997; however, based on our unit visits and analysis of the data by deployment category, it did not appear that most units were reporting such rotations.\(^2\)

Our information indicates that the SIDPERS data do capture most overseas deployments. The data appear to be most complete for those deployments where a central office creates a transportation manifest for the movement (such as a list of personnel boarded for each airplane flight).\(^3\) These major operations, such as those in Bosnia and Kosovo, also represent the most stressful deployments for both soldiers and units, as we argued in Chapter Two. In contrast, intratheater deployments tend to be shorter, in familiar locations, and planned well in advance so that soldiers and units can make adequate preparations to mitigate deleterious effects. Therefore we decided it was appropriate to omit the SIDPERS categories for local off-installation training and Combat Training Center activity. We believe this provides a better comparison over time and still yields useful inferences about the most important types of deployments.

One other aspect of the personnel data needs to be mentioned: The SIDPERS data include deployments for all Active Component Army personnel, not just those in TOE units. In this respect SIDPERS is more complete than the DEPTEMPO system, which includes information only for personnel assigned to TOE units. While most of the

\(^2\)See Appendix B for a description of data editing and a tabulation of all reported deployments by category, showing which types we included and excluded.

\(^3\)For deployments from the 1st Cavalry Division to Bosnia, we compared records of individual deployments between the actual flight manifests and SIDPERS records and found a close correspondence between the two. We also calculated the sum of individual deployment records from other installations involved in the same operations and compared those to passenger information from official deployment plans (TPFDD); again we found close agreement.
deployments are conducted by personnel assigned to TOE units, some soldiers do deploy from TDA organizations as well. For example, during the period 1998 through 2000 there were 5,054 enlisted deployments from TDA organizations, out of a total of 104,332 enlisted deployments (4.8 percent). The data in this chapter will be for all Army personnel, whether assigned to TOE or TDA organizations.

From the personnel data we can determine for each soldier when he or she deployed, the date of return, and the location of the deployment. By tracking individual records over time and aggregating across various categories, we can examine the level of deployment across the Army as a whole as well as in various parts of it. We are interested in estimating the number and length of deployments, the incidence of repeated deployments, and the total amount of time soldiers spend deployed. First, how many deployments have Army personnel undertaken in each year?

TRENDS SINCE 1994

Number of Deployments

Figure 3.1 shows the number of deployments as captured by the Army personnel system for 1994 through 2000. A “deployment” in this case is a movement by a soldier from his home station to a major operation or exercise captured in the personnel system. As we can see from the figure, the number of deployments was somewhat larger in 1996 through 1999 than in 1994 and 1995. However, the number of deployments in any year represented less than 10 percent of the force; the Army had between 479,000 and 541,000 total personnel in each of these years.

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4The data for 2000, available as of this writing, show a modest decline relative to 1999. However, we have noted in earlier analysis that there is often a considerable lag between the date of a deployment and the time the event appears in the Army personnel deployment database.

5Army end-strength was somewhat higher in 1994 and 1995 (541,000 and 508,000) because the post–Cold War drawdown was still in progress at that time. End-strength then fluctuated between 479,000 and 492,000 during 1996–2000. See Appendix C for details.
We note again that these data cover only deployments by Active Component soldiers. Through this period some Reserve Component (RC) soldiers have also deployed, primarily in support units. Late in the period, the Army also began deploying selected RC combat elements (e.g., a portion of a National Guard division headquarters, which deployed with an Active Armored Cavalry Regiment). These RC deployments have reduced the burden on the Active Component somewhat; however, overall active soldiers appear to have constituted the lion’s share of those deployed.6

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6Although data on individual RC soldiers deployed are not readily available in centralized systems, aggregate counts of deployments kept at Department of the Army headquarters support this inference.
Deployment Location and Length

Where did these deployments occur? As seen in Figure 3.2, the large increases in 1996 and 1999 resulted from deployments to Bosnia beginning in 1996 and to Kosovo beginning in 1999. The deployments to Bosnia dominated in 1996 and then fell off somewhat in 1997 and 1998. In 1999 the deployments to Kosovo ("other Balkans") added to those in Bosnia. In total, the number of deployments in 1999 was about 40 percent higher than in 1993–1994.

In addition to involving large numbers of soldiers, the Balkan operations also involved longer tours than other operations. Longer de-

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Figure 3.2—Major Deployments by Location, 1994–2000

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7 "Bosnia" in this figure includes deployments to Hungary as well as those for Bosnia itself. There is no specific country coded for Kosovo. In this figure, "Other Balkans" includes deployments coded as Macedonia, Yugoslavia, and Albania. The large increase in 1999 was due to the deployments of forces in support of peacekeeping in Kosovo, which included forces going to Macedonia and Albania as well as to Kosovo.
ployments are believed to have more effect than short deployments on the quality of life of soldiers and their families.

How long have deployments lasted for most soldiers? Figure 3.3 shows the average deployment length for the locations described above. Prior to 1995, the average deployment had lasted about 90 days. The Bosnia mission clearly added a much longer tour length to the mix; in 1995 and 1996, many of the personnel served a nominal one-year tour in Bosnia. Over time, this declined from a high of 241 days in 1995 to 180 days in 1998. Shortly thereafter, however, the Kosovo mission began, involving another series of longer-than-normal deployments.

However, note that the average length of “other” (non-Balkan) deployments also rose after 1994—from 90 days in 1994 to more than 120 days in 1995 and 1996. Therefore, the average length of a deployment increased across the board, a result that was due only in part to involvement in the Balkans.

Figure 3.3—Average Length of Deployment by Location, 1994–2000
Soldier-Days Deployed Overseas

Both the size of deployments and the length of those deployments affect the total number of days spent by soldiers on deployed missions. For example, having 7,000 soldiers on duty in Bosnia for 365 days a year means about 2.5 million soldier-days deployed—a measure of the total burden on the Army. We have calculated, in similar fashion, the total number of days all soldiers in the Army spent on major deployments as captured in the personnel system. Figure 3.4 depicts the total number of soldier-days deployed during each year from 1994 onward. This emphasizes the effect of the Balkan deployments on the total time that Army personnel were deployed in 1996 and later years. Moreover, the pace of “other” deployments—such as missions to Kuwait, Saudi Arabia, Egypt, and Latin America—has not abated. Instead, the addition of Balkan operations established a new, higher level of continuing activity.\(^8,9\)

Clearly, overseas deployment activity increased markedly in the late 1990s. Compared with a base of about 2.5 million days in 1994, the pace essentially doubled, to around 5 to 6 million days during the years 1997–1999 (after a peak in 1996). This was not visible in the DEPTEMPO data because they go back only to 1997. Putting the two data sources together, it is clear that the rising activity rates shown by DEPTEMPO during 1997–2000 did not represent a temporary aberration or a “blip.” They occurred in the context of an upsurge in overseas activity starting several years before. This change, relative to a less-active base period, is one factor that has created a widespread sense of faster tempo and pressure across the military services.

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\(^8\)This is also evident from counts of the “instantaneous” number of soldiers deployed at any given time. Since 1994, the Army has typically had between 5,000 and 7,000 soldiers deployed to non-Balkan operations at any point in time. The Balkan operations added an average of 10,000 to 15,000 soldiers to that figure (more during the spike in 1996). See Appendix C for details.

\(^9\)Of course, some of the “other” deployments may grow or change in character over time, and some of the changes may generate added pressure. For example, some deployments to Latin America are now treated as temporary duty, to which the soldier goes without dependents, rather than as regular moves with dependents. Similarly, deployments to the Middle East, which grew after the Gulf War, often involve temporary duty. Such policies avoid the official establishment of a permanent U.S. presence in sensitive locations.
Still, even these increased deployments account for a modest fraction of the Army’s personnel resources. The 9 million soldier-days for 1996 represents about 5 percent of the total soldier-days available from a force of roughly 500,000 personnel. The smaller figures for later years, of course, account for less—between 2 and 4 percent.\(^\text{10}\) Even if one takes only soldiers in TOE units as the base—which would include about 321,000 people at any given time—the fraction is well below 10 percent.

**REPEAT DEPLOYMENTS**

The increase in the number of deployments has given rise to apprehension in the military community about the cumulative burden on soldiers who remain in the Army over many years. It is not uncommon to hear anecdotes about particular soldiers who have deployed

\(^\text{10}^\) Recalculating the burden in this way for each year produces a picture that is essentially the same as Figure 3.4. See Appendix C.
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to operations year after year, or who transferred from one post after a
deployment only to be confronted with an impending deployment
from their new post. An often-expressed concern is that while many
soldiers may not deploy at all, other soldiers may be deployed many
times, and that such repeat deployments are likely to have an effect
on morale and ultimately on the willingness of soldiers to remain in
the Army.

To determine how widespread this problem might be, we analyzed
the frequency of deployments by the same individual over a period of
three years. Such a period reasonably approximates the length of an
assignment or tour of duty for many soldiers. Table 3.1 shows the
number of soldiers who deployed one time, two times, and three or
more times during each of several three-year periods. The number
of soldiers with multiple deployments increased, from about 8,000 in
1994–1996 to a range of 13,000 to 16,000 in the later periods. How-
ever, the number of soldiers who deployed repeatedly is small in
relation to the total force. For example, in the period 1997–1999,
about 15,400 deployed two or more times. During that period the
active Army contained about 500,000 soldiers at any given time; in
addition, 75,000 to 90,000 new accessions arrived during each year
(while a similar number separated). Thus, the fraction of all available
soldiers who deployed repeatedly was between 2 and 4 percent, de-
pending on how one defines the base. 11

This finding holds up even when longer periods of time are consid-
ered, as detailed in Appendix C. For example, during the entire
seven-year period from 1994 through 2000, the personnel data show
only about 33,000 soldiers who deployed twice and 8,000 who de-
ployed three or more times. Again, however the base is calculated,
those rates imply that fewer than 4 percent of the Army’s soldiers
experienced more than one deployment to major operations and
exercises.

11The appropriate base for calculating a percentage could vary depending on one’s
purpose. One possible base is simply the average end-strength over the period, which
was 485,000 during 1997–1999. Using that base yields a rate of 3.2 percent
(15,432/485,000). Over a three-year period, however, a large fraction of the new
arrivals would complete training and be eligible for deployment, and others would
separate or be so near to separation that they would not be eligible. We do not have
data on all these flows or the policies that would define eligibility. But clearly the base
could easily be more than 700,000, which would imply a rate of 2 percent.
Table 3.1

Number of Soldiers Deployed One, Two, and Three or More Times by Three-Year Periods

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>92,571</td>
<td>91,825</td>
<td>88,692</td>
<td>87,808</td>
<td>88,842</td>
</tr>
<tr>
<td>Two</td>
<td>7,507</td>
<td>8,346</td>
<td>11,721</td>
<td>13,113</td>
<td>11,694</td>
</tr>
<tr>
<td>Three or more</td>
<td>622</td>
<td>671</td>
<td>1,368</td>
<td>2,319</td>
<td>1,875</td>
</tr>
<tr>
<td>Total</td>
<td>100,700</td>
<td>100,842</td>
<td>101,781</td>
<td>103,240</td>
<td>102,411</td>
</tr>
</tbody>
</table>

Because of concern in the Army about the potential for ill effects from repeated deployments to locations like Bosnia or Kosovo, we examined in some detail the enlisted soldiers who had multiple deployments in the 1997–1999 period. The results of that examination showed very few soldiers with repeat deployments to the Balkans. In addition, and contrary to some expectations, the total time deployed for soldiers with multiple deployments was not noticeably greater than for those with only one deployment. This again indicates that soldiers with multiple deployments were likely to have multiple short deployments and not multiple long deployments.\(^{12}\)

AMOUNT OF TIME DEPLOYED

To tie together all of the above observations, we examined the total amount of time that soldiers were away on major deployments over a designated period. Interest in that calculation springs from a concern about equity. While most soldiers do not deploy at all during a given year, some must deploy for long periods. For example, during the Stabilization Force (SFOR) 4 and 5 rotations to Bosnia in 1998–1999—supported by the 1st Cavalry Division—some of the division headquarters personnel were deployed for an entire year. Some leaders were also deployed to Bosnia to participate in planning sessions and to become familiar with the location and mission before

\(^{12}\)See Appendix C for more discussion of multiple deployments, comparisons between enlisted and officer personnel, and comparisons among Army branches.
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the actual deployment. Other field-training activities in preparation for the deployment would further increase the amount of time that soldiers spent away from home.\textsuperscript{13}

\textbf{Time Deployed in a One-Year Period}

An era of intense activity, such as the Bosnia and Kosovo operations, is bound to affect some soldiers disproportionately. We would expect that during any six-month or even one-year period we would find some soldiers away much of the time while others would be away for only a short time or not at all. Figure 3.5 illustrates the trends in recent periods. It shows the number of soldiers who were deployed more than 120 days (one-third of the time) in each year. Clearly, the number of personnel deployed for more than 120 days in a calendar year increased markedly in the period after 1994. In 1994, only 4,700 soldiers spent more than 120 days deployed. In 1996 (the peak year from 1994 through 2000), more than 34,100 soldiers met this criterion, a sevenfold increase. In 1998–2000, the number hovered between 20,000 and 25,000—still well above the figures for 1994–1995. Virtually all of these increases were due to deployment to the Balkans. These kinds of increases have created an impression that long deployments have become more common, and perhaps common enough in a soldier’s career to pose a problem.

\textbf{Time Deployed in a Three-Year Period}

Over a period of a year or less, such intensive periods of activity are not unusual and may even be expected within the military. However, problems would certainly arise if some soldiers were spending an inordinate amount of time deployed over a period of several years. Repeated long deployments during a single assignment or during repeated assignments over a few years might have a negative effect both on the individual soldier and on others who might fear being similarly affected in the future. In an effort to look more closely at

\textsuperscript{13}For example, persons scheduled for an SFOR rotation were deployed to a Combat Training Center for preparatory exercises, but such intratheater deployments would not be reliably recorded in the personnel data system.
this concern, we examined total time deployed by soldiers over three-year periods of observation.

Figure 3.6 shows how many soldiers would meet certain deployment thresholds during a three-year period. These data indicate that relatively few soldiers spent a high proportion of time deployed over any three-year period. For example, consider soldiers who were deployed for more than 180 days over a three-year period (represented by the gray- and black-shaded segments of the bars in Figure 3.6). Such soldiers would be deployed for one-sixth of the time, an amount that would generally be viewed as moderate. In the peak deployment period (1996–1998), fewer than 37,000 soldiers spent more than 180 days deployed. That number represents less than 10 percent of the personnel inventory, however the base is calculated. In the other periods, a smaller fraction of soldiers spent that much time deployed.
A more intensive level of deployment would be 360 days deployed during a three-year period—the black-shaded segments of the bars. That would be one-third of the time, or the level at which the FORSCOM policy would indicate a unit becoming “amber” rather than “green.” During the peak period of 1996–1998, only about 3,700 soldiers spent more than 360 days deployed.\(^\text{14}\) Even during that period—when fairly large deployments with six-month tour lengths were common—fewer than 1 percent of the force spent one-third of their time deployed.

**A Mitigating Factor: Rotations Among Assignments**

Why do these over-time numbers turn out so low, given the evident sense of high tempo in many units? One factor that mitigates the

\(^{14}\text{On average during the period since 1994, there were fewer than 1,700 soldiers who met this criterion.}\)
deployment burden over a soldier’s career is the practice of rotating personnel among different units and types of assignments. Even when soldiers experience a long deployment during a TOE assignment, such as a tour in Bosnia or Kosovo, that event tends to be a one-time occurrence, or at least a very infrequent event over a career. For most career soldiers, TOE assignments are interspersed with assignments to TDA organizations, where overseas deployments are much more infrequent if they occur at all.

This can be illustrated by the patterns for soldiers in the Armor branch. In recent years, Armor soldiers have experienced the most time away from home, as shown by the DEPTEMPO data in Chapter Two. Over a career, however, the Armor soldier who remains in the Army can expect to spend more than 40 percent of the time in TDA assignments. Table 3.2 shows the percentage of TOE and TDA assignments available for enlisted Armor personnel (career management field 19). Recall from earlier that less than 5 percent of all deployments come from TDA organizations. Therefore, career personnel are likely to be essentially protected from deployments during their TDA tours. That pattern helps explain why we found so few personnel who experienced multiple deployments over three-year or even seven-year periods.

Table 3.2
Distribution of Armor Authorizations, by Seniority and Unit Type

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent of Authorized Positions, by Type of Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOE Units</td>
</tr>
<tr>
<td>Junior (E1–E4)</td>
<td>91%</td>
</tr>
<tr>
<td>Senior (E5–E9)</td>
<td>54%</td>
</tr>
</tbody>
</table>

**SUMMARY**

Similar to the results we saw in Chapter Two for the DEPTEMPO data, the analyses of individual deployment data show a substantial rise in deployment activity, which began in 1995 and continued
throughout the decade. The rates of deployments and lengths of tours rose sharply between the 1994–1995 and the 1996–2000 timeframe. Overall, the activity rate more than doubled, as measured by the total number of soldier-days away on major deployments.

Nonetheless, it is difficult to see from the personnel deployment data how the level of tempo could be the sole cause of the widespread concerns about potential ill effects. While the tempo rates are rising, they still account for a small fraction of total soldier-days and affect a modest fraction of soldiers at any time. For example, most soldiers do not deploy at all during a given year. Those who do deploy may be away for a long period—typically six months or even up to a year for the Balkan deployments—but fewer than 4 percent are subject to repeat deployments. In total, over a three-year period only a modest fraction—fewer than 10 percent of all personnel—were away on major deployments more than one-sixth of the time; fewer than 1 percent were away more than one-third of the time. In part, this is the inevitable result of the regular rotation of soldiers among assignments, which over the course of a soldier’s career will include assignments to nondeploying TDA units.

This does not reduce the impact on units, soldiers, and families of deploying even once to Bosnia or Kosovo. And it must be recognized that the deployments just cited are in addition to the normal intra-theater training deployments, which we outlined in Chapter Two. However, even the entire picture does not explain the evident concern within the defense community about the pace of deployments and operations. We turn now to a discussion of other aspects of deployments and other demands on units and soldiers that may help explain this seeming disconnect between perceptions and the actual situation as shown by the empirical data.