# LOSSES OF LIFE IN MODERN WARS

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Carnegie Endowment for International Peace
DIVISION OF ECONOMICS AND HISTORY
John Bates Clark, Director

# LOSSES OF LIFE IN MODERN WARS

## AUSTRIA-HUNGARY; FRANCE

By GASTON BODART, LL.D.

# MILITARY SELECTION AND RACE DETERIORATION

By VERNON LYMAN KELLOGG

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# INTRODUCTORY NOTE BY THE DIRECTOR

THE Division of Economics and History of the Carnegie Endowment for International Peace is organized to 'promote a thorough and scientific investigation of the causes and results of war'. In accordance with this purpose a conference of eminent statesmen, publicists, and economists was held in Berne, Switzerland, in August 1911, at which a plan of investigation was formed and an extensive list of topics was prepared. The programme of that Conference is presented in detail in an Appendix. It will be seen that an elaborate series of investigations has been undertaken, and the resulting reports may in due time be expected in printed form.

Of works so prepared some will aim to reveal direct and indirect consequences of warfare, and thus to furnish a basis for a judgement as to the reasonableness of the resort to it. If the evils are in reality larger and the benefits smaller than in the common view they appear to be, such studies should furnish convincing evidence of this fact and afford a basis for an enlightened policy whenever there is danger of international conflicts.

Studies in the causes of warfare will reveal, in particular, those economic influences which in time of peace bring about clashing interests and mutual suspicion and hostility. They will, it is believed, show what policies, as adopted by different nations, will reduce the conflicts of interest, inure to the common benefit, and afford a basis for international confidence and good-will. They will further tend to reveal the natural economic influences which of themselves bring about more and more harmonious relations and tend to substitute general benefits for the mutual injuries that follow unintelligent self-seeking. Economic internationalism needs to be fortified by the mutual trust that just dealing creates; but

just conduct itself may be favoured by economic conditions. These, in turn, may be created partly by a natural evolution and partly by the conscious action of governments; and both evolution and public action are among the important subjects of investigation.

An appeal to reason is in order when excited feelings render armed conflicts imminent; but it is quite as surely called for when no excitement exists and when it may be forestalled and prevented from developing by sound national policies. To furnish a scientific basis for reasonable international policies is the purpose of some of the studies already in progress and of more that will hereafter be undertaken.

The publications of the Division of Economics and History are under the direction of a Committee of Research, the membership of which includes the statesmen, publicists, and economists who participated in the Conference at Berne in 1911, and two who have since been added. The list of members at present is as follows:

EUGENE BOREL, Professor of Public and International Law in the University of Geneva.

LUJO BRENTANO, Professor of Economics in the University of Munich; Member of the Royal Bavarian Academy of Sciences.

CHARLES GIDE, Professor of Comparative Social Economics in the University of Paris.

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HENRI LA FONTAINE, Senator of Belgium.

His Excellency LUIGI LUZZATTI, Professor of Constitutional Law in the University of Rome; Secretary of the Treasury, 1891–3; Prime Minister of Italy, 1908–11.

GOTARO OGAWA, Professor of Finance at the University of Kioto, Japan.

Sir GEORGE PAISH, Joint Editor of *The Statist*, London.

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EUGEN PHILIPPOVICH VON PHILIPPSBERG, Professor of Political Economy in the University of Vienna; Member of the Austrian Herrenhaus, Hofrat.

PAUL S. REINSCH, United States Minister to China.

His Excellency BARON Y. SAKATANI, recently Minister of Finance; Present Mayor of Tokio.

THEODOR SCHIEMANN, Professor of the History of Eastern Europe in the University of Berlin.

HARALD WESTERGAARD, Professor of Political Science and Statistics in the University of Copenhagen.

FRIEDRICH, FREIHERR VON WIESER, Professor of Political Economy at the University of Vienna.

The function of members of this Committee is to select collaborators competent to conduct investigations and present reports in the form of books or monographs; to consult with these writers as to plans of study; to read the completed manuscripts, and to inform the officers of the Endowment whether they merit publication in its series. This editorial function does not commit the members of the Committee to any opinions expressed by the writers. Like other editors, they are asked to vouch for the usefulness of the works, their scientific and literary merit, and the advisability of issuing them. In like manner, the publication of the monographs does not commit the Endowment as a body or any of its officers to the opinions which may be expressed in them. The standing and attainments of the writers selected afford a guarantee of thoroughness of research and accuracy in the statement of facts, and the character of many of the works will be such that facts, statistical, historical, and descriptive, will constitute nearly the whole of their content. In so far as the opinions of the writers are revealed, they are neither approved nor condemned by the fact that the Endowment causes them to be published. For example, the publication of a work describing the attitude of various socialistic bodies

on the subject of peace and war implies nothing as to the views of the officers of the Endowment on the subject of socialism; neither will the issuing of a work, describing the attitude of business classes toward peace and war, imply any agreement or disagreement on the part of the officers of the Endowment with the views of men of these classes as to a protective policy, the control of monopoly, or the regulation of banking and currency. It is necessary to know how such men generally think and feel on the great issue of war, and it is one of the purposes of the Endowment to promote studies which will accurately reveal their attitude. Neither it nor its Committee of Research vouches for more than that the works issued by them contain such facts; that their statements concerning them may generally be trusted, and that the works are, in a scientific way, of a quality that entitles them to a reading.

JOHN BATES CLARK,
*Director.*

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## MILITARY SELECTION AND RACE DETERIORATION

# LOSSES OF LIFE IN MODERN WARS

## AUSTRIA-HUNGARY

## 1618–1913

BY

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# AUSTRIA-HUNGARY
# 1618–1913

## CHAPTER I

### THE YEARS OF WAR AND YEARS OF PEACE IN THE PAST THREE CENTURIES

In the number and significance of the wars in which she has been engaged in the last three hundred years, the Austro-Hungarian Monarchy ranks second among the military Powers of Europe, only France surpassing her in this respect.

Chief among the causes of these numerous conflicts have been, first, the geographical position of Austria-Hungary as frontier State and bulwark against the greed for conquest of the Ottomans; second, the imperial dignity which has usually appertained to the wearers of the crown of Stephen and Wenzel, and which has forced them to take part in all the struggles of the empire with its warlike neighbour, France; and third, the various hereditary claims of the Hapsburgs to dominion in Italy and Spain.

The tables which follow (Nos. 1, 2, and 3) are designed to show in chronological order the wars in which the Monarchy has taken part in the last three hundred years, and to exhibit graphically the years in each century to be designated as war-years and peace-years respectively.

From the tables it will be seen that while the number of wars to the century has grown constantly greater, the number of years of war has, on the other hand, steadily decreased.

In tabular form, the actual numbers for Austria-Hungary are as follows:

| *Century.* | *No. of Wars.* | *No. of Years of War.* |
|---|---|---|
| Seventeenth | 12 | 77 |
| Eighteenth | 16 | 59 |
| Nineteenth | 21 | 25 |

During the first thirteen years of the twentieth century, the Monarchy had only one occasion to take up arms. This was at the time of the Boxer uprising in China in 1900, when her embassy had to be protected by marines.

TABLE 1. WARS OF AUSTRIA-HUNGARY IN THE SEVENTEENTH CENTURY [1]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1600** | **1601** | **1602** | **1603** | **1604** | **1605** | **1606** | 1607 | 1608 | 1609 |
| 1610 | 1611 | 1612 | 1613 | 1614 | **1615** | **1616** | **1617** | **1618** | **1619** |
| **1620** | **1621** | **1622** | **1623** | **1624** | **1625** | **1626** | **1627** | **1628** | **1629** |
| **1630** | **1631** | **1632** | **1633** | **1634** | **1635** | **1636** | **1637** | **1638** | **1639** |
| **1640** | **1641** | **1642** | **1643** | **1644** | **1645** | **1646** | **1647** | **1648** | 1649 |
| 1650 | 1651 | 1652 | 1653 | 1654 | 1655 | 1656 | **1657** | **1658** | **1659** |
| **1660** | **1661** | **1662** | **1663** | **1664** | 1665 | 1666 | 1667 | 1668 | 1669 |
| **1670** | 1671 | **1672** | **1673** | **1674** | **1675** | **1676** | **1677** | **1678** | **1679** |
| **1680** | **1681** | **1682** | **1683** | **1684** | **1685** | **1686** | **1687** | **1688** | **1689** |
| **1690** | **1691** | **1692** | **1693** | **1694** | **1695** | **1696** | **1697** | **1698** | 1699 |

1. 1600–6. Turkish War (from 1593).
2. 1615–17. Uskok War with Venice.
3. 1618–48. Thirty Years' War.
4. 1629–30. War of the Mantuan Succession.
5. 1657–60. War of the Polish Auxiliaries.
6. 1658–62. Fighting in Hungary and Siebenbürgen.
7. 1663–4. War with Turkey.
8. 1670. Suppression of Magnates' Conspiracy in Hungary.
9. 1672–82. Kuruc Insurrection in Hungary.
10. 1673–8. War with France.
11. 1683–98. Great Turkish War.
12. 1689–97. War with France (League of Augsburg).

These twelve wars occupied seventy-seven years, leaving only twenty-three years of peace in the century.

[1] The black figures denote years of war; the light figures years of peace.

TABLE 2. WARS OF AUSTRIA-HUNGARY IN THE EIGHTEENTH CENTURY[1]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1700** | **1701** | **1702** | **1703** | **1704** | **1705** | **1706** | **1707** | **1708** | **1709** |
| **1710** | **1711** | **1712** | **1713** | **1714** | 1715 | **1716** | **1717** | **1718** | **1719** |
| **1720** | 1721 | 1722 | 1723 | 1724 | 1725 | 1726 | 1727 | 1728 | 1729 |
| 1730 | **1731** | **1732** | **1733** | **1734** | **1735** | 1736 | **1737** | **1738** | **1739** |
| **1740** | **1741** | **1742** | **1743** | **1744** | **1745** | **1746** | **1747** | **1748** | 1749 |
| 1750 | 1751 | 1752 | 1753 | 1754 | 1755 | **1756** | **1757** | **1758** | **1759** |
| **1760** | **1761** | **1762** | **1763** | 1764 | 1765 | 1766 | 1767 | 1768 | 1769 |
| 1770 | 1771 | 1772 | 1773 | 1774 | 1775 | 1776 | 1777 | **1778** | **1779** |
| 1780 | 1781 | 1782 | 1783 | **1784** | **1785** | 1786 | 1787 | **1788** | **1789** |
| **1790** | 1791 | **1792** | **1793** | **1794** | **1795** | **1796** | **1797** | 1798 | **1799** |

1. 1701–14. War of the Spanish Succession.
2. 1703–11. Insurrection in Hungary.
3. 1716–18. War with the Turks.
4. 1718–20. War with Spain (Quadruple Alliance).
5. 1731–2. Relief of Imperial Forces in Corsica.
6. 1733–5. War of the Polish Succession.
7. 1737–9. Turkish War.
8. 1740–8. War of the Austrian Succession.
9. 1756–63. Seven Years' War.
10. 1778–9. War of the Bavarian Succession.
11. 1784–5. Wallachian Insurrection in Siebenbürgen.
12. 1784–5. War with Holland (Scheldt War).
13. 1788–90. War with the Turks.
14. 1789–90. Insurrection in the Austrian Netherlands.
15. 1792–7. War of the First Coalition against France.
16. 1799. Beginning of the War of the Second Coalition.

The proportion of peace-years to war-years in the eighteenth century is somewhat more favourable than that of the seventeenth, but the war-years are still in excess—fifty-nine to forty-one. It should be noted, however, that the wars under Nos. 5, 11, 12, and 14 are hardly worthy of this designation; they were rather armed interventions for the restoration of order.

[1] Black figures represent war-years; light figures, peace-years.

TABLE 3. WARS OF AUSTRIA-HUNGARY IN THE NINETEENTH CENTURY[1]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1800** | **1801** | 1802 | 1803 | 1804 | **1805** | 1806 | 1807 | 1808 | **1809** |
| 1810 | 1811 | **1812** | **1813** | **1814** | **1815** | 1816 | 1817 | 1818 | 1819 |
| 1820 | **1821** | 1822 | 1823 | 1824 | 1825 | 1826 | 1827 | 1828 | 1829 |
| 1830 | **1831** | 1832 | 1833 | 1834 | **1835** | **1836** | 1837 | **1838** | 1839 |
| **1840** | 1841 | 1842 | 1843 | 1844 | 1845 | **1846** | 1847 | **1848** | **1849** |
| 1850 | 1851 | 1852 | 1853 | 1854 | 1855 | 1856 | 1857 | 1858 | **1859** |
| 1860 | 1861 | 1862 | 1863 | **1864** | 1865 | **1866** | 1867 | 1868 | **1869** |
| 1870 | 1871 | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 | **1878** | 1879 |
| 1880 | 1881 | **1882** | 1883 | 1884 | 1885 | 1886 | 1887 | 1888 | 1889 |
| 1890 | 1891 | 1892 | 1893 | 1894 | 1895 | 1896 | 1897 | 1898 | 1899 |

1. 1800–1. War of the Second Coalition against France (from 1799).
2. 1805. War of the Third Coalition against France.
3. 1809. War with France.
4. 1812. War with Russia.
5. 1813–15. Wars of Liberation.
6. 1815. War with Naples.
7. 1821. Quelling of Disturbances in Piedmont.
8. 1831. Occupation of the Duchies of Modena and Parma.
9. 1835–46. Punitive expeditions against the Bosnians.
10. 1838. Punitive expeditions against the Montenegrins.
11. 1840. Participation in the War against Egypt.
12. 1846. Quelling of disturbances in Galicia.
13. 1848. War with Sardinia. Quelling of disturbances in Prague, Cracow, and Vienna.
14. 1849. War with Sardinia.
15. 1848–9. Insurrection in Hungary.
16. 1859. War with France and Sardinia.
17. 1864. War with Denmark.
18. 1866. War with Prussia and Italy.
19. 1869. Suppression of uprising in Southern Dalmatia.
20. 1878. Occupation of Bosnia and Herzegovina.
21. 1882. Suppression of uprising in Southern Dalmatia.

The number of peace-years here begins to exceed that of the war-years—twenty-five years of war against seventy-five of peace.

[1] Black figures represent war-years; light figures, peace-years.

Arranged according to the nationality of her antagonists, Austria-Hungary has carried on, during the last three hundred years, the following wars:

| *Antagonist.* | *No. of Wars.* | *Total length of Wars. Years.* |
|---|---|---|
| France | 14 | 76 |
| Turkey | 8 | 44 |
| Sardinia (earlier, Piedmont; later, Italy) | 6 | 15 |
| Prussia | 5 | 16 |
| Saxony | 5 | 14 |
| Spain | 4 | 30 |
| Bavaria | 4 | 21 |
| Hungarian Insurgents | 4 | 39 |
| Sweden | 2 | 23 |
| Denmark | 2 | 5 |
| The Netherlands | 2 | 33 |
| Great Britain | 1 | 8 |
| Russia | 1 | 1 |
| China | 1 | 1 |

In this tabulation, the less important military interventions are not taken into account.

## CHAPTER II

### DURATION OF THE WARS IN WHICH AUSTRIA-HUNGARY HAS BEEN ENGAGED; THE NUMBER AND FREQUENCY OF BATTLES, ENGAGEMENTS, AND SIEGES IN EACH

It is of some importance for the later investigations into the relative losses suffered in the various wars, to raise and answer the question of the length of each and the number of important engagements it occasioned.

In regard to the length of the wars, it is clear from the foregoing tables that they become notably shorter as we approach the twentieth century. This is still more strikingly shown in the following tabulation by centuries.

SEVENTEENTH CENTURY—12 Wars

1 of 30 years—The Thirty Years' War.
1 of 16 years—The Great Turkish War.
1 of 9 years—War of the League of Augsburg.
1 of 7 years—War with France, 1673–8.
The remainder, from one to four years.

EIGHTEENTH CENTURY—16 WARS

1 of 13 years—War of the Spanish Succession.
2 of 8 years—Hungarian Insurrection and War of the Austrian Succession.
1 of 7 years—Seven Years' War.
1 of 5 years—War of the First Coalition.
The remainder, from one to three years.

NINETEENTH CENTURY—21 WARS

1 of 2 years—The War of Liberation.
All the rest of one year or less.

The most important wars in which the Monarchy has been engaged in recent times have lasted barely a few months, as shown in the following table:

| *War.* | *Duration.* *Months.* | *Days.* |
|---|---|---|
| Danish-German War of 1864 | 6 | 12 |
| War with Sardinia of 1848 | 4 | 20 |
| War with France of 1805 | 3 | 28 |
| War with France of 1815 | 3 (The 'Hundred Days') | 9 |
| War with France of 1809 | 3 | 2 |
| Italian Campaign of 1859 | 2 | 14 |
| War with Italy of 1866 | 1 | 22 |
| War with Prussia of 1866 | 1 | 6 |
| War with Sardinia of 1849 | 0 | 6 |

Not all the wars of the period under consideration gave rise to important engagements. Many which lasted ten or more years have not as many great battles to show as numerous ones in recent times lasting but a few months. As we

approach the twentieth century, the conduct of wars becomes more energetic, and the important battles follow in much more rapid succession.

In order to make comparisons, it is necessary to determine the number of significant battles in each war, reckoned on the basis of the combined losses of both antagonists.

On the assumption of a minimum loss in killed and wounded on both sides of two thousand men, the actual number of important engagements in the wars named is shown by the following table:

| *War.* | *Date.* | *No. of great battles.* |
|---|---|---|
| War of the First Coalition | 1792–7 | 183 |
| War of the Second Coalition | 1799–1801 | 132 |
| War of the Spanish Succession | 1701–14 | 115 |
| Seven Years' War | 1756–63 | 111 |
| Thirty Years' War | 1618–48 | 86 |
| Wars of Liberation | 1813–14 | 86 |
| War of the Austrian Succession | 1740–8 | 74 |
| War with France | 1809 | 34 |
| War with France | 1673–8 | 28 |
| War with France | 1805 | 27 |
| War of the League of Augsburg | 1688–97 | 25 |
| Hungarian Insurrection | 1848–9 | 19 |
| War of the Year 1866 | 1866 | 19 |
| Turkish War | 1736–9 | 18 |
| War of the Polish Succession | 1733–5 | 17 |
| Turkish War | 1787–92 | 13 |
| War with France | 1815 | 12 |
| War with Sardinia | 1848–9 | 12 |
| Hungarian Insurrection | 1703–11 | 10 |

To determine the relative frequency of the important battles, a specified period of time must be taken as a unit. Selecting for this purpose the interval of one month, the number of battles taking place per month in any war will be represented by a fraction with the total number of battles of the war for a numerator, and the number of months of its duration for a denominator. Computed in this way, the

battle-frequency of the different wars is shown in descending order in the table below:

| *War.* | *Date.* | *Important battles per month.* |
|---|---|---|
| War with France | 1809 | 11·0 |
| War of the Year 1866 | 1866 | 10·0 |
| War of the Third Coalition | 1805 | 7·0 |
| Wars of Liberation | 1813–14 | 6·0 |
| War with Russia | 1812 | 5·2 |
| War of the Second Coalition | 1799–1801 | 4·4 |
| War of the Hundred Days | 1815 | 4·0 |
| War of the First Coalition | 1792–7 | 3·0 |
| Italian War | 1859 | 2·0 |
| War of the Polish Succession | 1733–5 | 1·4 |
| Seven Years' War | 1756–63 | 1·4 |
| Hungarian Insurrection | 1848–9 | 1·1 |
| War with Sardinia | 1848–9 | 1·0 |
| War of the Austrian Succession | 1740–8 | 0·82 |
| War of the Spanish Succession | 1701–14 | 0·77 |
| War with France | 1673–8 | 0·42 |
| Turkish War | 1736–9 | 0·4 |
| Turkish War | 1787–92 | 0·25 |
| Thirty Years' War | 1618–48 | 0·24 |
| War of the League of Augsburg | 1688–97 | 0·23 |
| Great Turkish War | 1682–99 | 0·15 |
| Hungarian Insurrection | 1703–11 | 0·10 |

The Napoleonic wars show the greatest relative number of battles, the latest European wars standing next in order. The conclusion follows that the wars since 1792, although of much shorter duration than those of the seventeenth and eighteenth centuries, indicate a vastly higher frequency of important battles. Short duration of the war and high relative number of great battles are also to be found wherever the manœuvres on one side of the struggle were directed by a general of the first rank, much superior to his opponents.

## CHAPTER III

### GENERAL OBSERVATIONS CONCERNING THE LOSS OF HUMAN LIFE IN THE WARS OF MODERN TIMES

THE human loss sustained by a military Power in a war may be caused by the weapons of the enemy, by disease and pestilence, privation, and hardship, physical exhaustion, capture and imprisonment by the hostile nation, and finally, by desertion.

In most modern wars, the principal losses have been borne by those called to the defence of the national interests, i. e. by the armies of the contending Powers. Only in a secondary degree has the civil population been affected. Yet there have at all times been wars in which the unarmed peaceful inhabitants of towns and villages have suffered greater losses through destructive acts of the soldiery (of their own as well as of that of the hostile country) than those sustained by the armies themselves. This was the case in the Peasants' Wars, the religious wars of the sixteenth century, the Thirty Years' War, and in many colonial wars of the maritime Powers.

The efforts of the warring parties to put out of the fight as many men as possible on the enemy's side are to-day directed predominantly—we may say exclusively—against the hostile armies; yet even in our own day, it is often very difficult to avoid endangering the lives of non-combatants. This is notably the case in the besieging of fortified towns, bombardment of ports, and capture of defended points. Also, even to-day, the civil population of affected districts naturally suffers in the same degree as the armies from diseases and epidemics which break out in consequence of war.

In early times, slight record was kept of the killing or wounding of civilians or of their infection and death by

disease; hence it is impossible for the statistician to give such data with regard to the civil population. Official records of this character have been kept by the different Governments only in more recent times, not at all until the second half of the nineteenth century, and even in the records later than 1850 there are large gaps. Statistical reports or tables must, therefore, be practically limited to the losses of the armies.

In regard to these also, the investigator encounters great difficulties, steadily increasing, the farther he gets from the nineteenth century. Conscientiously compiled records of the actual losses of armies are to be found in the archives of most of the military Powers only after the War of the Spanish Succession, i. e. after 1714. Even after that date, reliable data are limited to the greater battles, the more important engagements and sieges. The total losses for each war were not compiled until after 1848. Since that date, the military history section of the General Staff in every country has prepared comprehensive monographs dealing with each campaign in which the armies of the country took part.

From these facts it will be seen that it is extremely difficult to get approximately correct data for the battles and engagements in the seventeenth and eighteenth centuries; and in part the same is true of the nineteenth. The historical documents of the earlier periods were kept with very few exceptions in a decidedly subjective, partisan fashion, and official reports of military leaders teem with exaggerations. Throughout human history, the general, flushed with the pride of victory, has always exerted himself immediately after a battle has resulted in his favour, to magnify his success, and make it seem as complete as possible by extravagant reports of enormous losses in men and munitions of war on the side of his opponent, while reducing his own losses to a minimum. The vanquished leader, on the contrary, follows a natural tendency to minimize his losses (in

so far as they may be unknown to the victor), and to represent the alleged victory of his opponent as having been bought with disproportionate sacrifices. As accurate figures of the losses in wars of earlier centuries are generally entirely wanting, the statistician is driven to take refuge in estimates. Even in modern wars, not all official figures are to be accepted at once as completely corresponding to the truth. The category 'wounded', in particular, is quite elastic. In official lists, for obvious reasons, only those disabled for fighting are counted; but in the service narratives of individuals, every wound or contusion, however slight, is included. Thus very different results will be reached, according to the way in which the investigator attempts to get at the facts. The more remote in time the battle, the more meagre are the available sources, and with so much the more reservation must their statements be accepted.

With regard to the wars since 1848, it must be admitted that the numerous official publications leave little to be desired in the way of thoroughness of documentary study and accuracy of statistical data; they manifest, in general, a praiseworthy effort not to evade the often unpleasant truth.

The losses which are naturally of greatest interest are those inflicted directly by the enemy in hostile operations against the armed forces of the opposing Power, having for their object the disabling or rendering ineffective of as many combatants as possible. Among these are to be distinguished the casualties (killed and wounded, including wounded taken prisoners), and those taken prisoners not wounded. Under the caption of 'missing', in the ordinary tables of losses may be included both sorts of losses, on the one hand dead and wounded who could not be found, and on the other, prisoners whose fate remained unknown to their comrades, as well as deserters and dispersed troops. The fate of the 'missing' is not generally learned until long after the close of the war. In many armies they are counted with the

dead, very often erroneously so. The magnitude of a victory depends upon the amount of war munitions captured (cannon, hand-arms, ammunition, flags, standards, provisions, wagons, horses, tents, bridge material, &c.), as well as upon the relative loss in men inflicted upon the enemy. In naval warfare, the number of ships captured, sunk, destroyed, or disabled is even more significant than the human loss.

The percentage of casualties suffered by armies in war has varied widely in the last four hundred years, and in spite of the progressive improvement in weapons, shows a tendency to *decrease*.

Comparative investigations have been made of the casualties of the thirty greatest battles of the sixteenth century, the results of which show that the losses in killed and wounded were, on the average, for the victors ten per cent, and for the defeated army forty per cent of the effective strength. The number of killed was considerably in excess of the number wounded, and in comparison with the battles of later centuries, few prisoners were taken. At the beginning of the sixteenth century, a rude professional soldiery of Swiss and mercenaries formed the main contingent of the armies of France, Spain, the Empire, and Venice. Battles were decided in hand-to-hand combat, and commonly ended with the ruthless cutting down by the victors of any portion of the opposing forces they could lay hands on. Quarter was given only to knights, nobles, and the higher officers, from whom a high ransom might be extorted; common soldiers were put to the sword. A further ground for the high losses in battle at this period is the large proportion of religious and civil wars, which are always bloodier in character than conflicts between states and nations. The battles of the Peasants' Wars (1524–5) frequently ended in the complete extermination of the peasant armies, and in the Huguenot Wars also, the slaughter was much greater than in the conflicts of the same period between France and the Empire, Spain or Venice.

A similar statistical study of the thirty most important battles of the Thirty Years' War shows an average of casualties of fifteen per cent for the victorious, and thirty per cent for the defeated army. The number of killed begins to fall below that of the wounded, and the number of prisoners rises steadily. During the wars of Louis XIV, despite numerous raids and the deliberate destruction of flourishing towns and laying waste of whole provinces, the conduct of war becomes more humane and chivalrous. The casualties of this period (1648–1715) amount to eleven per cent for the victors and twenty-three per cent for the vanquished. The number of prisoners not wounded often equals the total casualty loss, as at Höchstädt (August 13, 1704), where the French lost 15,000 killed and wounded and the same number of prisoners.

During the Northern War of 1700–21 and the War of the Polish Succession (1733–5), the above percentages do not vary significantly. The age of Frederick the Great, also, though rich in great battles, closes with an average loss of eleven per cent for the victors and seventeen per cent for their antagonists. The number of prisoners rises notably, not infrequently exceeding that of the killed and wounded. This was the case, e. g. at Rossbach (November 5, 1757) and Leuten (December 5, 1757).

The wars of the French Revolution bring the figures still lower, to nine per cent and sixteen per cent respectively. But in the thirty greatest battles of the Napoleonic era (1805–15), the percentages revert sharply toward those of the period of Louis XIV. The victors here show an average loss of fifteen per cent, the defeated army twenty per cent. The explanation of these high relative losses is to be found in the fact that Napoleon I, to a greater degree than almost any other general in history, employed his troops unsparingly in the attainment of his ends, demanding and receiving from them performance which remains unequalled to the present day. In a succession of wars conducted with unexampled

energy, the great battle emperor developed armies that found no rivals in military efficiency, and were animated by a spirit which enabled them to bear with indifference the greatest losses. The casualties at Austerlitz reached 15·3 per cent, at Wagram 20 per cent, Auerstädt 25 per cent, Borodino 27 per cent, Aspern 29 per cent, Eylau 31·4 per cent, and Albuera 44 per cent.

The wars following the Napoleonic period were far less bloody. The average casualty losses is shown in the following table:

| *War.* | *Date.* | *Av. casualty loss per cent.* |
|---|---|---|
| Turkish-Russian War | 1828–9 | 14·0 |
| Polish-Russian War | 1830–1 | 14·0 |
| Sardinian-Austrian War | 1848, 1849 | 4·0 |
| Hungarian Insurrection | 1848, 1849 | 4·0 |
| Crimean War | 1853–6 | 12·0 |
| Italian War | 1859 | 9·5 |
| American Civil War | 1861–5 | 14·0 |
| War of 1866 | 1866 | 8·0 |
| Franco-German War | 1870–1 | 7·5 |
| Turkish-Russian War | 1877–8 | 13·5 |
| Boer War | 1899–1901 | 5·0 |
| Russo-Japanese War | 1904–5 | 14·0 |

No official data are yet available for the Balkan War, still in progress at the time of writing. Such information as has been made public indicates that the battles of the Greeks and Serbs against the Turks in no case show an average loss on the side of the former of more than eight per cent. The Montenegrins in their investment of Scutari lost over twenty per cent, which incapacitated them for offensive action afterwards. The casualty losses of the Bulgars, who had to bear the brunt of the fighting, may be estimated at fifteen per cent. The Turks, on the other hand, fighting on the defensive for the most part, seem in no case to have suffered losses of more than ten per cent—probably less than that.

Several causes contribute to the lowering of the average

casualty losses in modern battles. In the first place, the conflict is no longer, as formerly, decided by hand-to-hand fighting. Also, the general levies of the present day have by no means the *esprit de corps* which the old professional soldiery possessed, and the higher losses will no longer be borne by the troops. Furthermore, wars have become less frequent in recent times. Most of the military Powers of Europe have been at peace for more than forty years, or at most have employed a few regiments in colonial warfare. In recent wars between first-class Powers the moral force of the unseasoned levies will break down when the loss reaches a certain point and they give way. A striking example of this fact is furnished by the second half of the Franco-German War of 1870–1, when the armies hastily raised by Gambetta, by no means lacking in patriotic enthusiasm, courage, or thirst for vengeance, found themselves opposed to the veterans of 1864 and 1866, and the victors in the battles of 1870.

The great battles of the Russo-Japanese War were really less bloody than those of recent European wars, as the losses were distributed over a considerable period of time. The battles of Liao Yan, Schaho, and Mukden, each lasted a week or more; and hence the total loss was divided among at least seven days, while Königgrätz, Wörth, Rézonville, Gravelotte, and Sedan were decided in a few hours.

It may be assumed that in any future war between great military Powers, where armies of from 400,000 to 500,000 men are opposed to each other, the conclusion will require several days, in which case the losses will be smaller than in former times.

An important basis for calculating the losses of an army is the loss among the officers, these figures affording an indication as to the accuracy or probability of reported losses of the men. The loss of officers is always given more exactly, many States publishing lists of their names. Since the number of officers in each battle unit—battalion, squadron, battery, &c.—is always known, and the number of petty

officers and men per officer is easily computed, the loss of the officers is an excellent check on that of the men. The officers of an army almost always show a much higher percentage of casualties than the men. This is to be explained by the effort of the officer to set before his men a good example in cool and courageous conduct. In several armies the relative loss of officers and men has not varied in the course of the wars of the last one hundred and fifty years; hence the casualty loss of the men can be calculated with reasonable certainty from that of the officers. This circumstance is very important for the estimation of losses in battles for which no statements, or very defective ones, were given out. Examples are the numerous engagements of the French armies in the wars of the Revolution and during the Napoleonic period, where the bulletins often gave hardly a fourth of the actual losses. This ever-recurring normal proportional loss of officers is observed especially in battles in the open field. In sea-fights, in storming fortified places, and in crossing rivers in the face of the enemy, the percentage exceeds the normal figure.

## CHAPTER IV

### THE PROPORTION OF KILLED TO WOUNDED

Of the casualty losses an army sustains, the most keenly felt are those which completely and permanently deprive it of a number of its combatants. These include those killed outright and those so seriously injured that they subsequently die of their wounds.

A comparative investigation of several hundred battles of modern and recent times with respect to the proportion of killed and wounded shows that the relation may be expressed by the numerical ratio of 10 to 35. That is, out of every 45 men put out of action, 10 on the average are killed,

or about three times as many are ordinarily wounded as killed outright. In the most recent wars, the proportion is somewhat more favourable to the wounded. In the war of 1870–1 the Germans had 17,821 killed against 95,938 wounded, or for every 100 men killed, 538 were wounded, a ratio of 10 to 54. In the late war in the Far East, 47,152 Japanese were killed against 220,813 wounded, a ratio of 10 to 47. When the number who subsequently died of their wounds is taken into consideration, the proportion is naturally quite significantly changed for the worse. Of the wounded Germans 10,710 died, making the final ratio 100 : 336. Of the Japanese 47,387 wounded later succumbed, and when these are transferred to the side of the killed, the ratio stands at 10 : 18. The very high death-rate of the Japanese wounded is unique in the history of war. Normally, from twelve to fifteen per cent of the wounded later die of their wounds; in the case of the Japanese, the figure is almost twenty-two per cent. The principal cause of this melancholy increase in mortality is not to be sought in any deficiency of medical attendance or in the hygienic conditions. In a greater degree it was due to the fact that in the assaults on the fortifications of Port Arthur, carried out with unparalleled bravery by the Japanese, only head-wounds were likely to be received, and these very often result fatally.

In the case of many casualty lists, where the number of killed is more than one-third or even half that of the wounded, and particularly where it equals or exceeds the latter, very special conditions must have obtained. Some of these seem to merit a little further consideration.

In some instances the high percentage of killed seems accounted for, and would not be called in question. This is especially true of naval battles, where to the destructive effect of the enemy's artillery on large masses of men confined within a small space is added death by drowning, consequent on the sinking, stranding, or ramming of ships. Or again, fires may break out and suffocate or burn whole crews, or

cause magazine explosions demolishing the vessels. In such cases, the proportion of killed is very high. In the naval battle of Abukir, 1798, for example, the French lost 2,000 killed, 1,100 wounded. Other examples of a high proportion of killed are: the Battle of Lissa (1866), Italian losses 620 killed, 80 wounded; Trafalgar (1805), Franco-Spanish loss 5,000 killed, 3,000 wounded; Tsushima (1905), Russian loss 3,500 killed, 7,500 wounded.

Death by drowning has not infrequently played a large rôle in land battles as well, and has strongly affected the ratio of killed to wounded. The occasion has sometimes been a disastrous river-crossing under fire of the enemy, as at the crossing of the Bérésina in 1812, where the French lost 10,000 killed and an equal number wounded. Similarly in those battles where a part of the defeated army is finally driven into lakes or rivers. Examples are the losses of the Dutch at Denain (1712), of the Turks at St. Gothard (1664), Zenta (1697), and Martinestie (1789), the Russians at Austerlitz (1805), and the French at the Katzbach (1813).

In those battles of earlier periods which ended in furious hand-to-hand struggles, the proportion of killed to wounded was often relatively high. Such was the case in the battles of the religious and civil wars, where quarter was never given; also in the murderous conflicts of the Seven Years' War—at Zorndorf (1758), Prussian losses, 3,700 killed, 7,300 wounded; Russian losses, 7,200 killed, 10,800 wounded; Prussian losses at Kunersdorf (1759), 6,100 killed to 12,600 wounded; proportion of killed to wounded, 10:20, and 10:15 for the victorious and the defeated armies respectively.

The storming of strong field-works often costs the attacking force disproportionate losses in killed, while the effective bombardment of fortified points may similarly affect the defenders. In artillery duels also a disproportionate percentage of wounded is on record.

According to the nature of the battle the attacking force generally loses more men killed than do the defenders. Thus

Napoleon's armies, almost always conducting a brisk and energetic offensive campaign, even though victorious, often lost more in killed than their defeated opponents.

In earlier times, at the capture by storm of strong and stubbornly defended fortifications, the defending force often suffered fearful losses in killed, for such martial exploits commonly degenerated into a general butchery of their foes by the victorious troops. Illustrations are afforded by the Turkish losses at the storming of Oczakow (1737, 1788) and Ismaila (1790), and the Polish losses at the storming of Warsaw by the Russians (1794, 1831). At such times the number of deaths has occasionally been greater among the civil population of the captured city than among the garrison of the place (as, e.g., at Magdeburg, 1631, Saragossa, 1809, Badajoz, 1812, and San Sebastian, 1813).

## CHAPTER V

### LOSSES OF THE IMPERIAL ARMIES IN THE THIRTY YEARS' WAR, 1618–48

THIS great war, which shook Central Europe to its foundations, has found many historians, yet the sources for the losses of the contending armies are very meagre. Statements are based chiefly on estimates of more or less partisan colouring, and widely disagree in their accounts of the results even of the most important battles. A reliable estimate of the total loss of life in the war is an impossibility. There are fair grounds for asserting, however, that the loss of life on the part of non-combatants must have been considerably greater than that of the armies. The responsibility for this fact rests in the first instance on the barbaric and brutal conduct of the war. Other causes were the havoc wrought by an often unpaid, loot-greedy army rabble, the deliberate and methodical wasting of entire districts, and the

diseases and plagues which followed everywhere in the wake of the armies and carried off uncounted thousands.

The Austrian forces figured most prominently in this struggle, a great number of the regiments still existing in the Monarchy tracing their origin back to the Thirty Years' War. On the side of Austria, however, were Bavaria and the Catholic League, as well as Spain. The military contingents of these Powers fought shoulder to shoulder in all the greater battles, and it is consequently difficult, if not impossible, to separate by States the losses suffered. On account of the deficiency of source material, the statements regarding losses are limited also to those more important engagements with respect to which credible information has come down from that time.

The following statistical tabulation of the opposing forces and the losses they sustained relates only to those battles in which Austrian troops took part. The contemporaneous conflicts of Spanish, Bavarian, and other Leaguist troops with the French will be treated in a separate chapter, in connexion with the discussion of the French losses.

LOSSES OF THE EMPIRE AND SPAIN.—VICTORIES

| *Battle.* | *Date.* | *Probable effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Zablat | June 10, 1619 | 3,000 | 500 | 17·0 |
| Weissen Berge | Nov. 18, 1620 | 28,000 | 1,500 | 5·3 |
| Wimpfen | May 6, 1622 | 20,000 | 5,000 | 25·0 |
| Höchst | June 9, 1622 | 26,000 | 2,000 | 8·0 |
| Stadtlohn | Aug. 6, 1623 | 28,000 | 1,000 | 3·5 |
| Dessau Bridge | Apr. 25, 1626 | 16,000 | 1,000 | 6·3 |
| Lutter am Barenberge | Aug. 27, 1626 | 17,000 | 2,000 | 12·0 |
| Nuremberg | Aug. 24, 1632 | 60,000 | 1,500 | 2·5 |
| Regensburg | July 19, 1634 | 30,000 | 8,000 | 26·6 |
| Nördlingen | Sept. 6, 1634 | 35,000 | 2,000 | 5·7 |
| Thionville | June 7, 1639 | 14,000 | 1,400 | 10·0 |
| La Marfée | July 6, 1641 | 10,000 | 1,000 | 10·0 |
| Tuttlingen | Nov. 14, 1643 | 22,000 | 1,000 | 4·5 |
| Mergentheim | May 5, 1645 | 10,000 | 700 | 7·0 |

LOSSES OF THE EMPIRE AND SPAIN.—DEFEATS

| Battle. | Date. | Probable effective strength. | Losses. Casualties. | | Other Losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Neuhäusel | July 10, 1621 | 12,000 | 3,000 | 25·0 | | |
| Wiesloch | Apr. 29, 1622 | 17,000 | 2,000 | 12·0 | | |
| Stralsund (Siege of) | Feb.–Aug., 1628 | 24,000 | 12,000 | 50·0 | | |
| Breitenfeld | Sept. 7 1631 | 34,000 | 8,000 | 24·0 | 4,000 | 12·0 |
| Rain a. Lech | Apr. 15, 1632 | 27,000 | 3,000 | 11·0 | | |
| Lützen | Nov. 16, 1632 | 25,000 | 5,000 | 20·0 | | |
| Oldendorf | June 28, 1633 | 15,000 | 7,000 | 47·0 | 3,000 | 20·0 |
| Wattweiler | Mar. 2, 1634 | 6,000 | 1,500 | 25·0 | 500 | 9·0 |
| Liegnitz | May 13, 1634 | 12,000 | 4,000 | 33·0 | 400 | 3·0 |
| Wittstock | Sept. 24, 1636 | 30,000 | 10,000 | 33·0 | 8,000 | 27·0 |
| Rheinfelden | Feb. 21, 1638 | 4,000 | 700 | 18·0 | 2,300 | 58·0 |
| Wittenweier | July 30, 1638 | 17,000 | 2,000 | 12·0 | 1,400 | 8·0 |
| Kempen | Jan. 17, 1642 | 9,000 | 4,000 | 45·0 | 3,000 | 33·0 |
| Schweidnitz | May 21, 1642 | 18,000 | 3,000 | 17·0 | 1,200 | 7·0 |
| Breitenfeld | Nov. 2, 1642 | 30,000 | 10,000 | 33·0 | 5,000 | 17·0 |
| Freiburg | Aug. 3–5, 1644 | 16,000 | 4,000 | 25·0 | | |
| Jankau | Mar. 6, 1645 | 16,000 | 4,000 | 25·0 | 4,500 | 28·0 |
| Allersheim | Aug. 3, 1645 | 16,000 | 4,000 | 25·0 | 2,000 | 12·5 |
| Zusmarshausen | May 17, 1648 | 10,000 | 1,800 | 18·0 | 200 | 2·0 |

## CHAPTER VI

### LOSSES OF THE IMPERIAL ARMIES IN THE TURKISH WARS OF THE SEVENTEENTH CENTURY

IN the war of the Mantuan Succession (1629–30), at the same period as the Thirty Years' War, Austria was only slightly involved; her ally, Spain, being the leading opponent of the French. The Austrian contingent in the field was small, and as the actions which took place were of secondary importance, the losses of this contingent need not be treated in detail. The same applies to the war with Sweden (1657–60), in which Austrian troops played only a small part. Equally unimportant in engagements of military significance, and hence equally unimportant with respect to the losses incurred, were the Magnates' Conspiracy War in Hungary in 1670,

and the Kuruc uprising immediately following (1672–82), which yielded only minor skirmishes with the insurgents.

Of the greatest importance, on the contrary, were the two Turkish wars of the second half of the seventeenth century. This is true not merely because of their influence upon the development of the defensive power of Austria and because of the military results achieved, but more especially because they represented the successful repulse of the last great onslaught of the Turks against the heart of the Monarchy. The existence of the Empire was in the balance, and the fighting on both sides was of the most stubborn and bitter character. The losses of both parties were heavy, but those of the Turks much the higher, for the imperial forces were almost uniformly victorious, and commonly followed up their successes with a general butchery of their foes.

### A. *The Turkish War of* 1663–4

This war grew out of fighting between the Turks and the Princes of Siebenbürgen, which had been carried on since 1658, and in which the Turks came out victorious. At Gyalu, May 22, 1660, Prince George Rakoczy was defeated and killed (army losses, 5,000 out of 8,000 engaged); Prince Kemeny met a similar fate in the unfortunate battle of Schässburg, January 23, 1662 (losses, 4,000 men out of 6,000). After August 1663, the war was vigorously pushed on the imperial side, and a few brisk battles brought it to a conclusion in their favour within a year. In the only engagement in which they were defeated (Párkány, August 7, 1663), the losses of the Austrians were 2,000 men out of 5,000. In all the remaining important actions they were victorious, but in two of them their losses cannot be determined (battles of Gran River, May 16, and Lewencz, July 20, 1664). The greatest battle of the war was that of St. Gothard, in which the imperial forces won a brilliant victory, losing, out of 30,000 men, barely 2,000, or seven

per cent. As the struggle was of short duration and the Austrians were almost always victorious, their losses in this war were relatively small. Much richer in military actions was the great conflict to which we now turn.

## B. *The Great Turkish War*, 1683–99

IMPERIAL LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Bisamberg | Aug. 24, 1683 | 13,000 | 1,300 | 10·0 |
| Defence of Vienna | July–Sept. 1683 | 10,000[1] | 5,000 | 50·0 |
| | | 6,000[2] | 1,700 | 28·0 |
| Kahlenberg | Sept. 12, 1683 | 76,000 | 5,000 | 6·5 |
| Párkány | Oct. 9, 1683 | 28,000 | 1,000 | 3·5 |
| Waitzen (Vácz) | June 27, 1684 | 32,000 | 300 | 1·0 |
| Hamszabég | July 22, 1684 | 10,000 | 400 | 4·0 |
| Gran | Aug. 10, 1685 | 60,000 | 600 | 1·0 |
| Buda | Aug. 14, 1686 | 50,000 | 500 | 1·0 |
| Siege of Buda | June–Sept. 1686 | 60,000 | 20,000 | 33·0 |
| Harsany | Aug. 12, 1687 | 50,000 | 2,000 | 4·0 |
| Derwent | Sept. 5, 1688 | 3,000 | 300 | 10·0 |
| Storming of Belgrade | Sept. 6, 1688 | 53,000 | 1,300 | 2·5 |
| Kostajnica | July 25, 1689 | 20,000 | 200 | 1·0 |
| Batodschina | Aug. 20, 1689 | 18,000 | 400 | 2·2 |
| Nish | Sept. 24, 1689 | 17,000 | 400 | 2·5 |
| Slankamen | Aug. 19, 1691 | 50,000 | 8,000 | 16·0 |
| Zenta | Sept. 11, 1697 | 50,000 | 2,100 | 4·2 |

IMPERIAL LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Unsuccessful Siege of Buda | July–Oct. 1684 | 34,000 | 17,000 | 50·0 | | |
| Kachanik | Jan. 11, 1690 | 3,500 | 2,500 | 70·0 | | |
| Tohany | Aug. 21, 1690 | 4,000 | 1,000 | 25·0 | 2,000 | 50·0 |
| Loss of Belgrade | Oct. 8, 1690 | 5,000 | 4,500 | 90·0 | | |
| Unsuccessful Siege of Belgrade | July–Sept., 1693 | 30,000 | 8,000 | 27·0 | | |
| Lugos | Sept. 20, 1695 | 8,000 | 5,000 | 62·0 | | |
| Olaschin | July 29, 1696 | 50,000 | 5,000 | 10·0 | | |

[1] Garrison. [2] Citizens.

The above are the most important battles regarding which statistics are to be had. The proportionately very low figures for the losses incurred in the greatest victories of the imperial forces must be taken with a degree of caution. Besides the battles named in the table, there were in this war of sixteen years' duration a vast number of minor engagements and skirmishes and attacks on fortified towns, respecting which no data are forthcoming. It is known, however, that the imperial armies suffered severely from swamp fever in the marshy lowlands of the Theiss and the Save, many regiments being decimated. The number of killed and wounded in the important engagements tabulated reaches nearly 100,000. With respect to the great number of remaining encounters, and in view of the long duration of the war and the unhealthful climatic conditions of the country, it is safe to assume that the Great Turkish War cost the imperial armies at least 300,000 men. Of these probably 120,000 were killed. Only a third of these losses, however, are to be ascribed to Austria proper, as it was an imperial war and each of the German States furnished its quota of troops. An estimate of the number of non-combatants or civil persons who lost their lives in this barbarously conducted war is an impossibility because of the lack of data.

## CHAPTER VII

### LOSSES OF THE IMPERIAL ARMIES IN THE WARS WITH LOUIS XIV, 1673–1714

An opponent of the House of Hapsburg no less obstinate than the Turks was the Grand Monarch of France. It was this ruler's ambitious foreign policy, brutally disregardful of others' interests, which called into being among the land and naval Powers of Europe those coalitions for the preservation of the balance of power into which the impulse of self-preservation and reasons of state drove Germany and

Austria. Side by side with Austrian and Hungarian troops in almost all the battles with the French, fought the German contingents, and Dutch, Spanish, Piedmontese, British, and often even Danish and Swedish troops, as well. As a separation of the effective strength and relative losses of these different nationalities is impossible, only the combined figures for all the allies are given in the tabulations which follow. On account of the Turkish wars in progress at the same time, in which Austria was protagonist, comparatively few Austrian troops fought against the French in the wars of the second half of the seventeenth century. This was particularly true of the fighting in Germany and the Netherlands; in Italy, in consequence of the geographical situation, the Austrian forces outnumbered those of her allies.

Down to the year 1704, the French armies and generals showed themselves superior to those of the allies. It required a hard struggle and the combined efforts of nearly all Europe finally to overcome the exhausted French. The battles were hotly contested and the losses heavy. In Germany, the barbarous conduct of operations on the part of the French, recalling the devastations of the Thirty Years' War, entailed much suffering, particularly upon the peaceful population. The systematic desolation of whole districts rendered thousands homeless, and as all their property was destroyed, many could but perish miserably.

Compared with the earlier wars, a large increase in the size of the armies is to be noted; 90,000 to 100,000 men under the command of a single general are not infrequently met with, where formerly 30,000 had been the maximum.

### A. *The War of* 1673–8

This war was not fought mainly on German soil; the most important battles took place in the Netherlands and against the Spaniards in Sicily, and in these Austria had no part. In Germany also, the fighting was principally done by the North German contingents (Hanoverians and Brandenburgers).

Hence, excepting the siege of Philippsburg, the Austrian troops sustained no heavy losses.

IMPERIAL LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Altenheim | Aug. 1, 1675 | 22,000 | 3,000 | 14·0 |
| Consarbrück | Aug. 11, 1675 | 17,000 | 1,100 | 6·5 |
| Siege of Philippsburg | June-Sept. 1676 | 60,000 | 10,000 | 16·6 |

IMPERIAL LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Sinsheim | June 16, 1674 | 7,500 | 2,500 | 33·9 | — | — |
| Seneffe | Aug. 11, 1674 | 70,000 | 8,600 | 12·2 | 5,400 | 7·8 |
| Ensisheim | Oct. 4, 1674 | 32,000 | 4,000 | 12·5 | — | — |
| Mühlhausen | Dec. 29, 1674 | 5,000 | 300 | 6·0 | 900 | 18·0 |
| Türkheim | Jan. 5, 1675 | 30,000 | 900 | 3·0 | 2,500 | 8·3 |

## B. *The War of* 1689–97 (*League of Augsburg*)

On account of the contemporaneous Great Turkish War, only a few Austrian troops fought against the French in this conflict. In the Netherlands, principally British, Dutch, and Brandenburgish troops were engaged; in Italy, chiefly Piedmontese, with a few Austrians. Engagements in which no German troops were opposed to the French are not included in the tabulation. The Austrians sustained no notable losses in this war.

LOSSES OF IMPERIAL FORCES AND ALLIES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Siege of Mainz | July–Sept. 1689 | 60,000 | 5,000 | 8·3 |
| Siege of Bonn | Sept.–Oct. 1689 | 30,000 | 4,000 | 13·0 |
| Siege of Namur | July–Sept. 1695 | 80,000 | 18,000 | 23·5 |

LOSSES OF IMPERIAL FORCES AND ALLIES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Loss of Philippsburg | Oct. 1688 | 2,000 | — | — | 2,000 | — |
| Fleurus . . . | July 1, 1690 | 38,000 | 11,000 | 29·0 | 8,000 | 21·0 |
| Staffarda . . | Aug. 18, 1690 | 18,000 | 2,800 | 16·0 | 1,200 | 7·0 |
| Leuze . . . | Sept. 19, 1691 | 12,000 | 1,500 | 12·5 | 400 | 3·3 |
| Steenkerken . . | Aug. 3, 1692 | 63,000 | 6,600 | 10·5 | 1,400 | 2·3 |
| Neerwinden . . | July 29, 1693 | 50,000 | 12,000 | 24·0 | 2,000 | 4·0 |
| Marsaglia . . | Oct. 4, 1693 | 36,000 | 9,000 | 25·0 | 2,000 | 5·5 |

## C. *The War of the Spanish Succession*, 1701–14

In this struggle, Emperor Leopold I, himself one of the pretenders to the Spanish throne, was foremost among the opponents of Louis XIV. The armed force which Austria sent into the world-wide conflict was of very considerable size, and was called upon to fight on the most widely separated fields. The emperor's claims were upheld in battle in Bavaria and Swabia, on the Rhine and in the Tyrol, in the Netherlands, northern and eastern France, upper Italy, Provence, and on the Iberian Peninsula, in both Spain and Portugal. In all these places the Austrians were represented by strong contingents, in spite of the fact that a civil war—the Hungarian Insurrection—was raging in the interior of the country. The Austrian losses, it is true, were relatively not so heavy as those of the allied British and Dutch; yet they were considerable, and taken absolutely, in view of the long duration of the war, may be called high. It will be safe to place the casualties of the Austrian armies alone at 100,000 men at the least, and of these from 35,000 to 40,000 were killed or died of wounds. The combined losses of the other German contingents may be assumed to have been equally high; those of the Dutch and English together may be estimated at 250,000, and those of the Piedmontese at not less than 50,000. The allies must therefore have lost 500,000

men altogether, in killed and wounded. As the losses of the French, Bavarians, and Spaniards were certainly still greater, the grand total for the losses of the War of the Spanish Succession was well over a million men, of whom at least 400,000 sacrificed their lives. This estimate, moreover, is limited to the troops actually engaged, and takes no account of non-combatants and the civil population. As there were during the war an extraordinary number of sieges of populous cities, and as in many districts, stripped bare by the armies, famine and pestilence became prevalent, the total loss of human life was undoubtedly vastly higher still.

In the tables following, only those battles are considered in which German troops took part. In the discussion of the French losses, the remaining battles will receive more detailed treatment.

LOSSES OF IMPERIAL FORCES AND ALLIES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Carpi | July 9, 1701 | 15,000 | 1,000 | 6·5 |
| Chiari | Sept. 1, 1701 | 22,000 | 200 | 1·0 |
| Siege of Kaiserswert | Apr.–June, 1702 | 38,000 | 9,000 | 23·5 |
| Luzzara | Aug. 15, 1702 | 20,000 | 2,700 | 13·5 |
| Siege of Landau | June–Sept., 1702 | 46,000 | 3,000 | 6·5 |
| Donauwörth | July 2, 1704 | 25,000 | 6,000 | 24·0 |
| Höchstädt | Aug. 13, 1704 | 50,000 | 13,000 | 26·0 |
| Siege of Landau | Sept.–Nov., 1704 | 30,000 | 5,000 | 16·5 |
| Ramillies | May 23, 1706 | 60,000 | 5,000 | 8·4 |
| Turin | Sept. 7, 1706 | 30,000 | 4,300 | 14·5 |
| Oudenarde | July 11, 1708 | 90,000 | 6,000 | 6·7 |
| Wynendael | Sept. 28, 1708 | 10,000 | 1,000 | 10·0 |
| Siege of Lille | Aug.–Dec., 1708 | 35,000 | 14,000 | 40·0 |
| Siege of Tournai | June–Sept., 1709 | 40,000 | 5,400 | 13·5 |
| Malplaquet | Sept. 11, 1709 | 93,000 | 25,000 | 27·0 |
| Siege of Douai | Apr.–June, 1710 | 60,000 | 8,000 | 13·5 |
| Almenara | July 27, 1710 | 24,000 | 400 | 1·7 |
| Saragossa | Aug. 20, 1710 | 22,000 | 1,600 | 7·4 |
| Siege of Béthune | July–Aug., 1710 | 31,000 | 3,000 | 10·0 |
| Siege of Aire | Sept.–Nov., 1710 | 28,000 | 7,000 | 25·0 |
| Siege of Bouchain | Aug.–Sept., 1711 | 30,000 | 3,000 | 10·0 |
| Siege of Le Quesnoy | June–July, 1712 | 18,000 | 3,000 | 17·0 |

LOSSES OF IMPERIAL FORCES AND ALLIES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Other Losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Cremona | Feb. 1, 1702 | 8,000 | 800 | 10·0 | 400 | 5·0 |
| Friedlingen | Oct. 14, 1702 | 14,000 | 1,900 | 13·5 | 1,100 | 8·0 |
| Eisenbirn | Mar. 11, 1703 | 10,000 | 1,200 | 12·0 | 1,300 | 13·0 |
| Höchstädt | Sept. 20, 1703 | 18,000 | 4,500 | 25·0 | — | — |
| Speyerbach | Nov. 15, 1703 | 22,000 | 4,000 | 18·0 | 2,000 | 9·0 |
| Loss of Landau | Nov. 17, 1703 | 5,600 | 1,800 | 32·0 | 3,800 | 68·0 |
| Cassano | Aug. 16, 1705 | 24,000 | 4,000 | 17·0 | 500 | 2·0 |
| Calcinato | Apr. 19, 1706 | 19,000 | 3,000 | 16·0 | — | — |
| Castiglione | Sept. 9, 1706 | 10,000 | 1,500 | 15·0 | 2,500 | 25·0 |
| Rumersheim | Aug. 26, 1709 | 7,000 | 2,600 | 37·0 | — | — |
| Villaviciosa | Dec. 10, 1710 | 13,600 | 3,000 | 22·3 | 2,000 | 14·7 |
| Denain | July 24, 1712 | 18,000 | 2,300 | 13·0 | 4,100 | 21·0 |
| Loss of Marchiennes | July 30, 1712 | 7,000 | 200 | 3·0 | 6,200 | 97·0 |
| Loss of Douai | Sept. 8, 1712 | 3,200 | 300 | 10·0 | 2,900 | 90·0 |
| Loss of Landau | Aug. 20, 1713 | 7,000 | 2,000 | 29·0 | 5,000 | 71·0 |
| Loss of Freiburg | Nov. 16, 1713 | 9,300 | 3,600 | 38·0 | — | — |

## D. *Hungarian Insurrection*, 1701–11

IMPERIAL LOSSES.—VICTORIES

| Battle. | Date. | Effective strength. | Casualties. | |
|---|---|---|---|---|
| | | | No. | Per cent. |
| Raab (Györ) | June 13, 1704 | 3,600 | 200 | 5·5 |
| Pata | Oct. 8, 1704 | 3,000 | 100 | 3·3 |
| Tyrnau | Dec. 26, 1704 | 7,000 | 500 | 7·2 |
| Zsibó | Nov. 11, 1705 | 13,000 | 600 | 4·6 |
| Trencsín | Aug. 4, 1708 | 10,000 | 500 | 5·0 |

IMPERIALIST LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Casualties. | |
|---|---|---|---|---|
| | | | No. | Per cent. |
| Schmöllnitz | May 28, 1704 | 2,400 | 1,600 | 67·0 |
| Kölesd | Sept. 2, 1708 | 3,500 | 3,000 | 85·0 |

In comparison with the contemporaneous War of the Spanish Succession and the Northern War, the Hungarian Insurrection was a conflict of the second order only. The forces levied were inconsiderable, seldom exceeding 10,000 men on the imperial side. The insurgent armies, though commanded by competent military leaders, and usually superior in numbers, consisted chiefly of irregulars. The losses of the imperial armies in the war were not noteworthy, those of the insurgents disproportionately higher. The conduct of the war was brutal and inhuman, as is generally the case with civil strife. Many inhabitants of the district desolated by fire and sword lost their lives.

## CHAPTER VIII

### THE QUADRUPLE ALLIANCE AGAINST SPAIN

In this war also, the chief scene of which was the island of Sicily, the forces placed in the field by each side were not large, the armies numbering only from 20,000 to 30,000 men. The battles, however, were rather stubbornly contested, and the losses not inconsiderable.

In the battle of Milazzo, October 15, 1718, the Austrians lost twenty-five per cent in killed and wounded (1,500 out of 6,000 men); in the defeat at Francavilla, June 20, 1719, the percentage of losses was 14·5, or 3,100 out of 21,000. The capture of Messina, October 20, 1719, cost the Austrians 5,200 men out of an effective force of 18,000, a loss of thirty per cent, and the killed and wounded on the Austrian side in the whole war probably reached the number of 15,000.

# CHAPTER IX

## THE TWO TURKISH WARS OF EMPEROR CHARLES VI

### A. *War of* 1716–18

THIS war lasted only two years, an unprecedentedly short duration for that time, and thanks to the capable leadership of their commander-in-chief, Prince Eugene of Savoy, the Austrians were victorious in all the decisive actions. In spite of these facts, however, they lost over 40,000 men in killed and wounded, a number which speaks for the obstinate bravery of the Turks.

LOSSES OF THE AUSTRIAN ARMIES

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Petervárad | Aug. 5, 1716 | 63,000 | 4,500 | 6·1 |
| Temesvar | Oct. 14, 1716 | 45,000 | 4,500 | 10·0 |
| Belgrade | Aug. 16, 1717 | 50,000 | 5,400 | 10·8 |
| Siege of Belgrade | June–Aug., 1717 | 100,000 | 20,000 | 20·0 |

### B. *War of* 1737–9

By her alliance with Russia, Austria was involved in the Turkish-Russian War, which broke out in the year 1736, and which ended for the Monarchy in disaster as great as had been the glory and extension of sovereignty won by the preceding Turkish War. The Austrian generals kept always on the defensive, and there was only one important engagement, the Battle of Grocka, July 23, 1739. In this the Austrians were defeated, with a loss of 5,600 men out of 40,000, or fourteen per cent. The total losses of the Austrian troops, exclusive of death by disease, probably did not exceed 20,000 men.

## CHAPTER X

### WAR OF THE POLISH SUCCESSION, 1733–5

In this war also, the Austrian arms were unsuccessful. As so often before, Italy was the principal scene of the war, and the allied French, Spaniards, and Sardinians were victorious in the more important battles. Operations were not energetically pushed by either side, especially on the Rhine, where the German contingents of the Empire were engaged. In Italy there were many more sieges than battles. In the whole war, Austria probably did not lose more than 30,000 men in killed and wounded.

AUSTRIAN LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Bitonto | May 25, 1734 | 6,200 | 1,000 | 16·0 |
| Parma | June 29, 1734 | 37,000 | 6,000 | 16·2 |
| Guastalla | Sept. 19, 1734 | 27,000 | 6,000 | 22·2 |

## CHAPTER XI

### WARS OF AUSTRIA WITH FREDERICK THE GREAT

#### A. *The War of the Austrian Succession*, 1740–8

In this great war, which was for her a struggle for existence, Austria, supported by Great Britain and Holland on the north and Sardinia on the south, opposed the combined powers of Prussia, Bavaria, Saxony, France, and Spain. She was compelled to strain every resource to defend herself against opponents greedy for a rich inheritance and commanded by the ablest military leaders of the time, King Frederick II of Prussia and the French Marshal, Count

Moritz of Saxony. Fiercely contested battles had to be fought, involving losses both relatively and absolutely high; the number of killed and wounded for Austria alone may be placed at 120,000. The campaigns in the Netherlands were principally carried on by English and Dutch troops, and the important engagements will be treated in connexion with the French losses.

AUSTRIAN LOSSES.—VICTORIES

| Battle. | Date. | Effective strength. | Casualties. | |
|---|---|---|---|---|
| | | | No. | Per cent. |
| Campo Santo | Feb. 8, 1743 | 11,000 | 1,600 | 15·0 |
| Dettingen | June 27, 1743 | 35,000 | 2,500 | 7·2 |
| Piacenza | June 16, 1746 | 40,000 | 3,000 | 7·6 |
| Rottofreddo | Aug. 10, 1746 | 30,000 | 2,500 | 8·2 |

AUSTRIAN LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. | | | |
|---|---|---|---|---|---|---|
| | | | Casualties. | | Other losses. | |
| | | | No. | Per cent. | No. | Per cent. |
| Mollwitz | Apr. 10, 1741 | 15,800 | 3,000 | 18·7 | 1,500 | 9·5 |
| Chotusitz | May 17, 1742 | 28,000 | 3,000 | 11·0 | 3,300 | 12·4 |
| Cuneo | Sept. 30, 1744 | 25,000 | 3,600 | 14·4 | 900 | 3·6 |
| Hohenfriedeberg | June 4, 1745 | 75,000 | 9,600 | 12·8 | 5,600 | 7·5 |
| Bassignano | Sept. 27, 1745 | 30,000 | 1,000 | 3·3 | 1,500 | 5·0 |
| Soor | Sept. 30, 1745 | 38,000 | 4,500 | 12·0 | 3,000 | 8·0 |
| Kesselsdorf | Dec. 15, 1745 | 35,000 | 3,800 | 11·0 | 6,700 | 19·0 |

## B. *The Seven Years' War*, 1756–63

In Prussia's memorable struggle for the position of a Power of the first rank, tremendous issues were at stake, and the losses were correspondingly great. The last applies especially to Prussia, who found arrayed against her a coalition of the strongest military powers, Austria, France, and Russia, and Sweden in addition. The armies which Prussia put into the field are among the largest which any nation has ever offered on the altar of patriotism, and the final

triumph was purchased with fearful sacrifices of human life. Austria also, from of old the leading Power of Central Europe, emerged from the struggle morally strengthened and with new military glory. The Prussian losses were undoubtedly heavier than the Austrian, as Prussia had to contend desperately with Russia and France at the same time. The losses of the Austrian armies were as follows, according to the official records:

| | | |
|---|---|---|
| Killed | 32,622 | |
| Died of wounds or disease | 93,408 | |
| Lost, unaccounted for | 19,592 | |
| Total dead | | 145,622 |
| Prisoners | | 78,360 |
| Deserters | | 62,222 |
| Discharged for disability | | 17,388 |
| Total losses | | 303,592 |

To these should be added those wounded who recovered and returned to duty, i.e. the 'slightly wounded', who are always considerably more numerous than the severely wounded. They may be estimated at not less than 70,000 men, so that the Seven Years' War must have cost Austria nearly 400,000 men, all told.

AUSTRIAN LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Kolin | June 18, 1757 | 54,000 | 6,400 | 12·0 | 1,600 | 3·0 |
| Moys | Sept. 7, 1757 | 32,000 | 1,500 | 4·7 | | |
| Breslau | Nov. 22, 1757 | 80,000 | 5,300 | 6·6 | | |
| Domstadtl | June 30, 1758 | 11,500 | 600 | 5·3 | | |
| Defence of Olmütz | May–July, 1758 | 7,500 | 900 | 12·0 | | |
| Hochkirch | Oct. 14, 1758 | 65,000 | 5,400 | 8·3 | 2,300 | 3·6 |
| Kunersdorf | Aug. 12, 1759 | 18,000 | 2,200 | 12·0 | | |
| Maxen | Dec. 21, 1759 | 38,000 | 1,000 | 2·7 | | |
| Landeshut | June 23, 1760 | 38,700 | 3,000 | 7·7 | | |
| Storming of Schweidnitz | Oct. 1, 1761 | 14,000 | 1,700 | 12·0 | | |
| Erbisdorf | Oct. 15, 1762 | 50,000 | 1,400 | 2·8 | | |

AUSTRIAN LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. Casualties. No. | Casualties. Per cent. | Other losses. No. | Other losses. Per cent. |
|---|---|---|---|---|---|---|
| Lobositz | Oct. 1, 1756 | 33,000 | 2,200 | 6·7 | 800 | 2·4 |
| Prague | May 6, 1757 | 61,000 | 9,200 | 15·1 | 4,400 | 7·2 |
| Leuthen | Dec. 5, 1757 | 65,000 | 10,000 | 15·4 | 17·000 | 26·1 |
| Loss of Breslau | Dec. 19, 1757 | 17,000 | — | — | 17,000 | 100·0 |
| Loss of Schweidnitz | Apr. 16, 1758 | 8,000 | — | — | 8,000 | 100·0 |
| Liegnitz | Aug. 15, 1760 | 30,000 | 3,800 | 13·4 | 2,200 | 6·7 |
| Torgau | Nov. 3, 1760 | 66,000 | 9,000 | 13·6 | 7,000 | 10·6 |
| Burkersdorf | July 21, 1762 | 20,000 | 1,800 | 9·0 | 1,200 | 6·0 |
| Reichenbach | Aug. 16, 1762 | 32,000 | 1,200 | 3·7 | 700 | 2·3 |
| Loss of Schweidnitz | Aug.–Oct. 1762 | 12,500 | 3,500 | 28·0 | 9,000 | 72·0 |
| Freiberg | Oct. 29, 1762 | 31,000 | 3,000 | 9·7 | 4,400 | 14·3 |

## C. *War of the Bavarian Succession*, 1778–9

Although the opposing armies in this contest were several times as strong as those of either opponent in the Seven Years' War, there was not a single important engagement in the ten months of its duration. Operations were conducted on a small scale, battles were insignificant, and losses correspondingly small. With respect to disease, however, conditions were unusually bad, and fifty times as many men died from this cause as were killed in battle. The number of deserters also was considerable—in the Prussian army in particular, extraordinarily large. The official losses of the Austrian troops are shown by the statement following;

| | Generals. | Other officers. | Men. |
|---|---|---|---|
| Killed or died of wounds | — | 9 | 265 |
| Wounded (not fatally) | — | 4 | 123 |
| Missing | — | — | 137 |
| Prisoners | — | 62 | 2,802 |
| Discharged for disability | — | 26 | 372 |
| Deserters | — | — | 3,012 |
| Died of disease | 5 | 74 | 12,546 |
| Total losses | 5 | 175 | 19,257 |

These numbers represent ten per cent of the fighting strength at the beginning of the war.

The Prussian losses are stated as one general, 87 officers, and 3,364 men killed, wounded, and prisoners, and 16,052 men deserted. The deaths from disease are not given.

## CHAPTER XII

### THE WAR OF JOSEPH II AGAINST TURKEY, 1788–90

For this war, also undertaken in conjunction with Russia, there were mobilized on the Austrian side the most imposing armies which had ever been put into the field by the Hapsburg Monarchy. At the beginning of hostilities, 264,000 men were under arms on the frontier. The results to be achieved by no means corresponded to this enormous levy, especially as Turkey divided her forces and sent more than half her troops against the Russians. The Austrians captured Belgrade, and the Austrians and Russians together fought and won the battles of Foksani and Martinesti, August 1 and September 22, 1789. These engagements cost the victors comparatively small losses. Aside from these, in consequence of the subdivision of the forces the war consisted principally of a host of minor actions and sieges, whose results were not always favourable to the Austrian arms, and frequently caused relatively high losses. Nevertheless, the total casualties of the Austrian armies hardly reached 10,000 men, in contrast with which, as in the preceding war, the number of deaths from disease must have been high.

## CHAPTER XIII

### INSURRECTION IN THE AUSTRIAN NETHERLANDS, 1789-90

THE Austrian losses in the numerous minor engagements and skirmishes with the Belgian patriots are shown in the following official statement:

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 12 | 352 |
| Wounded | 18 | 221 |
| Prisoners | 2 | 59 |
| Total | 32 | 632 |

The losses of the Belgian patriots are stated as 51 officers and 3,548 men killed and wounded, 8 officers and 235 men taken prisoners.

## CHAPTER XIV

### THE FRENCH REVOLUTIONARY WARS, 1792-1801

#### A. *War of the First Coalition against France*, 1792-7

AUSTRIA was the most tenacious opponent of the young French Republic in the fearful struggle which the Republic, threatened on all her borders, was forced to carry on against nearly all the European Powers, and which she pushed through to a victorious conclusion. On Dutch, German, and Italian fields, French and Austrian armies faced each other, as so often before. When most of the States of the coalition made peace with France, Austria carried on the war alone, only to succumb, after exhausting every effort, to the genius of Bonaparte. The engagements of this struggle were by no means so sanguinary as those of the Seven Years' War, yet the great number of battles and minor actions and sieges ran up very high numerical losses. Although

official figures for the total casualties are, unfortunately, not in existence, the killed and wounded of the Austrian armies will not be overestimated if placed at 200,000 men.

AUSTRIAN LOSSES.—VICTORIES

| Battle. | Date. | Effective strength. | Casualties. | |
|---|---|---|---|---|
| | | | No. | Per cent. |
| Neerwinden | Mar. 18, 1793 | 43,000 | 2,600 | 6·2 |
| Pellenberg | Mar. 23, 1793 | 38,000 | 900 | 2·3 |
| Famars | May 23, 1793 | 53,100 | 1,000 | 1·9 |
| Capture of Mainz | July 23, 1793 | 43,000 | 3,000 | 7·0 |
| Capture of Valenciennes | July 27, 1793 | 24,000 | 1,300 | 5·5 |
| Weissenburg | Oct. 13, 1793 | 43,000 | 1,800 | 4·3 |
| Catillon | Apr. 17, 1794 | 60,000 | 1,000 | 1·7 |
| Cateau | Apr. 26, 1794 | 90,000 | 1,500 | 1·7 |
| Grandreng | May 13, 1794 | 22,500 | 2,800 | 12·5 |
| Tournai | May 22, 1794 | 50,000 | 3,000 | 6·0 |
| Erquellines | May 24, 1794 | 28,000 | 700 | 2·5 |
| Gosselies | June 3, 1794 | 28,000 | 1,000 | 3·5 |
| Lambusart | June 16, 1794 | 41,000 | 3,000 | 7·5 |
| Mannheim | Oct. 18, 1795 | 27,000 | 700 | 2·6 |
| Mainz | Oct. 29, 1795 | 36,000 | 1,600 | 4·4 |
| Würzburg | Sept. 3, 1796 | 44,000 | 1,200 | 3·0 |
| Emmendingen | Oct. 19, 1796 | 28,000 | 1,000 | 6·0 |
| Schliengen | Oct. 24, 1796 | 36,000 | 800 | 2·3 |
| Bassano | Nov. 6, 1796 | 28,000 | 2,800 | 10·0 |
| Caldiero | Nov. 12, 1796 | 26,000 | 1,300 | 5·0 |
| Kehl | Jan. 9, 1797 | 40,000 | 4,800 | 12·0 |

AUSTRIAN LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Jemappes | Nov. 6, 1792 | 13,200 | 1,000 | 8·0 | 500 | 4·0 |
| Hondschoote | Sept. 8, 1793 | 16,000 | 1,600 | 10·0 | 1,400 | 8·8 |
| Unsuccessful Siege of Dunkerque | Sept. 1793 | 37,000 | 2,000 | 5·5 | — | — |
| Wattignies | Oct. 16, 1793 | 30,000 | 2,500 | 8·3 | 500 | 1·7 |
| Weissenburg Lines | Dec. 1793 | 30,000 | 3,000 | 10·0 | 1,500 | 5·0 |
| Tourcoing | May 18, 1794 | 74,000 | 4,000 | 5·5 | 1,500 | 2·0 |
| Fleurus | June 26, 1794 | 46,000 | 5,000 | 11·0 | — | — |

AUSTRIAN LOSSES—DEFEATS (*continued*)

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* Casualties. | | Other losses. | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Sprimont | Sept. 18, 1794 | 18,000 | 1,500 | 8·5 | 1,000 | 4·3 |
| Aldenhoven | Oct. 2, 1794 | 77,000 | 3,000 | 4·0 | 800 | 1·2 |
| Loano | Nov. 23, 1795 | 18,000 | 3,000 | 16·5 | 4,000 | 22·5 |
| Fighting in the Maritime Alps | Apr. 11–14, 1796 | 28,000 | 1,400 | 5·0 | 4,200 | 15·0 |
| Lodi | May 10, 1796 | 9,500 | 400 | 4·5 | 1,700 | 17·5 |
| Altenkirchen | June 4, 1796 | 14,000 | 1,000 | 7·1 | 1,500 | 10·5 |
| Malsch | July 9, 1796 | 45,000 | 1,300 | 2·8 | 1,300 | 2·8 |
| Lonato | Aug. 3, 1796 | 15,000 | 1,000 | 7·0 | 2,000 | 13·0 |
| Castiglione | Aug. 5, 1796 | 25,000 | 2,000 | 8·0 | 1,000 | 4·0 |
| Neresheim | Aug. 11, 1796 | 48,000 | 1,100 | 2·3 | 500 | 1·1 |
| Bassano | Sept. 8, 1796 | 16,000 | 600 | 4·0 | 2,000 | 12·5 |
| San Giorgio | Sept. 15, 1796 | 14,000 | 1,000 | 7·1 | 1,500 | 11·0 |
| Biberach | Oct. 2, 1796 | 23,000 | 300 | 1·4 | 4,000 | 17·6 |
| Arcole | Nov. 17, 1796 | 24,000 | 2,200 | 9·2 | 4,000 | 16·8 |
| Rivoli | Jan. 15, 1797 | 28,000 | 4,000 | 14·3 | 8,000 | 28·7 |
| La Favorita | Jan. 16, 1797 | 16,000 | 1,300 | 8·2 | 8,700 | 53·8 |
| Loss of Mantua | Feb. 2, 1797 | 28,000 | 8,000 | 28·5 | 20,000 | 71·5 |
| Tarvis | Mar. 23, 1797 | 8,000 | 1,000 | 12·5 | 3,500 | 44·0 |
| Heddesdorf | Apr. 18, 1797 | 30,000 | 1,000 | 3·3 | 4,000 | 13·3 |
| Diersheim | Apr. 21, 1797 | 34,000 | 2,700 | 8·0 | 2,000 | 6·0 |

## B. *War of the Second Coalition*, 1799–1801

Although of much shorter duration than the preceding conflict, this war cost the Austrian forces as great or greater losses. The armies were larger on both sides, and, hardened by the previous campaigns, were characterized by a more vigorous fighting spirit. The war was more energetically pushed, and the number and proportion of important, decisive engagements was larger and their frequency much greater. In this war also, Austria exerted every possible effort and underwent the greatest sacrifices, but superior generalship again carried the day against her on both German and Italian fields.

AUSTRIAN LOSSES.—VICTORIES

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Ostrach | Mar. 21, 1799 | 50,000 | 1,550 | 3·1 | 650 | 1·3 |
| Feldkirch | Mar. 23, 1799 | 7,500 | 900 | 12·0 | — | — |
| Stockach | Mar. 26, 1799 | 46,000 | 2,900 | 6·3 | 3,100 | 6·7 |
| Legnago | Mar. 26, 1799 | 23,000 | 700 | 3·0 | — | — |
| Magnano | Apr. 5, 1799 | 46,000 | 4,000 | 8·7 | 2,000 | 4·3 |
| Cassano | Apr. 28, 1799 | 52,000 | 3,800 | 7·3 | 1,200 | 2·3 |
| Remüs | Apr. 30, 1799 | 18,000 | 1,400 | 7·8 | 600 | 3·3 |
| Winterthur | May 27, 1799 | 15,000 | 1,000 | 6·6 | — | — |
| Zürich | June 4, 1799 | 55,000 | 2,200 | 4·0 | 1,200 | 2·5 |
| Trebbia River | June 17–20, 1799 | 20,000 | 2,700 | 13·5 | — | — |
| Capture of Mantua | July 28, 1799 | 32,000 | 2,100 | 6·7 | — | — |
| Novi | Aug. 15, 1799 | 35,000 | 5,000 | 14·3 | 1,400 | 4·0 |
| Mannheim | Sept. 18, 1799 | 30,000 | 1,300 | 4·3 | — | — |
| Genola | Nov. 4, 1799 | 29,000 | 2,400 | 8·3 | — | — |
| Battles in the Maritime Alps | April, 1800 | 30,000 | 5,000 | 16·6 | 5,000 | 16·6 |
| Siege of Genoa | Apr.–June, 1800 | 24,000 | 3,000 | 12·5 | 3,500 | 14·5 |
| Ampfing | Dec. 1, 1800 | 37,000 | 2,000 | 5·5 | 1,100 | 3·0 |

AUSTRIAN LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Chur | Mar. 1, 1799 | 3,400 | 170 | 5·0 | 2,830 | 83·0 |
| Maienfeld | Mar. 6, 1799 | 2,200 | 400 | 22·0 | 1,100 | 50·0 |
| Tauffers | Mar. 25, 1799 | 6,500 | 1,000 | 16·0 | 4,000 | 62·0 |
| Nauders | Mar. 25, 1799 | 6,000 | 500 | 8·3 | 1,500 | 24·9 |
| Pastrengo | Mar. 26, 1799 | 8,800 | 2,000 | 22·0 | 1,500 | 18·0 |
| Maienfeld | May 1, 1799 | 8,000 | 600 | 7·5 | 2,000 | 24·5 |
| Frauenfeld | May 25, 1799 | 10,000 | 2,200 | 22·0 | 3,000 | 30·0 |
| Modena | June 12, 1799 | 6,000 | 750 | 12·5 | 1,650 | 27·5 |
| San Giuliano | June 20, 1799 | 8,000 | 1,000 | 12·5 | 1,300 | 15·0 |
| Amsteg | Aug. 16, 1799 | 4,400 | 400 | 9·1 | 1,800 | 40·9 |
| Linth River | Sept. 25, 1799 | 10,000 | 1,500 | 15·0 | 3,500 | 35·0 |
| Engen | May 3, 1800 | 72,000 | 3,000 | 4·2 | 4,000 | 5·5 |
| Mösskirch | May 5, 1800 | 48,000 | 2,400 | 5·1 | 1,600 | 3·3 |
| Biberach | May 9, 1800 | 20,000 | 1,250 | 6·3 | 2,750 | 13·7 |
| Battles in the Maritime Alps | May–June, 1800 | 17,000 | 2,000 | 12·0 | 8,000 | 48·0 |
| Montebello | June 9, 1800 | 16,000 | 2,100 | 13·0 | 2,200 | 14·0 |
| Marengo | June 14, 1800 | 31,000 | 7,000 | 22·4 | 4,000 | 13·0 |
| Höchstädt | June 19, 1800 | 10,000 | 1,000 | 10·0 | 3,000 | 30·0 |
| Hohenlinden | Dec. 3, 1800 | 52,000 | 5,200 | 10·0 | 6,700 | 13·0 |
| Mincio River | Dec. 26, 1800 | 50,000 | 4,100 | 8·2 | 4,300 | 8·6 |

# CHAPTER XV

## THE NAPOLEONIC WARS, 1805–15

### A. *War of the Third Coalition*, 1805

NAPOLEON I brought this important war to a conclusion within two months. With the single exception of the battle of Caldiero, the Austrians were everywhere unsuccessful, and suffered heavy losses, especially in prisoners and missing. The losses of the different nationalities may be estimated as follows:

| | *Austrians.* | *Russians.* | *French.* |
|---|---|---|---|
| Killed, wounded, and missing . . | 20,000 | 25,000 | 30,000 |
| Prisoners . . . . . | 70,000 | 25,000 | 5,000 |
| Total . . . . | 90,000 | 50,000 | 35,000 |

AUSTRIAN LOSSES.—VICTORY

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Caldiero . . . . | Oct. 30, 31, 1805 | 49,000 | 5,700 | 12·0 |

AUSTRIAN LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Ulm Campaign . | Oct. 8–20, 1805 | 63,000 | 6,000 | 9·5 | 48,000 | 76·0 |
| Capitulation of Dornbirn . . . | Nov. 14, 1805 | 4,000 | — | — | 4,000 | 100·0 |
| Capitulation of Castelfranco . . | Nov. 24, 1805 | 4,800 | 400 | 8·5 | 4,000 | 92·5 |
| Ober Hollabrunn . | Nov. 16, 1805 | 7,000 | 1,200 | 17·0 | 1,800 | 25·0 |
| Austerlitz . . | Dec. 2, 1805 | 16,000 | 4,000 | 25·0 | 2,000 | 12·5 |

## B. *Austria against France and the Rhine Confederation*, 1809

In this war Austria stood alone against the main army of France and the contingents of the Confederation of the Rhine, the young Italian kingdom and the Grand Duchy of Warsaw. (About a third of the French forces were scattered over Spain.) It was the most sanguinary and most stubbornly contested war Austria has ever waged. It was decided against her in three months, and cost her half her armies, or a sacrifice of 90,000 men killed and wounded and 80,000 prisoners and missing. The casualties of the victors, who were commonly on the offensive, were heavier than those of their opponent. The French armies alone must have lost 90,000 men, and the allied troops at least 20,000. The losses in prisoners and missing of the successful contestants, however, probably did not exceed 20,000 men.

AUSTRIAN LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* | | | |
|---|---|---|---|---|---|---|
| | | | *Casualties.* | | *Other losses.* | |
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Sacile | Apr. 16, 1809 | 39,000 | 3,600 | 9·3 | — | — |
| Aspern | May 21, 22, 1809 | 99,000 | 20,000 | 20·2 | 3,000 | 3·0 |

AUSTRIAN LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* | | | |
|---|---|---|---|---|---|---|
| | | | *Casualties.* | | *Other losses.* | |
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Battles around Regensburg | Apr. 16–23, 1809 | 176,000 | 17,000 | 9·1 | 28,000 | 16·0 |
| Ebelsberg | May 3, 1809 | 30,000 | 3,000 | 10·0 | 4,200 | 14·0 |
| Piave River | May 8, 1809 | 25,000 | 1,900 | 7·7 | 1,700 | 6·8 |
| Raab | June 14, 1809 | 37,000 | 3,500 | 9·5 | 6,500 | 17·5 |
| Wagram | July 5, 6, 1809 | 136,000 | 19,000 | 14·0 | 19,000 | 14·0 |
| Znaim | July 10, 11, 1809 | 60,000 | 3,200 | 5·4 | 3,000 | 5·0 |

### C. *Austria's part in the Russian Campaign of Napoleon*, 1812

The Austrian auxiliary corps which took part in the Russian campaign consisted of 33,000 men. Together with the Saxon contingent, these formed the extreme right wing of the grand army, and had no part either in the important battles which were fought or in the disastrous retreat of Napoleon's army. The losses in the different engagements, in which the Austrians were generally victorious, amounted to 5,000 men; 4,000 more succumbed to cold and hardship.

### D. *The Wars of Liberation*, 1813–14

In order to fell the Titan, who had returned from the Russian steppes practically without an army, the European States shut him in an iron ring, and Austria was one of the important links of the chain. With the exception of Turkey, every State in Europe took part in the struggle, which represents a tenseness of military effort as yet unequalled, and which could hardly arise again. The rôle of Austria in the mighty struggle was an important one, as it was her joining the coalition which assured to the allies the numerical superiority. The heaviest losses in the great battles which were fought were borne by Russia and Prussia, as they commenced hostilities at the beginning of the year 1813—Russia continuing the war of the year before and Prussia as her first ally—while Austria did not enter the coalition until the end of August. The principal battles were fought in the months of May, August, September, and October, and entailed enormous sacrifices of human life. As no records of the losses, or only very defective ones, exist, the statistician is forced to take refuge in estimates.

LOSSES BY NATIONALITIES.—OPERATIONS OF 1813

| *Nationality.* | *Killed and wounded.* | *Missing. Prisoners, dispersed, and deserted.* | *Totals.* |
|---|---|---|---|
| Russians | 100,000 | 25,000 | 125,000 |
| Prussians | 70,000 | 20,000 | 90,000 |
| Austrians | 45,000 | 25,000 | 70,000 |
| English | 25,000 | 3,000 | 28,000 |
| Spaniards | 20,000 | 5,000 | 25,000 |
| Portuguese | 7,000 | 1,000 | 8,000 |
| Bavarians | 5,000 | 5,000 | 10,000 |
| Swedes | 3,000 | 1,000 | 4,000 |
| Combined losses | 275,000 | 85,000 | 360,000 |

| *Nationality.* | *Killed and wounded.* | *Missing. Prisoners, dispersed, and deserted.* | *Totals.* |
|---|---|---|---|
| French | 220,000 | 130,000 | 350,000 |
| Rhine Confederation troops | 18,000 | 30,000 | 48,000 |
| Poles | 13,000 | 22,000 | 35,000 |
| Italians | 12,000 | 6,000 | 18,000 |
| Neapolitans | 3,000 | 1,000 | 4,000 |
| Croatians | 1,000 | — | 1,000 |
| Danes | 1,000 | — | 1,000 |
| Other allied troops | 2,000 | 1,000 | 3,000 |
| Combined losses | 270,000 | 190,000 | 460,000 |

Within a few months over 500,000 men were disabled for duty, a truly terrifying number. In killed and wounded, the victors lost practically the same number as the Napoleonic armies, showing that the latter fought resolutely against the overwhelming numbers of their foes. As to how many of the wounded died and how many soldiers perished of malignant diseases, nothing can be learned from the scrappy casualty lists of those excited times. We cannot be far wrong in estimating at 200,000 men the total number killed of all the nationalities involved in the fighting of the year 1813.

Austrian troops were engaged and suffered notable losses in the following important actions:

AUSTRIAN LOSSES.—VICTORIES

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Kulm | Aug. 30, 1813 | 20,000 | 900 | 4·5 | 700 | 3·5 |
| Leipsic | Oct. 16–19, 1813 | 105,000 | 18,000 | 17·2 | 3,000 | 2·9 |

AUSTRIAN LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Dresden | Aug. 26, 27, 1813 | 120,000 | 7,000 | 5·8 | 10,000 | 8·3 |
| Hanau | Oct. 30, 31, 1813 | 23,000 | 3,000 | 1·3 | — | — |

## OPERATIONS OF 1814

The invasion of France and final overthrow of the warrior Emperor cost the peoples of Europe great additional sacrifices. The lion at bay defended himself well, and dealt his antagonists many telling blows. In this campaign the generalship and soldierly qualities of Napoleon showed themselves in a splendid light. The armies of the allies sustained, according to the best estimates, the losses shown in the tables.

LOSSES BY NATIONALITIES, 1814

| Nationalities. | Killed and Wounded. | Missing. Prisoners, and dispersed. |
|---|---|---|
| Russians | 45,000 | 15,000 |
| Austrians | 25,000 | 15,000 |
| Prussians | 25,000 | 10,000 |
| Württembergers and Bavarians | 5,000 | 5,000 |
| English and Portuguese | 15,000 | 4,000 |
| Saxons | 1,000 | 1,000 |
| Combined losses | 116,000 | 50,000 |
| French | 90,000 | 50,000 |
| Italians | 5,000 | 5,000 |

AUSTRIAN LOSSES.—VICTORIES

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Losses. Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| La Rothière | Feb. 1, 1814 | 45,000 | 1,500 | 3·3 | — | — |
| Bar-sur-Aube | Feb. 27, 1814 | 18,000 | 300 | 1·7 | — | — |
| Limonest | Mar. 16–20, 1814 | 30,000 | 1,900 | 6·3 | 1,000 | 3·0 |
| Arcis-sur-Aube | Mar. 20–21, 1814 | 20,000 | 1,300 | 6·5 | — | — |
| Paris | Mar. 30, 1814 | 15,000 | 750 | 5·0 | — | — |

AUSTRIAN LOSSES.—DEFEATS

| Battle. | Date. | Effective strength. | Losses. Casualties. | | Losses. Other losses. | |
|---|---|---|---|---|---|---|
| | | | No. | Per cent. | No. | Per cent. |
| Mincio River | Feb. 8, 1814 | 32,000 | 2,800 | 8·8 | 1,200 | 3·0 |
| Montereau | Feb. 18, 1814 | 4,000 | 700 | 17·5 | 1 500 | 37·0 |
| Troyes | Feb. 23, 1814 | 10,000 | 800 | 8·0 | 1,200 | 12·0 |
| Parma | Mar. 2, 1814 | 4,000 | 600 | 15·0 | 1,700 | 42·0 |

## OPERATIONS OF 1815

In this 'War of the Hundred Days', as it is known, Austria was not deeply involved. The issue had already been decided at Waterloo when the Austrian troops reached the eastern boundary of France and opened hostilities. On account of the small numbers of the French forces in Alsace, Lorraine, the Dauphiny, and Savoy, there were no great battles. Operations were practically limited to the investment of Strassburg, Belfort, Hüningen, and Schlettstadt. It is hardly probable that the total losses of the Austrian troops reached 5,000, of whom not more than 3,000 were killed and wounded.

### E. *The War with Naples*

The war with Joachim Murat, King of Naples and brother-in-law of Napoleon, was successfully concluded by the Austrians in two months (April to June 1815). The armies

in the field numbered 30,000 on each side. The official statement of the Austrian losses follows:

| | *Killed.* | *Wounded.* | *Missing.* |
|---|---|---|---|
| Officers | 9 | 43 | 4 |
| Men | 297 | 1,294 | 310 |

The numbers are small in comparison with the importance of the results achieved.

The losses of the Neapolitans were 3,000 killed and wounded and 6,000 prisoners, according to a statement which is probably fairly accurate.

There was only one important battle, in which the Austrians won a decisive victory:

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Tolentino | May 3, 1815 | 11,000 | 700 | 6·3 | 200 | 1·9 |

## CHAPTER XVI

### MINOR WARS, 1816–48

THE exhaustion of all the European countries in the twenty-four years of warfare against France was followed by an interval of peace extending down to the revolutionary year of 1848. This was interrupted only by various military interventions, such as that of France in Spain in 1823, and in Belgium in 1830, and that of the naval Powers in the Greek War of Independence, and by a few internal insurrections. Notable among the latter were the Revolution of 1830 in France, the uprising of 1830–1 in Poland, and the Greek struggle for independence, 1822–9 (with contemporaneous war between Russia and Turkey). Though Austria had no part in any of these struggles, she was forced to send out a number of minor expeditions. They were by

no means worthy of the name of wars, however, and the losses incurred were insignificant, as shown in the following list:

| *Date.* | *Expedition.* | *Losses.* *Officers.* | *Men.* |
|---|---|---|---|
| 1821 | March to Naples | 5 | 66 |
| 1821 | Disturbances in Piedmont | Insignificant | |
| 1831 | Occupation of Modena and Parma | „ | |
| 1835 | Punitive expedition against the Bosnians | „ | |
| 1836 | „ „ „ „ | „ | |
| 1838 | „ „ „ Montenegrins | „ | |
| 1840 | Expedition against Egypt | „ | |
| 1845 | Punitive expedition against the Bosnians | „ | |
| 1846 | Quelling of disturbances in Dalmatia and Cracow | „ | |

## CHAPTER XVII

### THE WARS OF THE REVOLUTIONARY PERIOD, 1848–9

THE great revolutionary movement of the year 1848 shook Austria to the depths and threatened the permanence of the Empire. Disorder seethed in every nook and corner of the Monarchy, and the loyal troops had much work to do, within the country and outside of it as well. In addition to quelling disturbances in Vienna, Cracow, Lemberg, and Prague, two campaigns were conducted against Sardinia and the States of Upper Italy, which were in an uproar. An uprising of the Serbs in southern Hungary and, finally, the determined revolutionary attempt of the Magyars, had also to be dealt with. The troops successfully performed their task, though the great Hungarian insurrection was put down only with the efficient help of an auxiliary Russian army 190,000 strong.

The relative losses of the troops in all these encounters were light, and as at the same time the numbers engaged were small (rarely reaching 50,000) the total losses were also inconsiderable.

Thanks to the special studies and investigations of modern wars which the Imperial and Royal Military Archives (Military History section of the General Staff) have conducted, detailed official casualty lists are available for military operations since 1848. These do not, however, include statistics of the deaths by disease and from hardship among the troops, a subject which has unfortunately received very scant treatment in most of the work of general staffs.

The writer of the present monograph has taken upon himself the task of verifying or correcting the figures for the casualty losses of officers in the Imperial and Royal Army in all the wars of the Monarchy since 1848. The tabulated results of this special investigation will be given a place at the conclusion of the discussion.

### A. *The Suppression of the Popular Uprisings of the Year* 1848

The overthrow of the internal insurrections cost the Austrian troops the losses shown below.

| *Place and date.* | *Killed.* | | | *Wounded.* | | |
|---|---|---|---|---|---|---|
| | *Generals.* | *Officers.* | *Men.* | *Generals.* | *Officers.* | *Men.* |
| Cracow, Apr. 25–26, 1848 . | — | — | 8 | 1 | 60 | 45 |
| Prague, June 11–18, 1848 . | — | 2 | 12 | 1 | 10 | 60 |
| Vienna, Oct. 6, 25–31, 1848 | 2 | 17 | 200[1] | — | 47 | 1,000[1] |

The insurgents had disproportionately higher losses; of the defenders of Vienna 3,000 to 4,000 were killed.

### B. *War of Austria with Sardinia and the Provinces in Insurrection in Upper Italy, March to August* 1848

In this five months' war, the Austrian arms were almost uniformly victorious, but in consequence of the small strength of the opposing forces there were no important battles

[1] Approximately.

involving notable losses. The killed and wounded in the principal actions never exceeded the number of a thousand men, as is shown in the table.

AUSTRIAN LOSSES, SARDINIAN WAR

| *Battle.* | *Date.* | *Effective strength.* | *Casualties.* | |
|---|---|---|---|---|
| | | | *No.* | *Per cent.* |
| Santa Lucia | May 6, 1848 | 19,000 | 350 | 1·7 |
| Curtatone | May 29, 1848 | 19,000 | 700 | 3·7 |
| Goito | May 30, 1848 | 11,000 | 400 | 3·3 |
| Vicenza | June 10, 1848 | 31,000 | 900 | 3·0 |
| Sona | July 23, 1848 | 42,000 | 600 | 1·5 |
| Custozza | July 25, 1848 | 55,000 | 900 | 2·7 |
| Volta | July 27, 1848 | 19,000 | 500 | 2·6 |

The losses of the Austrian troops in Radetzky's campaign of 1848 are stated by the General Staff as follows:

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 63 | 967 |
| Wounded | 212 | 3,236 |
| Missing | 16 | 3,826 |
| Prisoners | 26 | 893 |
| Total | 317 | 8,922 |

In addition, there were 17,000 men in garrisons at the beginning of the war, who were cut off from assistance and lost to Austria.

A renewal of the insurrection in the Austrian Provinces and another declaration of war by Sardinia in 1849 made necessary another campaign by Field-Marshal Radetzky.

### C. *Campaign in Upper Italy, March to August* 1849

The war with Sardinia was brought to a conclusion in a few days by the Austrian victories of Mortara and Novara. After the capture of Bologna, Livorno, Ancona, and Venice, the resistance of northern Italy was likewise broken. Austrian losses in the war were unimportant, as appears from the tables.

LOSSES OF AUSTRIAN TROOPS

| Battle. | Date. | Effective strength. | Casualties. | |
|---|---|---|---|---|
| | | | No. | Per cent. |
| Mortara | Mar. 21, 1849 | 16,000 | 350 | 2·2 |
| Novara | Mar. 23, 1849 | 41,000 | 3,300 | 8·0 |

CLASSIFICATION OF LOSSES IN ENTIRE CAMPAIGN

| | Officers. | Men. |
|---|---|---|
| Killed | 33 | 824 |
| Wounded | 157 | 2,787 |
| Missing | — | 288 |
| Prisoners | 6 | 346 |
| Total | 196 | 4,245 |

The deaths by disease should, however, be added to the above. No lists of these are in existence, but it is known that the proportion of sickness, especially during the siege of Venice, was very high. Marsh fever raged among the men, and it may be assumed that at least 2,000 fell victims to it.

Austria's principal antagonist in both campaigns was Sardinia; but Papal, Venetian, and Lombard contingents also took part against her. Of the losses of those contingents no official statements were given out; they may be estimated at 1,500 for the casualties and 2,500 for the prisoners and missing. The Sardinian losses were as follows:

| | Killed. | Died of Wounds. | Died of Disease. | Total. |
|---|---|---|---|---|
| Officers | 35 | 44 | — | 79 |
| Men | 902 | 844 | 575 | 2,321 |

Nothing is said in the official reports concerning the wounded who recovered. These may be estimated at 5,000 men, and the prisoners not wounded at 10,000 for the two campaigns.

### D. *The Hungarian Insurrection*, 1848–9

The greatest crisis of the revolutionary years for Austria was the suppression of the insurrection in Hungary. The Hungarian regiments obeyed the commands of their new ministry, and fought against the imperial forces. As at the same time the Monarchy had several other internal uprisings to deal with, and in addition was compelled to employ a large portion of her best troops against Sardinia, her forces were insufficient to overcome the revolutionists. With the help of a Russian army of 190,000 men, they were subdued after almost a year of fighting. There were few decisive battles in the contest, but many minor engagements. In the two greatest battles (both near Komorn, July 2 and July 11), the Austrians were about 50,000 strong and lost only 900 in each encounter. In this war also, neither the relative nor the numerical losses were large, but many soldiers and non-combatants as well perished from the diseases which became epidemic. Cholera, typhus fever, and malaria wrought much more destruction than did the weapons of the armies. On account of the disturbed conditions of the time, no official casualty lists were published, and the statistician is thrown back upon estimates. The probable losses of the Austrian troops are shown in the table.

AUSTRIAN LOSSES (ESTIMATED)

| | *Officers.* | *Men.* |
|---|---|---|
| Killed and wounded | 600 | 16,000 |
| Prisoners not wounded | 200 | 14,000 |
| Died of disease | 1,000 | 40,000 |

RUSSIAN LOSSES (OFFICIAL STATEMENT)

| | *Officers.* | *Men.* |
|---|---|---|
| Killed in battle | 27 | 543 |
| Died of wounds | 20 | 313 |
| Wounded, not fatally | 129 | 1,457 |
| Total | 176 | 2,313 |

Deaths from disease reached the fearful number of 13,554, of which 7,809 were from cholera. The total number of men stricken with disease reached 30,000, or nearly sixteen per cent of the troops who went into the war.

## CHAPTER XVIII

### THE WAR WITH FRANCE AND SARDINIA, 1859

This campaign of barely two months in Upper Italy cost both sides large sacrifices. The battles were stubbornly contested and bloody, and the losses high as to both absolute numbers and percentages. The killed and wounded numbered about the same on both sides, amounting to 30,000, or 24,000 French and 6,000 Sardinians against 30,000 Austrians. The French lost 1,158 officers and the Sardinians 310; Austria, 1,109 killed and wounded and 168 missing and prisoners. The French and Sardinians together lost about 5,000 men in prisoners and missing, the Austrians over 15,000. In this struggle, the fortunes of war were against the Austrian arms; in all the more important engagements she was defeated. Her losses in detail are shown in the table.

Austrian Losses

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Montebello | May 20, 1859 | 18,700 | 1,100 | 5·9 | 400 | 2·1 |
| Palestro | May 31, 1859 | 18,000 | 1,700 | 9·4 | 500 | 2·8 |
| Magenta | June 4, 1859 | 62,000 | 5,700 | 9·2 | 4,500 | 7·3 |
| Melegnano | June 8, 1859 | 8,500 | 360 | 4·2 | 1,140 | 13·8 |
| Solférino | June 24, 1859 | 130,000 | 13,100 | 10·1 | 8,700 | 6·8 |

## CHAPTER XIX

### DANISH-GERMAN WAR OF 1864

In conjunction with Prussia, Austria participated in the expedition against Denmark in 1864. Her contingent of 21,000 men finished their part of the work in a five-weeks' campaign, though the Prussian army of twice their strength had still to accomplish the main task of storming the trenches at Düppel and crossing to Alsen. This was not effected and the war brought to a successful conclusion until the end of June. The only actions of the Austrians were the battles of Oberselk and Jagel, Oeversee and Veile, in which they were victorious, and the indecisive sea fight at Heligoland. The losses follow:

AUSTRIAN LOSSES

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 16 | 211 |
| Wounded | 61 | 751 |
| Missing | — | 61 |
| Total | 77 | 1,023 |

PRUSSIAN LOSSES

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 35 | 462 |
| Wounded | 126 | 1,696 |
| Missing | 2 | 102 |
| Total | 163 | 2,260 |

The Danish losses may be estimated at 4,000 men killed and wounded and 7,000 missing and prisoners.

## CHAPTER XX

### THE WAR WITH PRUSSIA OF 1866 AND THE AUSTRO-ITALIAN WAR OF 1866

THE antagonism between the two leading Powers of the German Confederation, which had been latent for several decades and had repeatedly threatened to break out into armed conflict, led in June 1866 to the great war for the hegemony in Germany. On the side of Austria were Saxony, Hanover, Hesse, the Electorate of Hesse, Nassau, Bavaria, Württemberg, and Baden; with Prussia stood the North German States with the exception of Hanover, and also her southern ally, the young Italian kingdom, to which Venice had been promised as a reward for participating in the war.

The hostilities lasted barely a month, but the losses were heavy, especially on the side of the defeated contestant, as the victors were much better armed. The great Prussian victories in Bohemia, and in particular the crushing defeat at Königgrätz, brought the war to an early conclusion unfavourable to Austria, even though she had triumphed brilliantly over the superior forces of the Italians on both land and sea.

The armies opposed in this short war were very large. As in the Napoleonic era, 500,000 men stood in the opposing lines, but with the difference that they did not belong to so many nationalities as at the time of the Wars of Liberation.

FORCES OF PRUSSIA AND HER ALLIES

| | |
|---|---|
| Prussian troops | 437,000 |
| Italian Regulars | 166,000 |
| Italian Volunteers | 34 000 |
| Total | 637,000 |

FORCES OF AUSTRIA AND HER ALLIES

| | |
|---|---|
| Austro-Hungarian troops | 407,000 |
| Bavarian contingent | 53,000 |
| Württemberg contingent | 7,000 |
| Hessian contingent | 13,000 |
| Electorate of Hesse contingent | 7,000 |
| Hanoverian contingent | 20,000 |
| Badenese contingent | 5,000 |
| Saxon contingent | 32,000 |
| Total | 544,000 |

## *Losses of the Austro-Hungarian Troops* [1]

### 1. WAR AGAINST PRUSSIA

#### A. Campaign in Bohemia (Army of the North)

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 743 | 6,650 |
| Missing (not later heard from) | 77 | 11,530 |
| Wounded (including wounded prisoners) | 1,377 | 28,984 |
| Prisoners not wounded | 382 | 25,896 |
| Total | 2,579 | 73,060 |

#### B. Campaign in West Germany (Hahn's Brigade)

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 5 | 233 |
| Missing | — | 67 |
| Wounded (including prisoners) | 16 | 398 |
| Prisoners not wounded | 17 | 1,652 |
| Total | 38 | 2,350 |

### 2. WAR AGAINST ITALY

#### A. Venetian Campaign (Army of the South)

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 102 | 1,224 |
| Missing | 7 | 680 |
| Wounded | 200 | 3,710 |
| Prisoners or dispersed | 15 | 2,708 |
| Total | 324 | 8,322 |

[1] Results of a special investigation by the present writer.

### B. Defence of the Tyrol

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 8 | 92 |
| Missing | — | 4 |
| Wounded | 23 | 323 |
| Prisoners | 5 | 445 |
| Total | 36 | 864 |

### C. Battles on the Adriatic Sea

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 3 | 63 |
| Wounded | 17 | 198 |
| Total | 20 | 261 |

### Summary, War with Prussia

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 748 | 6,883 |
| Missing (not later heard from) | 77 | 11,597 |
| Wounded (including prisoners) | 1,393 | 29,382 |
| Total casualties | 2,218 | 47,862 |
| Other losses | 399 | 27,548 |
| Total losses | 2,617 | 75,410 |

### Summary, War with Italy

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 113 | 1,379 |
| Missing (not later heard from) | 7 | 684 |
| Wounded | 240 | 4,221 |
| Total casualties | 360 | 6,284 |
| Other losses | 20 | 3,153 |
| Total losses | 380 | 9,437 |

### Summary, both Wars combined

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 861 | 8,262 |
| Missing (not later heard from) | 84 | 12,281 |
| Wounded (including prisoners) | 1,633 | 33,603 |
| Casualties, both wars | 2,578 | 54,146 |
| Prisoners not wounded | 419 | 30,701 |
| Total losses, both wars | 2,997 | 84,847 |

## *Losses of Austrian Allies*

### 1. Losses of the Bavarians

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 59 | 289 |
| Wounded (not fatally) | 108 | 1,987 |
| Missing and prisoners | 19 | 1,378 |
| Total | 186 | 3,654 |

### 2. Losses of the Saxons

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 38 | 203 |
| Wounded | 44 | 1,229 |
| Missing and prisoners | — | 580 |
| Total | 82 | 2,012 |

### 3. Losses of the Hanoverians

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 33 | 346 |
| Wounded (including prisoners) | 70 | 981 |
| Prisoners not wounded | 417 | 14,846 |
| Total | 520 | 16,173 |

### 4. Losses of the Badenese

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 5 | 19 |
| Wounded | 3 | 112 |
| Missing and prisoners | 1 | 56 |
| Total | 9 | 187 |

### 5. Losses of the Hessians

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 10 | 77 |
| Wounded | 27 | 417 |
| Missing and prisoners | 8 | 448 |
| Total | 45 | 942 |

### 6. Losses of Hessian Electorate Troops

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 1 | — |
| Missing and prisoners | 1 | 89 |
| Total | 2 | 89 |

### 7. Losses of Württemberg Troops

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 12 | 55 |
| Wounded | 14 | 438 |
| Missing and prisoners | 3 | 195 |
| Total | 29 | 688 |

### 8. Summary of Losses of Austrian Allies

| | *Officers.* | *Men.* |
|---|---|---|
| Total casualty loss of Austrian Allies | 424 | 6,153 |
| Other losses of Austrian Allies | 449 | 17.592 |
| Total losses | 873 | 23.745 |

## *Losses of the Prussians*

### 1. Campaign in Bohemia

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 142 | 2,231 |
| Died of wounds | 62 | 1,188 |
| Wounded | 521 | 12,625 |
| Missing or dispersed | — | 660 |
| Total | 725 | 16,704 |
| Died of disease | 51 | 6,116 |

### 2. Campaign in West Germany

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 36 | 522 |
| Died of wounds | 22 | 251 |
| Wounded | 148 | 2,923 |
| Missing | — | 125 |
| Prisoners not wounded | 10 | 900 |
| Total | 216 | 4,721 |
| Died of disease | 2 | 258 |

### 3. Summary of Prussian Losses

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 262 | 4,192 |
| Wounded | 669 | 15,548 |
| Total casualty losses | 931 | 19,740 |
| Missing | — | 785 |
| Prisoners not wounded | 10 | 900 |
| Died of disease | 53 | 6,374 |
| Total Prussian losses | 994 | 27,799 |

## *Losses of the Italians*

### 1. Venetian Campaign

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 76 | 641 |
| Missing (not later heard from) | — | 484 |
| Wounded | 257 | 2,463 |
| Prisoners | 43 | 3,668 |
| Total | 376 | 7,256 |

### 2. Battles in the Tyrol

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 15 | 250 |
| Missing (not later heard from) | — | 69 |
| Wounded | 46 | 1,001 |
| Prisoners | 16 | 1,358 |
| Total | 77 | 2,678 |

### 3. Battles on the Adriatic Sea

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 38 | 613 |
| Wounded | 6 | 153 |
| Total | 44 | 766 |

### 4. Summary of Italian Losses

| | *Officers.* | *Men.* |
|---|---|---|
| Killed or died of wounds | 129 | 1,504 |
| Missing | — | 553 |
| Wounded | 309 | 3,617 |
| Total casualty losses | 438 | 5,674 |
| Prisoners | 59 | 5,026 |
| Total Italian losses | 497 | 10,700 |

## *Comparison of Losses by Nationalities*

### 1. Casualty Losses

| | *Officers.* | *Men.* |
|---|---|---|
| Prussians | 931 | 20,525 |
| Italians | 438 | 5,674 |
| Austrians | 2,578 | 54,146 |
| Austrian Allies | 424 | 6,153 |
| Prussians and Italians | 1,369 | 26,199 |
| Austrians and Allies | 3,002 | 60,299 |

2. Other Losses

| | Officers. | Men. |
|---|---|---|
| Prussians | 10 | 900 |
| Italians | 59 | 5,026 |
| Austrians | 419 | 30,701 |
| Austrian Allies | 449 | 17,592 |
| Prussians and Italians | 69 | 5,926 |
| Austrians and Allies | 868 | 48,293 |

3. Total Losses

| | Officers. | Men. |
|---|---|---|
| Prussians | 941 | 21,435 |
| Italians | 497 | 10,700 |
| Austrians | 2,997 | 84,847 |
| Allies | 873 | 23,745 |
| Prussians and Italians | 1,438 | 32,135 |
| Austrians and Allies | 3,870 | 108,592 |

The Prussian army lost by cholera 53 officers (of whom three were generals) and 6,374 men, a total of 6,427 souls. Hence the number who were killed or died of wounds, 262 officers and 4,192 men—total 4,454, was considerably under that of the men carried off by disease and pestilence.

In regard to the deaths from disease in the Austrian and Italian armies, we unfortunately possess no clue.

The Austro-Hungarian armies show a notably higher proportion of their effective strength killed or wounded in battle than do the Prussians. This is brought out by the following tabular statement:

Austrian Relative Losses

| | Effective strength. | Killed. | | Wounded. | |
|---|---|---|---|---|---|
| | | No. | Per cent. | No. | Per cent. |
| Officers | 10,932 | 945 | 8·64 | 1,633 | 15·0 |
| Men | 396,291 | 20,543 | 3·60 | 33,603 | 8·5 |

Prussian Relative Losses

| | Effective strength. | Killed. | | Wounded. | |
|---|---|---|---|---|---|
| | | No. | Per cent. | No. | Per cent. |
| Officers | 9,093 | 262 | 2·9 | 669 | 7·4 |
| Men | 428,169 | 4,192 | (c.) 1·0 | 15,548 | 3·6 |

The following tables show the Austrian losses in some of the principal single engagements :

AUSTRIAN LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Custozza | June 24, 1866 | 75,000 | 6,200 | 8·5 | 1,800 | 2·4 |
| Lissa (naval battle) | July 20, 1866 | 8,000 | 200 | 2·5 | — | — |

AUSTRIAN LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Effective strength.* | *Losses.* *Casualties.* | | *Other losses.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Wysokow | June 27, 1866 | 31,000 | 3,700 | 12·0 | 2,100 | 7·0 |
| Trautenau | June 27, 1866 | 27,000 | 3,600 | 13·4 | 1,200 | 4·4 |
| Soor | June 28, 1866 | 22,000 | 1,100 | 5·2 | 2,700 | 12·3 |
| Skalitz | June 28, 1866 | 23,000 | 3,330 | 14·5 | 2,270 | 10·0 |
| Jitschin | June 29, 1866 | 44,000 | 2,900 | 6·6 | 2,600 | 5·4 |
| Königgrätz | July 3, 1866 | 215,000 | 31,400 | 14·6 | 12,900 | 6·0 |

## CHAPTER XXI

### THE OCCUPATION OF BOSNIA AND HERZEGOVINA, 1878

IN the Congress of Berlin, the European Powers, with the consent of Turkey, committed to Austria-Hungary the task of occupying Bosnia and Herzegovina and establishing a government. To effect the occupation, 75,000 men were first sent into the Provinces. But in consequence of the stubborn resistance of the population, supported also by bodies of regular Turkish troops, the force had to be gradually increased to 145,000. The fighting lasted ten weeks before the uprising was entirely suppressed, and cost the Austrians 47 officers and 1,144 men killed, and 135 officers and 3,878 men wounded.

## CHAPTER XXII

### SUPPRESSION OF UPRISINGS IN SOUTHERN DALMATIA AND KRIVOSHIAN, 1869, 1882

On two occasions disturbances in the extreme south of the Monarchy, due to dissatisfaction with Austrian rule, and in particular with the execution of new military service laws, have necessitated the presence of troops in these districts. In the year 1869, 12,000 men were required to control the situation, and in 1882, 63,000 were called out.

Operations in this rugged and inhospitable region were limited to petty warfare, which was waged with varying success. The losses of the troops in 1869 were 13 officers and 61 men killed, 9 officers and 137 men wounded, and 8 men missing. In the expedition of 1882, 4 officers and 68 men were killed, 13 officers and 242 men wounded, and 8 men missing. In the latter year five of the wounded officers and sixteen of the men died of their wounds, and 450 men also perished by disease.

## CHAPTER XXIII

### THE BOXER UPRISING IN CHINA, 1900

In the armed expedition of the Great Powers against the Boxers in China, who were threatening the lives of European residents, Austrian marines also shared. Although present in smaller numbers than those of the other Powers, they played an active part, fighting bravely in the capture of Tientsin and Peking, and especially in the defence of the legation buildings. They suffered losses as follows:

| | *Officers.* | *Seamen.* |
|---|---|---|
| Killed in action | 2 | 5 |
| Succumbed to hardship | 1 | 5 |
| Wounded | 3 | 12 |

## CHAPTER XXIV

### COMPARATIVE LOSSES OF AUSTRIA AND OTHER COUNTRIES

From the foregoing discussion it will be seen that the Thirty Years' War, the Great Turkish War, and the Seven Years' War, cost the Austrian Monarchy the greatest losses of life. The wars of the French Revolution and the Napoleonic era involved Austria deeply, it is true, but here her losses, particularly the number who were killed or died of wounds, were usually smaller than those of her antagonists. The recent wars in which she has been engaged have been much less destructive of human life than those of other States in recent times. The Polish-Russian War of 1831, the Crimean War of 1854–6, the American War of Secession of 1861–5, the Franco-German War of 1870–1, the Turkish-Russian War of 1877–8, and the Russo-Japanese War of 1904-5, have all cost the contending Powers far greater losses than Austria suffered in the wars of 1859 and 1866. This is true with respect both to the number killed or who died of wounds and to those who perished by disease.

It follows, therefore, that Austria, while second among European States in the extent of engagement in wars during the last three centuries, must yield that rank in regard to the human losses suffered to other States that have waged fewer wars but bloodier ones.

The losses suffered in war have never been so extensive, as was repeatedly the case in France, that on their account a war could no longer be carried on.

An actual depopulation in consequence of war has taken place in Austria only at the time of the Thirty Years' War, and that is also the only occasion when the birth-rate has been unfavourably affected after a long and strenuous armed conflict.

## CHAPTER XXV

### THE OFFICER-LOSSES OF AUSTRIAN ARMIES

THE fact has already been mentioned that the casualty loss of officers is extremely important in the statistics of losses in military enterprises, in that it affords a good indication of the losses of men where the latter are unknown or the records are inadequate.

The officers in almost all armies show a loss ratio more or less above that of the men, a fact explained by the officer's position and his duty to lead his men and set them a good example in courage.

In earlier times, when close combat was a common occurrence and sharpshooting was easier than now, a relatively larger proportion of the higher commanders, generals, and staff-officers were put out of action by wounds. In order to illustrate how times and the conduct of wars have changed, the present author has undertaken the compilation of the tables which follow. They show by wars arranged chronologically the number and rank of Austrian generals and staff-officers killed in battle since 1618. The writer would add the observation that the figures for the wars of the seventeenth century are probably incomplete. Undoubtedly the number of lieutenant-colonels and majors who fell was higher than that shown; but the most diligent search of the archives of that remote period commonly disclosed only the names of the chief officers of the regiments. The following table indicates the number and rank of the higher officers who met death on the field of battle:

| | |
|---|---|
| Army commanders (generals or field-marshals) | 10 |
| Corps commanders (masters of ordnance, generals of infantry or of cavalry) | 33 |
| Division commanders (lieutenant-generals) | 60 |
| Brigade commanders (major-generals) | 111 |
| Regiment commanders (colonels) | 281 |
| Lieutenant-colonels (537 battalion commanders) | 225 |
| Majors (537 battalion commanders) | 312 |
| Total | 1,032 |

In comparison with this loss, embracing the wars of almost three centuries, it may be noted that during the Napoleonic wars (1805–15) France sustained the following losses of generals and other higher officers:

| *Rank.* | *Killed.* | *Wounded.* |
|---|---|---|
| Marshals | 3 | 23 |
| Generals of divisions | 43 | 213 |
| Brigadier-generals | 123 | 498 |
| Colonels | 262 | 1,031 |
| Lieutenant-colonels | 101 | 447 |
| Majors | 769 | 2,704 |
| Total | 1,301 | 4,916 |

That is to say, in eleven years France lost more officers killed than Austria has lost in the course of three hundred years. These numbers are most significant.

# APPENDIX

## RECAPITULATION OF CASUALTIES AMONG GENERALS AND STAFF-OFFICERS, 1618-1913

| | |
|---|---|
| Thirty Years' War | 185 |
| War against Sweden | 1 |
| Engagements at Siebenbürgen | 2 |
| Turkish War | 6 |
| War against France | 10 |
| Kuruc Insurrection | 1 |
| Great Turkish War | 87 |
| War against France | 5 |
| Spanish War of Succession | 60 |
| War of the Hungarian Insurrection | 2 |
| Turkish War | 39 |
| Quadruple Alliance against Spain | 11 |
| War of Polish Succession | 25 |
| Turkish War | 29 |
| Austrian War of Succession | 49 |
| Seven Years' War | 87 |
| Turkish War | 19 |
| Belgian Insurrection | 4 |
| First Coalition War | 69 |
| Second Coalition War | 73 |
| Third Coalition War | 17 |
| War against France | 58 |
| War against Russia | 3 |
| War of Liberation | 26 |
| Italian Campaign | 16 |
| Prague Insurrection | 1 |
| Vienna Insurrection | 3 |
| Hungarian Insurrection | 24 |
| Italian Campaign | 8 |
| War against Sardinia and France | 31 |
| War against Denmark | 4 |
| War against Italy | 11 |
| War against Prussia | 57 |
| Insurrection in South Dalmatia | 1 |
| Occupation of Bosnia | 6 |
| Insurrection in Krivosćije | 1 |
| Boxer Insurrection in China | 1 |
| | 1,032 |

The following table shows the casualty losses (killed and wounded and missing not later heard from) of Austrian

officers in the most important battles of the past three centuries. The last column shows the per cent of the total loss represented by the loss of officers.

| *Date.* | *Battle.* | *Total loss.* | *Officer loss.* | *Per cent of total.* |
|---|---|---|---|---|
| 1702 | Luzzara | 2,700 | 170 | 6·3 |
| 1706 | Turin | 4,300 | 239 | 5·6 |
| 1716 | Peterwardein | 4,500 | 214 | 4·8 |
| 1717 | Belgrade | 5,400 | 330 | 6·1 |
| 1734 | Parma | 6,000 | 267 | 4·5 |
| 1734 | Guastalla | 5,800 | 302 | 5·5 |
| 1739 | Grocka | 5,200 | 335 | 6·4 |
| 1741 | Mollwitz | 3,000 | 208 | 6·9 |
| 1742 | Chotusitz | 3,000 | 200 | 6·6 |
| 1745 | Hohenfriedberg | 9,600 | 316 | 3·3 |
| 1745 | Soor | 4,500 | 179 | 4·0 |
| 1746 | Piacenza | 3,000 | 118 | 4·0 |
| 1756 | Lobositz | 2,200 | 127 | 5·7 |
| 1757 | Prague | 9,200 | 373 | 4·1 |
| 1757 | Kolin | 6,400 | 340 | 5·3 |
| 1757 | Breslau | 5,300 | 280 | 5·4 |
| 1757 | Leuthen | 10,000 | 492 | 4·9 |
| 1758 | Hochkirch | 5,400 | 307 | 5·7 |
| 1759 | Kunersdorf | 2,200 | 118 | 5·4 |
| 1760 | Liegnitz | 3,800 | 190 | 5·0 |
| 1760 | Torgau | 9,000 | 286 | 3·2 |
| 1793 | Neerwinden | 2,600 | 95 | 3·7 |
| 1796 | Arcole | 2,200 | 75 | 3·4 |
| 1799 | Stockach | 2,900 | 95 | 3·3 |
| 1799 | Novi | 5,100 | 164 | 3·2 |
| 1800 | Marengo | 7,000 | 258 | 3·7 |
| 1805 | Caldiero | 5,700 | 122 | 2·1 |
| 1809 | Aspern | 21,500 | 841 | 3·9 |
| 1809 | Wagram | 31,000 | 693 | 2·2 |
| 1813 | Dresden | 6,400 | 172 | 2·7 |
| 1813 | Leipsig | 14,000 | 393 | 2·8 |
| 1814 | Mincio River | 2,800 | 102 | 3·6 |
| 1849 | Novara | 2,300 | 119 | 5·2 |
| 1859 | Magenta | 5,700 | 321 | 5·6 |
| 1859 | Solférino | 13,100 | 654 | 5·0 |
| 1866 | Custozza | 6,200 | 305 | 4·9 |
| 1866 | Königgrätz | 30,000 | 1,155 | 3·8 |

The loss of officers has amounted on the average to four per cent of the total loss. In the wars of the eighteenth century there were proportionately more officers in the armies than to-day, hence the higher losses.

## RECAPITULATION OF OFFICER-CASUALTIES, 1848–1913

| | | |
|---|---|---|
| 1848. | Italian Campaign | 386 |
| 1848. | Cracow Insurrection | 7 |
| 1848. | Prague Insurrection | 13 |
| 1848. | Vienna Insurrection | 67 |
| 1848. | Putting down of Serbian Insurrection | 15 |
| 1848. | Insurrection in Hungary | 58 |
| 1849. | Insurrection in Hungary | 490 |
| 1849. | Italian Campaign | 205 |
| 1853. | Insurrection in Milan | 2 |
| 1859. | Italian Campaign | 1,109 |
| 1864. | War against Denmark | 77 |
| 1866. | War against Prussia | 2,218 |
| 1866. | War against Italy | 360 |
| 1869. | Insurrection in South Dalmatia | 22 |
| 1878. | Occupation of Bosnia | 182 |
| 1882. | Insurrection in South Dalmatia | 18 |
| 1900. | Engagements in China | 6 |
| | | 5,246 |

### OFFICER-CASUALTIES OF THE ALLIED TROOPS

*Losses of the Russians.*

| | | |
|---|---|---|
| 1849. | Insurrection in Hungary | 176 |

*Losses of the Prussians.*

| | | |
|---|---|---|
| 1864. | War against Denmark | 157 |
| 1866. | War against Prussia: | |
| | Losses of the Badenese | 8 |
| | Losses of the Bavarians | 171 |
| | Losses of the Hanoverians | 106 |
| | Losses of the Hessians | 32 |
| | Losses of the Kurhessen | 4 |
| | Losses of the Saxons | 82 |
| | Losses of the Württembergers | 26 |
| | | 429 |

Since 1848, 1,685 officers have been killed in battle or died of wounds or have been lost and never accounted for; 3,561 officers have been wounded. These numbers cannot be considered high, since in a single war, the Franco-German War of 1870–1, the German armies lost 6,229 and the French 7,862 officers killed and wounded.

# LOSSES OF LIFE IN MODERN WARS

## FRANCE

### 1614–1913

BY

GASTON BODART, LL.D.

# FRANCE: 1614-1913

## CHAPTER I

### WARS OF FRANCE IN THE LAST THREE CENTURIES

THE tables which follow (Tables 1 to 4) are designed to show the number of wars in which France was engaged in the seventeenth, eighteenth, nineteenth, and twentieth centuries, or from 1614 to the present time. The light figures denote years when France was at peace, the heavy figures years of war. The author has thought best not to limit himself to wars with external enemies; accordingly civil and colonial wars have been included in the tables. Not counting colonial wars, France has in these three centuries passed through 148 years of war and 152 years of peace. The figures by centuries are shown in tabular form as follows:

| *Century.* | *Years of War.* | *Years of Peace.* |
|---|---|---|
| Seventeenth | 64 | 36 |
| Eighteenth | 52 | 48 |
| Nineteenth | 32 | 68 |
| Twentieth | — | 14 |

Since 1614 the number of years of war is almost equal to that of the years of peace, and if colonial wars and oversea expeditions are included, the years of war are the more numerous of the two.

TABLE 1. THE WARS OF FRANCE IN THE SEVENTEENTH CENTURY [1]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1600 | 1601 | 1602 | 1603 | 1604 | 1605 | 1606 | 1607 | 1608 | 1609 |
| 1610 | 1611 | 1612 | 1613 | **1614** | 1615 | 1616 | 1617 | 1618 | 1619 |
| **1620** | **1621** | **1622** | **1623** | **1624** | **1625** | **1626** | **1627** | **1628** | **1629** |
| **1630** | **1631** | 1632 | 1633 | 1634 | **1635** | **1636** | **1637** | **1638** | **1639** |
| **1640** | **1641** | **1642** | **1643** | **1644** | **1645** | **1646** | **1647** | **1648** | **1649** |
| **1650** | **1651** | **1652** | **1653** | **1654** | **1655** | **1656** | **1657** | **1658** | **1659** |
| 1660 | 1661 | 1662 | 1663 | 1664 | 1665 | **1666** | **1667** | **1668** | **1669** |
| 1670 | 1671 | **1672** | **1673** | **1674** | **1675** | **1676** | **1677** | **1678** | **1679** |
| 1680 | 1681 | 1682 | **1683** | **1684** | **1685** | **1686** | **1687** | **1688** | **1689** |
| **1690** | **1691** | **1692** | **1693** | **1694** | **1695** | **1696** | **1697** | 1698 | 1699 |

[1] The black figures denote years of war; the light figures years of peace.

1620–9. War with the Huguenots.
1624. Participation in the War of the Grisons.
1627–9. War with England.
1627–31. War of the Mantuan Succession.
1635–48. Participation in the Thirty Years' War.
1635–59. War with Spain.
1649–53. Insurrection of the Fronde.
1663–4. Participation in the war with the Turks.
1666–7. Naval war with England.
1667–8. War with Holland.
1667–9. Participation in the Defence of Crete.
1672–9. War with Holland.
1683–4. Naval war with the Barbary States.
1684. Conquest of Luxemburg.
1688–97. War with the League of Augsburg.

TABLE 2. WARS OF FRANCE IN THE EIGHTEENTH CENTURY

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1700** | **1701** | **1702** | **1703** | **1704** | **1705** | **1706** | **1707** | **1708** | **1709** |
| **1710** | **1711** | **1712** | **1713** | **1714** | 1715 | 1716 | 1717 | **1718** | **1719** |
| **1720** | 1721 | 1722 | 1723 | 1724 | 1725 | 1726 | 1727 | 1728 | 1729 |
| 1730 | 1731 | 1732 | **1733** | **1734** | **1735** | 1736 | 1737 | 1738 | 1739 |
| 1740 | **1741** | **1742** | **1743** | **1744** | **1745** | **1746** | **1747** | **1748** | 1749 |
| 1750 | 1751 | 1752 | 1753 | 1754 | **1755** | **1756** | **1757** | **1758** | **1759** |
| **1760** | **1761** | **1762** | **1763** | 1764 | 1765 | 1766 | 1767 | 1768 | **1769** |
| 1770 | 1771 | 1772 | 1773 | 1774 | 1775 | 1776 | 1777 | **1778** | **1779** |
| **1780** | **1781** | **1782** | **1783** | 1784 | 1785 | 1786 | 1787 | 1788 | 1789 |
| 1790 | 1791 | **1792** | **1793** | **1794** | **1795** | **1796** | **1797** | **1798** | **1799** |

1701–14. War of the Spanish Succession.
1702–6. Insurrection of the Camisards.
1718–20. War with Spain.
1733–5. War of the Polish Succession.
1741–8. War of the Austrian Succession.
1755–63. Naval and colonial war with England.
1756–63. Participation in the Seven Years' War.
1769. Conquest of Corsica.
1778–83. War with England.
1780–3. Participation in the War of Independence of the United States.
1791–1803. Insurrections in Santo Domingo.
1792–7. War of the First Coalition.
1793–5. War with Spain.
1793–6. Insurrection in the Vendée.
1798–9. Conquest of Naples.

1798–1801. Expedition to Egypt.
1793–1802. War with England.
1799–1801. War of the Second Coalition.

Thus, during the eighteenth century France had forty-eight years of peace as against fifty-two years of war.

TABLE 3. WARS OF FRANCE IN THE NINETEENTH CENTURY

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1800** | **1801** | **1802** | **1803** | **1804** | **1805** | **1806** | **1807** | **1808** | **1809** |
| **1810** | **1811** | **1812** | **1813** | **1814** | **1815** | 1816 | 1817 | 1818 | 1819 |
| 1820 | 1821 | 1822 | **1823** | 1824 | 1825 | 1826 | **1827** | **1828** | 1829 |
| **1830** | **1831** | **1832** | 1833 | 1834 | 1835 | 1836 | 1837 | 1838 | 1839 |
| 1840 | 1841 | 1842 | 1843 | **1844** | 1845 | 1846 | 1847 | **1848** | **1849** |
| 1850 | **1851** | 1852 | 1853 | **1854** | **1855** | **1856** | **1857** | **1858** | **1859** |
| **1860** | **1861** | **1862** | **1863** | **1864** | **1865** | **1866** | **1867** | 1868 | 1869 |
| **1870** | **1871** | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 | 1878 | 1879 |
| 1880 | 1881 | **1882** | **1883** | 1884 | 1885 | 1886 | 1887 | 1888 | 1889 |
| 1890 | 1891 | 1892 | 1893 | 1894 | 1895 | 1896 | 1897 | 1898 | 1899 |

1800, 1801. War of the Second Coalition (from 1799).
1800–1. Egyptian Expedition (from 1798).
1800–2. War with England (from 1793).
1801. War with Portugal.
1803–15. War with England.
1805. War of the Third Coalition.
1806. Conquest of the Kingdom of Naples.
1806–7. War with Prussia, Saxony, Russia, and Sweden.
1807. Conquest of Portugal.
1808–14. War with Spain.
1809. War with Austria.
1812. War with Russia.
1813–14. Wars of Liberation.
1815. War of the Hundred Days.
1823. Intervention in Spain.
1827. Intervention in Greece.
1828–9. Morean War.
1830. July Insurrection.
1830–1. Conquest of Algeria.
1831–2. War with Holland.
1834–47. Fighting in Algeria.
1838–9. Intervention in Mexico.
1844. War with Morocco.
1845. Intervention in Uruguay.
1848. Revolution.

| | |
|---|---|
| 1849. | Intervention and taking of Rome. |
| 1851. | Fighting in Algeria; Insurrection at Paris. |
| 1854–6. | Crimean War. |
| 1856–60. | War with China. |
| 1857. | Fighting in Algeria. |
| 1858–62. | Expedition to Cochin China. |
| 1859. | Italian War. |
| 1861–7. | Mexican War. |
| 1862–4. | Intervention in China (Tai-ping Rebellion). |
| 1867. | Intervention in Rome against Garibaldi. |
| 1870–1. | Franco-German War. |
| 1871. | Insurrection of the Communards. |
| 1882–3. | Expedition to Tonkin. |
| 1883–5. | Expedition to Madagascar. |
| 1884–5. | War with China. |
| 1890–1902. | Expedition to Dahomey. |
| 1891. | Conquest of Tunis. |
| 1895–8. | Expedition to Madagascar and pacification of the island. |

During the nineteenth century, France had twenty-six years of peace as against seventy-four years of war, or, eliminating fighting in the colonies and oversea expeditions, sixty-eight years of peace as against thirty-two years of war.

TABLE 4. WARS OF FRANCE IN THE TWENTIETH CENTURY

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1900 | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 |
| 1910 | 1911 | 1912 | 1913 | 1914 | | | | | |

| | |
|---|---|
| 1900–1. | Fighting in Algeria. |
| 1900–1. | Expedition to China. |
| 1907–8. | Fighting in Morocco. |
| 1911. | Fighting in Morocco. |

From 1871 to the middle of 1914 the only fighting in which France was engaged consisted in oversea expeditions and armed interventions in colonies or countries newly brought under a protectorate. Peace with continental countries was thus unbroken for a period of forty-three years. The foregoing tables show that France had not previously enjoyed so long an interval of peace in the history of the three centuries just elapsed.

A comparison of the number of years of active warfare of the Great Powers shows that no other country has been so extensively engaged in war as has France; she enjoys the gloomy distinction of being the most warlike of the nations, and of having laid upon the altar of patriotism the largest sacrifices of human lives.

The following table shows the number and total duration of her wars against her various antagonists:

| *Antagonist.* | *No. of Wars.* | *Total Duration of Wars. Years.* |
|---|---|---|
| Austria | 14 | 76 |
| Great Britain | 10 | 73 |
| Spain | 10 | 62 |
| German Empire | 8 | 61 |
| Holland | 8 | 45 |
| Russia | 7 | 17 |
| Sardinia (Savoy) | 6 | 34 |
| Prussia | 6 | 19 |
| Portugal | 5 | 47 |
| Sweden | 4 | 11 |
| China | 4 | 12 |
| Turkey | 3 | 14 |
| Denmark | 1 | 5 |
| Mexico | 1 | 7 |

A fair idea of the extent of French participation in military activities since 1614 may be obtained by considering the proportion of all important engagements of the military nations in which French armies have been engaged.

Defining as an important engagement one in which the combined loss by both antagonists amounted to at least 2,000 men killed, wounded, missing, and prisoners, the writer finds that the military history of all the European nations presents a total of 1,700 such actions. Of these, 1,044 were land battles, 122 naval combats, 490 sieges, and 44 capitulations in the open field.

French forces have been engaged in 652 of the land battles, 63 naval actions, 322 sieges, and 32 of the capitulations included, a total of 1,079 engagements, or 63·5 per cent of

the principal military actions of the whole three centuries, colonial wars not considered.

We may say then that France has had an active part in two-thirds of all the military events that have agitated Europe since the sixteenth century.

Her wars have been a mixture of successes and reverses; out of the 1,079 important battles, she won 584 victories and sustained 495 defeats, or 54·5 and 45·5 per cent respectively of the total.

Besides the great number of continental wars, France has been the scene of many civil conflicts. These alone aggregate thirty-four years of warfare, a figure which exceeds the total for all other countries combined. As civil wars have generally been more sanguinary than struggles between nations or races, this fact must have played a part in the depopulation of certain areas.

With respect to colonial wars, it is necessary to distinguish between those carried on in colonies during wars with maritime powers and conflicts with the natives in taking possession of or pacifying a colony. France has had a large share of both categories of struggles. In most of her wars with England, Holland, and Spain, on the one hand, she has had to defend her colonies, especially in the East and West Indies; and this has also been a prolific cause of naval battles. On the other hand, the conquest of her possessions in Africa and Asia, in pursuance of the colonial policy inaugurated in 1830, has been and continues to be the occasion of many oversea expeditions. In view of the much smaller size of the armies, the actions in these distant regions are not of course to be compared with those of a European war. Yet they are far from being a negligible quantity, since in the first place their total number is considerable—from the conquest of Algeria in 1830 to the present there has practically not a year passed without a battle—and also because the opposing armies of the natives are usually superior in numbers. The relative losses in these colonial

wars have generally been heavy, though caused less by the fire of the enemy than by the insalubrious climate, contagious diseases, hardships, and exhaustion. In view of these considerations, the writer has thought it well to devote a chapter to the oversea expeditions, which have claimed their own share of victims.

## CHAPTER II

### GENERAL REMARKS ON THE LOSSES OF MEN IN WAR

The losses in men sustained by a belligerent nation are caused either by the hostile arms or by disease, fatigue, and physical exhaustion, capture by the enemy, or by desertion.

The losses inflicted by the enemy include the killed, wounded, prisoners of war, and the missing or unaccounted for. Losses of the last-named category are the most difficult to isolate, for they may include individuals belonging under any of the other captions as well. Among the missing may be many dead not found, wounded taken prisoners, prisoners not wounded, and dispersed troops who later regain the lines, as well as others who deliberately leave the flag, marauders, deserters, and fugitives.

The greater part of the losses sustained by a country in the course of a war is usually borne by its regular armed forces on land and sea or by civilians fighting in the national defence —in a word, by combatants. But there has never been a war which has not also claimed many victims among non-combatants, the civil population of territories invaded by the enemy; this is particularly true of blockades or sieges of fortified points.

The ravages of epidemic diseases are often greater among the civil population than in the armies.

As no lists are in existence of the deaths from disease of non-combatants, it is quite impossible to give accurate figures for the total loss of human life caused by any war

whatever. Even for recent wars such statistics are out of the question, since neither losses of this character nor those of the troops themselves from fatigue and hardships are recorded in the military archives.

On account of the lack of sources upon which to draw, the present work cannot concern itself with losses caused by sickness or exhaustion, and must be limited to a discussion of the losses of French armies inflicted by their enemies. In cases where losses from disease could be ascertained, they will be given in the appropriate connexion.

It is a lamentable fact, moreover, that because of the lack of official documents, we are not in a position to give the exact figures for the French losses in a single war of the whole period under consideration. Even in the case of the most recent of all, the Franco-German War of 1870–71, which has been the subject of an interminable literature, official figures for the losses have never been forthcoming, and if the official records for recent wars are defective, an idea may readily be formed of the gaps which exist in those for wars of a more distant date. The archives contain documents—and those often incomplete—only for the great pitched battles and notable sieges; figures are never found for the total losses of the armies in all the battles, engagements, and sieges of an entire war.

Not being in a position to give figures for total losses in wars, the writer will limit himself to tables of the effective strength and the losses in the battles and actions in regard to which he has been able to find official records. Even this work has necessarily been somewhat crude. While for some periods the official documents furnish reliable data, there are others in which records have been very carelessly kept, even when self-interest has not led to their intentional falsification. After a battle, the first concern of the victor is to report the losses of his antagonist at as high, and his own at as low, a figure as possible, in order to accentuate the decisive character of the result. The defeated general naturally

follows the reverse procedure, and it is often years later before historic research can correct the figures first published, often at best leaving large room for doubt. Laborious search has been required to get at the most reliable sources, and so to obtain results approximating to the truth. The author does not claim absolute accuracy for the tables which follow, but offers them to the reader simply as the fruit of the most painstaking search of the archives of the great military Powers. The statistics given should be useful, however, as a basis for reliable deductions. In connexion with other historical data, they give a good indication of the valour of the troops engaged in the various battles and their tenacity in combat, the quality of the leadership, character of their arms, &c., as well as the relative strength of the opposing sides; and these are the facts with which military history must deal if it is to yield its proper fruits.

The most important consideration in connexion with the tables, and that with which the present study is chiefly concerned, is that of the losses of France and of her antagonists in the principal battles since 1614. The examination of the curve of loss percentages for this period will afford an indication in quantitative terms of the influence of moral progress on the conduct of war.

## CHAPTER III

### PERIOD OF THE THIRTY YEARS' WAR, 1618–48

During the first part of the Thirty Years' War, while Germany and Austria were being laid waste by the excesses of a soldiery made up of mercenaries of every nationality, France was carrying on several wars of secondary importance. In consequence of the revolt of the Princes of Condé and Bouillon in 1614, and of the conspiracy of the queen-mother in 1620, a ninth war of religion divided France into two hostile camps. This war, which was terminated by the

Peace of Alais in 1629, unfavourably for the Huguenots, was prosecuted with little vigour on either side, and was much less destructive of life than the previous Huguenot wars. It gave rise to skirmishes rather than to battles, and consisted largely of sieges. It was only during the period of 1627 to 1629, when England made common cause with the Huguenots, that military operations took on considerable proportions. The reduction of La Rochelle by Cardinal Richelieu, after a memorable siege which cost the defenders over 12,000 men, was the principal feat of arms of the struggle.

The War of the Mantuan Succession, 1627–31, waged by France against Savoy, Spain, and Austria, was the prelude to her participation in the Thirty Years' War. Although the king (Louis XIII) and Cardinal Richelieu were at the head of the French forces, their effective strength did not exceed 10,000 men, and in spite of the superiority in numbers of the enemy, there was no decisive engagement and the losses were inconsiderable on either side. Like the preceding contests, this war terminated favourably for the French. After the suppression, at the Battle of Castelnaudary in 1632, of the revolt of the Duke of Montmorency, Richelieu took steps toward the carrying out on the desired scale of his policy of weakening and humiliating the house of Hapsburg. This policy led to the active participation of France in the last stage of the Thirty Years' War, 1635 to 1648, and to the war with Spain, 1635 to 1659.

The effective strength of the opposing forces and the losses they sustained are shown in the tables of battles in Part I of this work.

These tables show that in almost all the engagements the victor, even when on the offensive, suffered much smaller losses than the defeated army; this is no longer the rule in the wars of the eighteenth and nineteenth centuries and of our own times, when close combat is much rarer in consequence of the greater range of firearms.

The results of the thirty greatest battles of the Thirty Years' War give an average casualty loss (killed and wounded) of fifteen per cent for the victors and twice this proportion, or thirty per cent, for the defeated antagonist. The following tables show the relative losses in the most important battles:

FRENCH LOSSES.—FRENCH VICTORIES

| *Battle.* | *Date.* | *Losses in killed and wounded, per cent of total strength.* |
|---|---|---|
| Freiburg | 1644 | 40 |
| Allersheim | 1645 | 33 |
| Wittenweier | 1638 | 12 |
| Zusmarshausen | 1648 | 10 |
| Rheinfelden | 1638 | 8 |
| Kempen | 1642 | 5 |

FRENCH LOSSES.—IMPERIAL VICTORIES

| *Battle.* | *Date.* | *Losses, per cent of effective strength.* | | |
|---|---|---|---|---|
| | | *Killed and wounded.* | *Prisoners.* | *Total.* |
| La Marfée | 1641 | 41 | 27 | 68 |
| Thionville | 1639 | 33 | 15 | 48 |
| Tuttlingen | 1643 | 16 | 22 | 38 |
| Mergentheim | 1645 | 14 | 18 | 32 |

The contemporaneous Valtelline War was much more sanguinary; the losses of the Duke of Rohan in the various battles of 1635, Mazzo, San Giacomo, Morbegno, often reached twenty per cent of the effective strength, which, however, never exceeded 5,000 men.

The French armies in Germany were at no time larger than 20,000 men; they reached that figure at Freiburg and Thionville; the effective strength at the battles of Tuttlingen and Nördlingen was 18,000; at Wittenweier 14,000; La Marfée and Mergentheim 11,000; and at Kempen 7,500 men.

The battle of Freiburg, August 3 to August 5, 1644, forms an exception to the rule that the victorious army usually

loses less heavily than the defeated one. Repeated assaults upon entrenchments well defended by troops of equal courage always involve heavier losses for the aggressor.

The total losses of the French forces in the Thirty Years' War against the Empire may be estimated at 100,000 men, of whom 80,000 were killed or wounded and 20,000 taken prisoners. A large part of the troops who fought under the French flag, however, were foreign mercenaries in the pay of France—Swedes, Hessians, Saxons, &c.; hardly half the effective strength consisted of men of French nationality. The figures given above do not include losses by disease. The loss by desertion must have been large in the Thirty Years' War, as would naturally be the case in view of the character of the armies of the period. The troops were recruited from heterogeneous elements of dubious morality, largely adventurers whom previous misdemeanours and the love of booty impelled to take up a career of arms. It is unnecessary to add that such a soldiery and their mode of warfare largely account for the atrocities and horrors which characterized the war.

The Spanish War, which lasted twenty-four years (1635–59) and was fought in part on French soil, cost France much greater losses than her simultaneous participation in the war in Germany. Other circumstances besides its eleven years' greater length contributed to make it more sanguinary. In Germany, France fought in common with strong allies, the Swedes and the contingents of the Protestant princes, while in the Spanish War she had to stand alone against the land and naval forces of Spain. In addition, a great civil war, the War of the Fronde (1649–53) raised up new enemies of the royalist cause and swelled the ranks of the Spaniards, not only with common soldiers, but with some of the ablest French commanders as well.

The effective strength of the armies sent against Spain was greater than that of the forces employed in Germany; at Avein the French numbered 34,000 men; Turenne com-

manded 25,000 at Valenciennes in 1656, and Condé led 23,000 at Rocroi in 1643.

The Spanish War was in a sense an apprenticeship for the French navy, which, in response to the efforts of Richelieu, was beginning to make a notable growth and a very creditable record of achievement, even rivalling the fleets of England and Holland. In the naval battles of the war the French squadrons consisted of from fifteen to thirty vessels of forty to fifty guns each, and with an average personnel of 6,000 to 7,000 men; they were uniformly victorious, though many of the successes were dearly bought. In the course of the war, two French admirals and twelve captains of vessels were killed, and the Spanish losses were much heavier, as they had many ships sunk or burned. The French lost hardly more than ten per cent of their forces, except in the naval battle of St. Tropez (or of Genoa), September 1, 1638; the losses in killed and wounded in this engagement are not accurately known, but must have been heavy, as the French had seven captains of vessels killed.

A noteworthy fact revealed by an examination of the losses in naval combats is the large proportion—much higher than in the case of land battles—of killed in comparison with the wounded. In land battles the ordinary ratio of killed to wounded is one to three, while in naval actions the number of killed quite commonly exceeds that of the wounded. The explanation is found in part in the nature of the weapons employed, heavy artillery, and the splinters produced by large projectiles; further causes are the falling of rigging, burning and sinking of vessels, and—last but not least—close combat. The last applies particularly to naval conflicts of earlier days, when vessels were captured by boarding, which always led to murderous hand-to-hand struggles.

The following tables show the French losses in the most important battles of the war with Spain:

FRENCH LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Loss in killed and wounded (per cent of effective strength).* |
|---|---|---|
| Lens | 1648 | 28 |
| Leucate | 1637 | 25 |
| Casale | 1640 | 20 |
| Rocroi | 1643 | 17 |
| Dunkirk | 1658 | 13 |
| Avein | 1635 | 9 |
| Rethel | 1650 | 9 |
| Arras | 1654 | 7 |

FRENCH LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Loss (per cent of effective strength).* | |
|---|---|---|---|
| | | *Killed and wounded.* | *Prisoners.* |
| Fontarabia | 1638 | 33 | — |
| Honnecourt | 1642 | 20 | 25 |
| Valenciennes | 1656 | 8 | 16 |

FRENCH LOSSES.—NOTABLE SIEGES

| *Siege.* | *Date.* | *Loss.* | |
|---|---|---|---|
| | | *No.* | *Per cent of effective strength.* |
| Saint-Omer | 1638 | 6,000 | 30 |
| Turin | 1640 | 4,000 | 30 |
| Dunkirk | 1646 | 6,000 | 20 |
| Sieges of Lérida | 1642, 1643, 1645, 1646, 1647 | 25,000 (at least) | |

Taking into account the losses of the civil war of the Fronde, of French fighting in the ranks of the enemy, and the losses in naval battles and in the colonies, the total French losses in the Spanish War of 1635–59 may be placed at over 300,000 men killed and wounded. This does not include deaths from disease or loss of life by non-combatants,

## CHAPTER IV

### THE WARS OF LOUIS XIV

At the accession of Louis XIV, in 1643, France was already at war with Spain and with the Emperor Ferdinand II, so that we cannot impute to him her participation in the wars discussed in the preceding chapter. But from the time he took up the reins of government, at the death of Cardinal Mazarin in 1661, Europe was a prey to the bellicose disposition of the Grand Monarch. From that date until 1715, or during the last fifty-four years of his long reign, France passed through barely sixteen years of peace.

Some of the wars of Louis XIV, it is true, were of secondary importance as military enterprises. Such were the dispatch of 6,000 French to fight against the Turks in Hungary in 1664, and of 10,000 to aid the Venetians in the siege of Crete in 1669, the half-hearted participation in the war of his ally Holland with England in 1666, the chastisement of the Barbary pirates in 1681–3, the armed intervention in Spain in 1683 and 1684, and the War of Devolution in 1667 and 1668. But aside from these, his reign was largely taken up with wars which convulsed all Europe and cost hundreds of thousands, if not a full million, of human lives.

The unbounded ambition of Louis XIV threatened the balance of power in Europe and inaugurated the period of the great coalitions against France. That nation soon found herself surrounded by foes on all her frontiers and had at first to put forth unprecedented efforts to come out victorious from the dangerous position in which Louis' policies had placed her, and was finally forced to fight with desperation in order not to be entirely overwhelmed by her numerous and implacable enemies.

The administrative ability of Colbert and the organizing genius of Louvois were able to provide and keep at the

king's disposal the two essentials of war, money and men, and this fact, together with the good fortune of having at the head of his armies the greatest commanders of the time, inclined him to the military method of settling all questions.

With the increase in the size of armies and fleets, a point in which Louis' example was piously followed by his enemies, the absolute loss of life in war increased considerably, though the relative losses in proportion to the forces engaged diminished sensibly in comparison with earlier wars. The average casualty loss was eleven per cent for the victor and twenty-three per cent for the vanquished. The number of prisoners not wounded increased, and the conduct of war became more chivalrous in the battle itself, but the barbarous practices of the Thirty Years' War, of devastating with fire and sword cities and even whole provinces, persisted and tarnished with an indelible stain the glory of the French arms.

### A. *The War of Devolution*

This war consisted mainly of sieges. The French armies were much superior in numbers to the feeble Spanish garrisons, and being led by the best generals and military engineers of the day, easily overcame the weak resistance of a nation in its decadence. No notable losses were incurred by either side.

### B. *War with Holland and her Allies*, 1672–8

In this general European conflict, France was opposed to Spain, the German Empire (represented especially by Austria and Brandenburg), and Denmark, in addition to the land and naval forces of the Netherlands. Allied with France were Great Britain (from 1672 to 1674) and Sweden (from 1674 to 1679).

The army commanded by the French king in person in 1672 numbered 80,000; at the battle of Seneffe, 1674,

Condé commanded 50,000; in January 1675 Turenne was at the head of 33,000; Luxembourg had 30,000 at Mont Cassel in 1677, and at the close of the war, at Saint-Denis-les-Mons in 1678, the same general led a force of 40,000 men. The fleets increased in size over those of previous conflicts on a scale much grander still. The combined squadrons of France and England, at the outbreak of the war, comprised ninety ships of the line, of 70 guns each, carrying over 30,000 men, and in the naval war around Sicily in 1675 and 1676, fleets of thirty ships of the line faced each other on the opposing sides. In this naval campaign the French were victorious over the greatest Dutch admiral, the celebrated De Ruyter, and held, though only for a short time, the first rank among the navies of Europe.

The naval battles in the North Sea in 1672 and 1673, despite the great superiority in numbers of the allied French and English, led to no decisive result; the advantage remained rather with the Dutch, who frustrated the plans of the allies for effecting a landing on the coast of Holland. The losses of the allies in these naval engagements are shown in the table below:

LOSSES OF ALLIES.—NAVAL ENGAGEMENTS

| *Battle.* | *Date.* | *Losses, killed and wounded (per cent of effective strength).* |
|---|---|---|
| Solebay | 1672 | 15 |
| Shooneveld | 1673 | 7 |
| Walcheren | 1673 | 4 |
| Camperduin | 1673 | 9 |

By order of Louis XIV, the French fleet took no energetic part in the actions, as he wished the English and Dutch to weaken each other; hence the French losses were inconsiderable.

On the other hand, the naval battles off the Sicilian coast, where Admiral Duquesne won decisive victories, were very bloody; at Stromboli and Agosta the French lost from sixteen to nineteen per cent. The bloodiest battle of all

was the naval combat of Tobago Island, where the victorious French had thirty-six per cent and the defeated Dutch forty-five per cent of their effective forces put out of action.

A large majority of the land battles ended in victory for the French arms, and the French forces lost fewer men in general than did their antagonists. The tables give the figures for the principal battles:

FRENCH LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Losses, killed and wounded (per cent of effective strength).* |
|---|---|---|
| Sinsheim | 1674 | 15 |
| Mont Cassel | 1677 | 15 |
| Seneffe | 1674 | 12 |
| Ensisheim | 1674 | 11 |
| St. Denis | 1678 | 10 |

FRENCH LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Losses, per cent of effective strength.* | |
|---|---|---|---|
| | | *Killed and Wounded.* | *Prisoners.* |
| Altenheim | 1675 | 29 | — |
| Consarbrück | 1675 | 18 | 17 |

The losses of the French in killed and wounded for the entire war may be estimated at 120,000 men; the capture of Luxemburg in 1684 cost them 2,500.

## C. *The War of the League of Augsburg*, 1688–97

Barely ten years after the Peace of Nimwegen, France faced a new coalition of her old enemies, to whom were now added two other formidable adversaries, Great Britain and Savoy. The energy of Louvois, the superior organization of her army, and better leadership on the part of her chief commanders again enabled France to come out victorious over all her foes, even though without allies and compelled to carry on the war at the same time in the Netherlands, Germany, Italy, and Spain.

But though the land battles were victories for the French,

it was otherwise on the sea. England was fighting for the naval supremacy, and, allied with her former enemy, Holland, she had the superiority in numbers and succeeded in reducing France to the position of a second-class naval power. In spite of several victories by Tourville over both adversaries combined, the decisive battle of La Hougue established the predominance of the English navy, which has been maintained to the present day.

The growth in the size of armies and fleets progressed another stage in this war. In 1692 we find Louis XIV at the head of a formidable army of 120,000 men, and Marshal Luxembourg won the battles of Fleurus, Steenkerke, and Neerwinden with 50,000, 57,000, and 80,000 respectively. The English and Dutch required ninety-nine ships of the line and nineteen frigates, carrying 6,756 guns and 40,000 men, at La Hougue, in order to overcome Tourville, who had barely half these forces to oppose to them. In the size of the forces engaged, La Hougue remains the greatest naval battle of modern times.

The important battles of this war were bloodier than those of the preceding one, especially for the defeated armies. Below are tables of the French losses:

FRENCH LOSSES: LAND BATTLES.—VICTORIES

| *Battle.* | *Date.* | *Losses, killed and wounded (per cent of effective strength).* |
|---|---|---|
| Staffarda . . . | 1690 | 17 |
| Neerwinden . . | 1693 | 15 |
| Steenkerke . . | 1692 | 12 |
| Fleurus . . . | 1690 | 12 |
| Marsaglia . . . | 1693 | 8 |

The French loss in the naval battle of La Hougue, 1692, was twenty-five per cent of the men and thirty-eight per cent of the ships engaged.

The total losses of the French in killed and wounded for the war may be estimated at 160,000 men; those of her antagonists were not less than 200,000.

The first siege of Namur in 1692 cost 7,000 men, and the defence of the same place in 1695, 8,000; the siege of Barcelona in 1697 cost the lives of over 10,000 soldiers.

### D. *The War of the Spanish Succession*, 1701–14

The close of the reign of Louis XIV was marked by the greatest, the bloodiest, and the most disastrous war which France was forced to wage in the long reign of that warlike monarch. France, part of Spain, and Bavaria had to fight the combined forces of the German Empire, Austria, Savoy, Great Britain, the Netherlands, Portugal, and those Spanish provinces which espoused the cause of the pretender, Charles of Austria. Denmark sent a contingent to aid the allies, while a great insurrection in Hungary kept occupied a part of the Austrian forces.

As on this occasion the allies were commanded by the two greatest generals of the time, Prince Eugene of Savoy and Marlborough, the French troops, often badly led, suffered reverse after reverse. France was more than once on the brink of the abyss, but various factors making for discord in the ranks of the allied Powers saved her from disaster and even enabled her to conclude the war with some military and diplomatic successes, in spite of her physical, moral, and financial exhaustion.

As a climax to her misfortunes, one of the most bitter of civil wars, the tenth war of religion or Camisard Insurrection, broke out in 1702 and raged until 1706 in the beautiful province of Languedoc, forcing the king to withdraw troops from his frontiers to cope with internal insurrection. Armies of from 20,000 to 30,000 men, commanded by his ablest leaders, were required to suppress the rebellion. The losses in the struggle were enormous, surpassing those of the previous civil wars. Great numbers of towns and villages were burned, and the suppression of the revolt left the province of Languedoc wasted and depopulated;

it has not to this day recovered from the effects of that devastation.

In the course of the War of the Spanish Succession, both adversaries made prodigious efforts to enlarge their armies. The decisive battles were fought between forces of from 60,000 to 90,000 men on a side, and at the end of the war Marshal Villars was at the head of 130,000 men. In various battles the victor suffered heavier losses than his opponent, as at Schellenberg and Malplaquet (see Table). Malplaquet was the greatest battle as to number of men engaged, and the bloodiest, of the war; it was a veritable Pyrrhic victory for the allies, who lost more than a fourth of their army of over 90,000 men.

There were few naval battles in this war, as the French squadrons were conscious of inferiority and avoided an engagement. This was the beginning of the naval decadence of France. The sea-fight of Velez-Malaga in 1704 was indecisive, and in 1702 a strong French and Spanish fleet met disaster in the Bay of Vigo.

With respect to the curve of relative losses in individual battles, little change can be noted in comparison with previous wars; the numerical losses were considerably higher, in view of the larger forces engaged. The tables show the relative losses in different battles:

FRENCH LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Losses, killed and wounded (per cent of effective strength).* |
|---|---|---|
| Speier | 1703 | 22 |
| Villaviciosa | 1710 | 19 |
| Cassano | 1705 | 18 |
| Friedlingen | 1702 | 17 |
| Luzzara | 1702 | 12 |
| Eeckeren | 1703 | 13 |
| Almansa | 1707 | 10 |
| Denain | 1712 | 9 |

In the last two battles above, the enemy lost respectively thirty-one per cent and thirteen per cent killed and

wounded, and forty-four per cent and twenty-one per cent prisoners.

The indecisive battle of Velez-Malaga, 1704, cost the French nine per cent of their effective strength.

FRENCH LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Losses, per cent of effective strength.* | | |
|---|---|---|---|---|
| | | *Killed and wounded.* | *Prisoners.* | *Total.* |
| Höchstädt or Blenheim | 1704 | 27 | 27 | 54 |
| Saragossa | 1710 | 25 | 25 | 50 |
| Vigo | 1702 | 22 | 33 | 55 |
| Ramillies | 1706 | 13 | — | 13 |
| Malplaquet | 1709 | 12 | 3 | 15 |
| Turin | 1706 | 10 | 7 | 17 |
| Oudenarde | 1708 | 8 | 10 | 18 |

In no other war have there been so many sieges as in the War of the Spanish Succession. There were fortified places, such as Landau, which passed through as many as four sieges in the course of the struggle. The losses in sieges were much heavier on both sides than those in battles, without counting the garrisons taken prisoners of war.

France lost over 20,000 killed and wounded in the four sieges of Landau; at least 20,000 before Barcelona in 1714; 6,000 before the same city in 1706; 14,000 before Turin in 1706; 12,000 before Verrue in 1704; 12,000 before Gibraltar in 1705; and 10,000 before Freiburg in 1713.

The allies lost 14,000 men before Lille in 1708; over 10,000 before Toulon in 1707; 8,000 before Douai in 1710; and at least 12,000 killed and wounded in the four sieges of Landau.

The total losses of the French armies in killed and wounded during the war must have amounted to at least half a million men, and those of the allies were probably about equal in number. The deaths among the inhabitants of besieged cities, those caused by diseases carried by the armies, those of the Camisards, and finally those from the famine which

followed in the wake of this duel to the death, must have reached an enormous figure. Statistics on these points, however, are unfortunately totally wanting.

During the wars of the reign of Louis XIV, from 1643 to 1715, no fewer than 222 French general officers were killed in battle. Included among them were 1 marshal-general of the camps and armies of the king (Turenne), 2 admirals (Brézé and Beaufort), 1 colonel-général (La Châtre), 4 marshals of France (Guébriant, Gassion, Castelnau, Marcin), 1 vice-admiral, 52 lieutenant-generals, 5 rear-admirals, 86 major-generals (*Maréchaux de Camp*), and 70 brigadier-generals (*Brigadiers*).

A comparison of these figures with the number of officers killed in other countries, also at war much of the time, gives an idea of the enormous sacrifices of the French nation on the altar of *La Patrie*. Austria, for example, between 1618 and the present time, or in a space of three hundred years, has lost only 214 general officers killed in battle. Besides the 222 French general officers killed, at least three times as many must have been wounded, which means that in the reign of Louis XIV the French armies lost in all about 1,000 general officers.

The table below shows the distribution of the number killed in the various wars:

| *War.* | *Date.* | *No. of French General Officers killed.* |
|---|---|---|
| Thirty Years' War | 1643–8 | 6 |
| War with Spain | 1643–59 | 42 |
| War of the Fronde | 1649–53 | 10 |
| Fighting with pirates | 1664 | 1 |
| War of Devolution | 1667–8 | 3 |
| Defence of Crete | 1667–9 | 2 |
| War with Holland | 1672–9 | 29 |
| War of the League of Augsburg | 1688–97 | 37 |
| War of the Spanish Succession | 1701–14 | 92 |
| Total | | 222 |

## CHAPTER V

### WARS UNDER LOUIS XV AND LOUIS XVI, 1715–92
### THE ERA OF THE WARS OF FREDERICK THE GREAT

#### A. *The War of the Quadruple Alliance against Spain*, 1718–20

THE War of the Quadruple Alliance with Spain followed an agreement with England, France, Austria, and Holland for the purpose of opposing the aspirations of Spain, dominated at that time by the ambitious policy of Cardinal Alberoni. It was prosecuted with but little energy on the part of France, who was drawn into it rather against her will by England. The only interest France had in the war was the overthrow of the naval power of Spain; Austria, however, wished to secure Sicily and to unite it with the kingdom of Naples, of which she was already in possession by the terms of the treaty of Utrecht. The French troops fought half-heartedly against the monarch whose throne they had secured at such sacrifice in the previous war, and their military operations were limited to the sieges of San Sebastian and Fontarabia, in which they sustained but slight losses.

#### B. *The War of the Polish Succession*, 1733–5

Allied with Spain and Sardinia, France was now opposed to the Empire and Austria; the war was fought out in Germany and Italy. Although the army which operated in Germany was much the larger, there were no great battles in that country, the successful sieges of Kehl (1733) and of Philippsburg (1734) being the chief military enterprises. The investment of the latter place cost France at least 10,000 men, killed and wounded. The decisive blows were struck in Italy, where also the French were victorious. In the battles of Parma and Guastalla, in 1734, they sustained losses of eight per cent and fifteen per cent respectively, their defeated opponents losing sixteen and twenty-two per cent.

The total of the French losses in the war may be estimated at 50,000 killed and wounded; 12 general officers were killed.

### C. *The War of the Austrian Succession*, 1741–8

Frederick II was the instigator of this war, in which he served his apprenticeship for his career as a great general. He had as allies Bavaria, Saxony, France, and Spain; the allies of Austria were Sardinia, England, Portugal, and Holland. The great struggle, which resulted in the humiliation of the house of Austria and the entry of Prussia into the ranks of the first-class military Powers, was fought out in Austria, Prussia, South Germany, the Netherlands, Italy, Alsace and Lorraine, Provence, in the English, French, and Spanish colonies, and on the high seas. The armies put into the field by France were still larger than those of the War of the Spanish Succession. Hermann-Maurice, Comte de Saxe, Marshal of France, commander-in-chief of the French forces in the Netherlands, led 110,000 men at Rocoux, and 98,000 at Laffeldt. The relative losses were lighter than in the wars of Louis XIV for the French armies, but heavier for those commanded by Frederick.

The total losses of the French in the war may be estimated at approximately 140,000 killed and wounded, and 50,000 prisoners. The French navy suffered two reverses in 1747 off the heights of Cape Finisterre, losing thirty per cent of its men in a brave fight against the overwhelming numbers of the enemy. The naval loss of France for the war was 20 ships of the line and 16 frigates, carrying 12,000 men and 1,738 guns; England lost 14 ships of the line and 7 frigates, with 7,000 men and 1,012 guns; Spain, 17 ships of the line and 7 frigates, 11,000 men and 1,276 guns.

The French armies lost heavily in the great sieges of the war. The investment of Prague in 1742 cost them over 8,000 men; that of Freiburg 16,000; of Cuneo, 10,000;

Bergen-op-Zoom, 7,000; and Ostend and Maestricht, 2,000 each. The tables show their losses in the chief battles:

FRENCH LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Losses (per cent of effective strength).* |
|---|---|---|
| Cuneo | 1744 | 15 |
| Fontenoy | 1745 | 10 |
| Rocoux | 1746 | 4 |
| Laffeldt | 1747 | 10 |

FRENCH LOSSES.—DEFEATS

| *Battle.* | *Date.* | *Losses (per cent of effective strength).* | |
|---|---|---|---|
| | | *Killed and wounded.* | *Prisoners.* |
| Dettingen | 1746 | 11 | 5 |
| Piacenza | 1746 | 16 | 7 |

The bloodiest battle of the war was the unfortunate affair of Col de l'Assiette, in 1747, where the French troops lost forty per cent killed and wounded and four per cent prisoners. In the course of the war, France had twenty-six generals and one admiral killed in battle.

### D. *War with England*, 1755–63, *and Participation in the Seven Years' War*, 1756–63

In spite of the combined forces of Austria, the majority of the States of the German Empire, France, Spain, Russia, and Sweden, Prussia and England were victorious over all their adversaries, thanks to the military and diplomatic genius of Frederick the Great and the supremacy of England on the sea. France and England fought a war to the death on the ocean, on the coasts, in their colonies in Asia and North America, and on the battlefields of Germany. It was one of the most disastrous conflicts France has ever waged; she lost her finest colonies in India and the New World, and more than 350,000 soldiers in addition, of whom about half were killed or wounded and half prisoners and

deserters. In no other war have there been so many deserters. The number for the Austrian army exceeded 62,000, and for the Prussians 80,000; the French probably had 70,000, and close to 80,000 prisoners. The French navy, which except for the battle of Minorca had only defeats to show, lost over 40,000 men, of whom more than half were killed in action, drowned, or missing. Besides this loss of men, 20 ships of the line were captured by the enemy, 25 more sunk or wrecked, 25 frigates captured, and 17 destroyed. Spain, which entered the war only in 1761, lost 10,000 seamen, 12 ships of the line, and 4 frigates. England lost about 20,000 seamen, 2 ships of the line, and 3 frigates captured, and seventeen ships of the line and 14 frigates destroyed.

The French armies on land were sometimes 100,000 strong, and almost always superior in number to their foes, but were led by mediocre commanders, and suffered one reverse after another. Army and navy alike showed a general breakdown; with rare exceptions the troops, under poor leaders, fought badly, both courage and fighting spirit as well as discipline leaving much to be desired; the small relative losses in the few victories and more frequent defeats bear witness to the weak resistance of the French soldiery. The small losses of the French, shown in the tables below, may be compared with those of Frederick the Great, whose battles were ably contested. At Prague his army lost twenty per cent killed and wounded; at Kolin, twenty-six per cent; at Breslau, thirty per cent; Leuthen, eighteen per cent; Zorndorf, thirty-two per cent; Hochkirch, nineteen per cent; Züllichau, twenty-five per cent; Kunersdorf, thirty-nine per cent; and at Torgau, twenty-three per cent.

FRENCH LOSSES.—VICTORIES

| *Battle.* | *Date.* | *Losses (per cent of effective strength).* |
|---|---|---|
| Hastenbeck | 1757 | 4 |
| Luttenberg | 1758 | 2 |
| Bergen | 1759 | 5 |
| Korbach | 1760 | 3 |
| Kloster Kampen | 1760 | 14 |

FRENCH LOSSES.—DEFEATS

| Battle. | Date. | Losses (per cent of effective strength). | |
|---|---|---|---|
| | | Killed and wounded. | Prisoners. |
| Rossbach | 1757 | 8 | 13 |
| Krefeld | 1758 | 11 | 3 |
| Minden | 1759 | 10 | 4 |
| Warburg | 1760 | 9 | 13 |
| Vellinghausen | 1761 | 3 | 2 |
| Wilhelmsthal | 1762 | 6 | 12 |

The French fought better in the colonies, especially in Canada, where, in the battle of Quebec, in 1759, they were defeated only after losing thirty-three per cent of their effectives. The unfortunate naval battles of Lagos and Quiberon Bay were also stubbornly contested by the French, their ships not surrendering until thirty per cent of their crews had been lost. In the course of the war, the French armies lost seventeen general officers, and the fleets two admirals, killed in battle.

E. *War with England and participation in the War of Independence of the United States of America*, 1778–83

In this struggle, England was pitted against the combined forces of France, Spain, and Holland, as well as the Neutral League (Denmark, Sweden, and Russia), who were determined to wrest from her the naval supremacy. Besides this, she had to defend her vast and scattered possessions, and to maintain her sovereignty over her North American colonies. The task was a hard one and the conflict stubborn, and England, after exhausting her physical and financial resources, was forced to yield and recognize the independence of the United States. She kept her supremacy on the sea, however, thanks to her able admirals and excellent sailors, and also saved the greater part of her over-sea colonies. England had little reason to fear an invasion, in view of the want of naval strength and of resolution on the

part of her adversaries, and employed all her forces in the defence of her over-sea possessions. Hence the fighting was done in the colonies and on the sea rather than on the continent of Europe. Exception must be made of Gibraltar, which sustained a memorable siege, in which the French and Spaniards lost over 6,000 men.

As a naval war, this was the greatest and most important in history; the French navy was aroused from the torpor of a century, and was often—especially in India, under de Souffren, a worthy and even successful opponent of the Union Jack. Many indecisive naval battles were fought, besides the two great victories of the English fleets; one of the latter was at Cape St. Vincent in 1780, and the other near Dominica, where Admiral Rodney obtained a decisive advantage over the French and Spanish squadrons. In these two engagements only, the losses on the defeated side were heavy; here they were respectively seventeen per cent and sixteen per cent killed and wounded, twenty and eight per cent prisoners, and in vessels, sixty and sixteen per cent. The losses in the other battles on land and water ranged but from six to ten per cent. The following table shows the losses in ships of the maritime Powers in the war:

NAVAL LOSSES

| | | *Ships of the line.* | *Guns.* | *Frigates.* | *Guns.* |
|---|---|---|---|---|---|
| France | Captured | 12 | 838 | 30 | 912 |
| | Destroyed | 7 | 508 | 2 | 76 |
| Spain | Captured | 5 | 362 | 6 | 176 |
| | Destroyed | 3 | 210 | 5 | 150 |
| Holland | Captured | 3 | 164 | 3 | 102 |
| | Destroyed | 1 | 64 | — | — |
| United States | Captured | — | — | 13 | 374 |
| | Destroyed | — | — | 9 | 280 |
| Total for Allies | | 31 | 2,146 | 68 | 2,070 |
| Great Britain | Captured | 3 | 164 | 23 | 642 |
| | Destroyed | 17 | 1,232 | 47 | 1,336 |
| Total for Great Britain | | 20 | 1,396 | 70 | 1,978 |

It will be seen that the losses of frigates were about equal on the two sides; in ships of the line, however, and especially flagships, those of the allies were notably the heavier. On the other hand, the merchant marine of England suffered enormously during the war; the English lost 2,200 merchant vessels and 75 privateers, the allies only 1,100 merchant ships, though 215 privateers.

In the absence of official records, it is entirely impossible to give the total losses of men, only those for the great battles being known. The naval campaign in India in 1782 and 1783 cost the English squadron under Admiral Hughes, 1,866, and the French under de Souffren, 1,782 killed and wounded, or over one-fourth of the effective strength in each case. The total losses of the English in the big naval battles hardly exceeded 6,000 men; those of the French in the same engagements reached 10,000, not counting prisoners not wounded, whose number may be estimated at 2,000. The land and naval battles in America and India naturally caused those two countries losses heavier than the numbers given above.

## CHAPTER VI

### THE WARS OF THE REVOLUTION, 1792–1802

#### A. *War of the First Coalition*, 1792–1802

The new régime quickly won for the young Republic the enmity of Prussia and Austria and the other States of the German Empire. The fresh-levied French armies were repulsed at the outset of the campaign in Belgium by the seasoned Austrian troops; but under the leadership of Generals Kellermann and Dumouriez, their patriotic enthusiasm swept everything before them at Valmy and Jémappes in 1792, defeating the Prussian and Austrian veterans under the Duke of Brunswick and the Duke of Saxe-Teschen. The

results of these fortunate first strokes of the revolutionary armies were the invasion of Germany and the conquest of Belgium. The rapid successes of the French arms and the consequent concern for the European balance of power on the part of England, Holland, Sardinia, and Spain, threw these countries into the ranks of the enemies of France; thus was inaugurated the second era of great coalitions against France, and war followed war for twenty-three years, or until 1815.

In spite of the number and power of the hostile armies, general conscription gave the French sufficient forces to resist the invasion threatened on all their frontiers. They were beaten on the sea by the English, but the Republican armies, animated by the most ardent patriotic enthusiasm and led by brave and enterprising young generals, repulsed invasion and carried the war into the enemies' territory, where they made extensive conquests. Bonaparte, the greatest captain of modern times, and a large number of the best generals France has had, including Hoche, Kléber, Moreau, Marceau, Desaix, won their first successes in this war. The conquest of Holland in 1795 terminated the war with that country, and Prussia and Spain also made peace the same year. Austria and Sardinia continued the struggle until 1797, when they were forced to accept a disadvantageous peace; England alone carried on the war until 1802, to resume it in 1803 and continue without interruption until 1815.

The great battles were frequent in this struggle, but much less bloody than those of the Seven Years' War. The average loss in killed and wounded does not exceed eight per cent; even the defeated armies, which in previous wars often lost a fourth to a third of their effective strength in killed and wounded, rarely lost over fifteen per cent. War began to be conducted much more humanely than formerly, the number of French soldiers made prisoners in the war exceeding 150,000, while that of the allies reached 220,000.

But in spite of this fact and the more favourable percentage of relative losses, this war cost the lives of hundreds of thousands of men. A new epoch in the conduct of military operations was inaugurated by Napoleon; the decisive blows succeeded each other more rapidly, the war of sieges and methodical manœuvres gave place to new methods, and there were many more battles than formerly. In the course of the war, France lost thirty-seven general officers killed in battle.

The losses in the principal battles are shown in the tables below:

LOSSES.—FRENCH VICTORIES

| *Battles.* | *Date.* | *French losses.* | | *Enemies' losses.* | |
|---|---|---|---|---|---|
| | | *Killed and wounded. Per cent.* | *Prisoners. Per cent.* | *Killed and wounded. Per cent.* | *Prisoners. Per cent.* |
| Arcola . . . | 1796 | 17·5 | 6·5 | 9·2 | 17·0 |
| Hondshoote . . | 1793 | 12·5 | — | 10·0 | 8·8 |
| Wattignies . . | 1793 | 11·0 | — | 8·0 | — |
| Loano . . . | 1795 | 10·0 | 2·0 | 20·0 | 22·0 |
| Fleurus . . . | 1794 | 6·0 | — | 11·0 | — |
| Rivoli . . . | 1797 | 10·0 | 5·0 | 14·0 | 29·0 |
| Tourcoing . . | 1794 | 4·3 | — | 3·5 | 4·0 |
| Jémappes . . | 1792 | 4·5 | — | 8·0 | 4·0 |

LOSSES.—FRENCH DEFEATS

| *Battles.* | *Date.* | *French losses.* | | *Enemies' losses.* | |
|---|---|---|---|---|---|
| | | *Killed and wounded. Per cent.* | *Prisoners. Per cent.* | *Killed and wounded. Per cent.* | *Prisoners. Per cent.* |
| Famars . . . | 1793 | 11·0 | — | 2·0 | — |
| Tournay . . | 1794 | 11·0 | 1·0 | 6·0 | — |
| Kaiserslautern . | 1793 | 8·0 | 2·0 | 3·5 | — |
| Würzburg . . | 1796 | 6·7 | 3·0 | 3·0 | — |

## B. *Insurrection of La Vendée*, 1793–6

The Vendéan insurrection was a civil war such as France, whose history is so rich in such struggles, had not previously

experienced, and has not since experienced to the present day. Four years' time and over 400,000 men were required to subdue the royalist revolt. The war was fought mercilessly and to the death, and the battles were much bloodier than those of the same period between the French armies and the multiplied foes on the frontiers. A new proof was afforded for the thesis that civil wars are much more sanguinary than conflicts between nations or races. The conduct of the war was barbarous and inhuman on both sides, but especially on that of the republican armies. Prisoners taken with arms in their possession were massacred or executed; it was a war of extermination, resulting in the depopulation of several departments, and France has never ceased to feel its effects. The republican armies had thirteen generals killed, while all the Vendéan leaders were killed in action or by the hand of the executioner. The battles of Dol, Entrammes, Cholet, and Le Mans cost the republicans thirty-two, seventeen, sixteen, and ten per cent of their effectives; the Vendéans lost eighty-six per cent at Savenay, seventy per cent (15,000 men) at Le Mans, and twenty per cent (8,000 men) at Cholet. The best generals—Kléber, Marceau, and Hoche—and the most hardened troops were required to suppress the insurrection. As the vanquished, who lost the most heavily, were also Frenchmen, the country suffered doubly from these irreparable losses; the exact figures are unknown, but they may be estimated at several hundred thousand men.

### C. *The Naval War with England*, 1793–1802

Ten years after the Peace of Versailles the old antagonists resumed their struggle for the supremacy on the sea. The French navy had revived during the preceding war, and had even won some victories over English squadrons. England could not forgive France for this turn of fortune, and did her utmost to relegate the French navy to the humiliating

position it had occupied at the time of the Seven Years' War. Although English troops fought the French in all countries and all places where the wars of the First and Second Coalition were contested, on the coasts of France and of Italy, in the Kingdom of Naples, in Egypt, and in the colonies, still the principal efforts of Great Britain were directed to the destruction of the French navy. France herself assisted England in this design by neglecting the development of her sea-power and by displacing her ablest admirals and other officers because they belonged to the nobility. The new ideas which were agitating men's minds at the time penetrated to the crews of the vessels, sowing discord, resistance to discipline, and revolt. The English made short work of the untrained personnel and run-down equipment, and the battles were so many defeats for the French navy. The fleets of the Powers allied with France, that of Holland after 1795, and that of Spain after 1796, shared the same fate in the battles of Camperdown in 1798, and of St. Vincent in 1797, while the Danish squadron, the champion of the Neutral League, was practically annihilated in the battle of Copenhagen in 1801; the triumph of England was complete. Following are tables of the French losses in the principal naval engagements:

FRENCH LOSSES,—NAVAL BATTLES

| *Battle.* | *Date.* | *Killed and wounded. Per cent.* | *Prisoners not wounded. Per cent.* | *Ships. Per cent.* |
|---|---|---|---|---|
| Ushant | 1794 | 27·5 | 16·5 | 25·0 |
| Quiberon Bay | 1795 | 8·0 | 14·5 | 22·0 |
| Cape Noli | 1795 | 9·0 | 14·0 | 13·0 |
| Aboukir | 1798 | 34·0 | 43·0 | 85·0 |

LOSSES OF ALLIES: NAVAL BATTLES

| *Nation.* | *Battle.* | *Date.* | *Killed and wounded. Per cent.* | *Prisoners. Per cent.* | *Ships. Per cent.* |
|---|---|---|---|---|---|
| Spain | Cape St. Vincent | 1797 | 10·0 | 13·5 | 16·0 |
| Holland | Camperdown | 1797 | 11·0 | 46·4 | 56·0 |
| Denmark | Copenhagen | 1801 | 30·0 | 50·0 | 60·0 |

ENGLISH LOSSES: NAVAL BATTLES

| *Battle.* | *Percentage.* |
|---|---|
| Ushant | 7·0 |
| Cape Noli | 4·5 |
| Quiberon Bay | 2·2 |
| Aboukir | 10·6 |
| Cape St. Vincent | 5·6 |
| Camperdown | 10·6 |
| Copenhagen | 15·0 |

The following table shows the losses in ships. This enormous destruction, exceeding that of the naval war of 1803 to 1815, assured the approaching ruin of the principal navies of Europe to the profit of England.

| *Nation.* | *Ships of the Line.* | | *Guns.* | *Frigates.* | | *Guns.* |
|---|---|---|---|---|---|---|
| | *Captured.* | *Destroyed.* | | *Captured.* | *Destroyed.* | |
| France | 32 | 24 | 4,272 | 33 | 125 | 5,004 |
| Spain | 5 | 5 | 910 | 5 | 15 | 616 |
| Holland | 25 | — | 1,572 | 32 | — | 1,080 |
| Denmark | 1 | 4 | 316 | — | 9 | 292 |
| Total | 63 | 33 | 7,070 | 70 | 149 | 6,992 |
| Great Britain | 6 | 20 | 1,844 | 11 | 44 | 1,734 |

The principal sea-battles cost France over 10,000 men killed and wounded and the same number of prisoners not wounded; England lost only 3,200 killed and wounded. Taking account of numerous minor engagements, of shipwrecks, and of the ravages of disease among the sailors in the colonies and the tropics, the total losses of the French navy in the war may be estimated at 60,000 men; half of these were prisoners.

Two admirals and nineteen captains of vessels met death in battle.

### D. *Expedition into Egypt*, 1798–1801

On May 19, 1798, General Bonaparte set sail from Toulon at the head of 32,000 men (of whom 1,000 were non-combatants). The expedition was embarked on 232 transports and convoyed by a squadron composed of thirteen ships of the line and eleven corvettes and armed dispatch boats,

carrying 10,000 men with 1,200 guns. The total number of men was thus 42,000. The following summary of their fate shows the losses of the expedition:

| | |
|---|---|
| Number returned to France in 1801 by English vessels when Egypt was abandoned by the French | 14,000 |
| Seamen escaped from the disaster of the naval battle of Aboukir | 2,000 |
| Soldiers and seamen made prisoners | 8,500 |
| Number who returned with Bonaparte to France in 1799 | 500 |
| Total number of survivors | 25,000 |
| Total killed, drowned, dispersed, died of disease | 17,000 |
| Total effective strength of the expedition | 42,000 |

The relative losses of the French army in killed and wounded were rather high, due to the fact that the French forces had almost always to contend with armies double or treble their own numbers.

The total French losses in killed and wounded may be estimated at 15.000 men, those of their adversaries (Mamelukes, Arabs, Turks, and English), at 50,000; the French lost 8,500 prisoners, the Arabs and Turks, 15,000.

The sea fight of Aboukir, or Battle of the Nile (August 1, 1798), was the greatest and most decisive naval victory of modern times, as well as the greatest maritime success which England had achieved up to that date. The French fleet lost thirty-four per cent of its crews in killed and wounded, and forty-three per cent in prisoners, and eighty-five per cent of its line-of-battle ships; Nelson lost but eleven per cent in killed and wounded.

The unsuccessful siege of Acre cost Napoleon 4,000 men, or a third of his effective strength.

LOSSES.—FRENCH VICTORIES

| *Battle.* | *French forces.* | *Enemies' forces.* | *Losses.* *French.* | | *Enemies'.* | |
|---|---|---|---|---|---|---|
| | | | *No.* | *Per cent.* | *No.* | *Per cent.* |
| Pyramids | 20,000 | 60,000 | 300 | 1·5 | 2,000 | 3·3 |
| Mount Tabor | 4,000 | 26,000 | 500 | 12·5 | 6,000 | 23·0 |
| Aboukir, 1799 | 6,000 | 18,000 | 1,100 | 19·0 | 12,000 | 65·0 |
| Heliopolis | 12,000 | 50,000 | 600 | 5·0 | 10,000 | 20·0 |

LOSSES.—FRENCH DEFEATS

| Battle. | French forces. | Enemies' forces. | Losses. French. Killed and Wounded. No. | Killed and Wounded. Per cent. | Prisoners. No. | Prisoners. Per cent. | Enemies'. Killed and Wounded. No. | Killed and Wounded. Per cent. |
|---|---|---|---|---|---|---|---|---|
| Aboukir, 1798 . | 9,000 | 8,000 | 3,100 | 34·0 | 3,900 | 43·0 | 900 | 11·0 |
| Acre . . . | 12,000 | 30,000 | 4,000 | 33·0 | — | — | 2,000 | 6·6 |
| Canopus, 1801 . | 10,000 | 12,000 | 3,000 | 30·0 | 500 | 5·0 | 1,500 | 12·5 |

In the expedition the French had one commander-in-chief (Kléber), one vice-admiral (Brueys), three division commanders, and six brigadier-generals killed in action.

## E. *The War with Naples*, 1798–9

This war was of secondary significance in comparison with the great conflict which had just been concluded in 1797, or with the War of the Second Coalition, to which it was the prelude, and into which it merged in 1799. Fifty thousand Neapolitans, at the instigation of Austria, and led by Austrian generals, marched against 15,000 French at Rome. The seasoned troops of General Championnet easily overcame the undisciplined and badly commanded Neapolitans. The latter were defeated in several engagements in the Apennines (Civita, Castellana, and Otricoli), losing over 7,000 men, mostly prisoners; they were then driven back into the kingdom of Naples, where they were completely dispersed by the French. After occupying the fortified points, which surrendered without firing a shot, and taking Naples by storm, Championnet abolished the kingdom of Naples and proclaimed the Parthenopian Republic in its place. Its sovereign escaped to Sicily by the aid of Nelson's English fleet. In the course of the War of the Second Coalition, a large part of the French troops scattered over the kingdom of Naples were called to Northern Italy, where the French arms had suffered serious reverses. With the able

assistance of English sailors the royalist troops forced the weak French garrisons to lay down their arms. About 15,000 men were made prisoners; the French losses in the few minor engagements were slight.

### F. *The War of the Second Coalition*, 1799–1801

Soon after the Peace of Campo-Formio, which terminated the war of the First Coalition in 1797, the policy of France gave her former enemies renewed cause to fear for the maintenance of the European balance of power. The Egyptian expedition, threatening the deepest interests of England, forced that country to seek powerful allies. The occupation of the Papal States, of the kingdom of Naples, and of Switzerland, by the Republican forces, the expulsion of the King of Sardinia and the Grand Duke of Tuscany, and the creation of new republics in Italy, aroused Austria, and the seizure of Malta by Bonaparte incensed the Czar of Russia, who was protector of the Maltese. A second coalition was formed, much more formidable than the first; it comprised England, which had been at war since 1793, Austria and the southern States of the Empire, Russia, Turkey (also angered by the expedition to Egypt), Portugal, and the kingdom of Naples.

The war was fought in Italy, Switzerland, Southern Germany, in Holland, and, toward the close of the struggle, in Austria. In Holland an Anglo-Russian expedition attempted to stir up an insurrection and to penetrate into Belgium, but was compelled to withdraw after suffering serious reverses.

The armies put in the field by both sides were larger than those of the preceding war, but never exceeded 100,000 men; the war was carried on simultaneously in so many places that it was impossible to unite a vast number of men under a single command. The decisive battles were fought with forces of from 30,000 to 40,000 men; at the battle of Marengo, which decided the campaign, Bonaparte, First Consul, was at the head of 28,000; General Moreau,

commander of the army of Germany, had 90,000 under his orders in 1800. The armies engaged consisted chiefly of seasoned troops, the veterans of the preceding campaigns, and the battles were much more sanguinary than those of the previous wars, as well as more frequent and of greater magnitude. The superior morale of the seasoned soldiers led them to put up a much more obstinate resistance.

Although this war lasted but two years in contrast with the five years' duration of the War of the First Coalition, the total losses were equally heavy. Twenty-four pitched battles, sixty-seven significant engagements, twelve sieges, and one capitulation in the open field are recorded in the history of this great war. The French arms suffered serious reverses before achieving their final victory, which they owed to the disunion of the allies and to the genius of Bonaparte and Moreau. The number of prisoners not wounded was less than in the preceding war, amounting to about 140,000 men on each side. The French lost seventeen generals killed in battle; their heaviest relative losses were sustained in the battles of the Trebbia River, where they lost twenty-nine per cent killed and wounded; at Montebello and Marengo (twenty-five and twenty-three per cent respectively), and on the disastrous field of Novi, where the loss in killed and wounded reached twenty per cent.

The famous passage of the St. Gothard by the Russian Marshal, Souvarov, cost him twenty-nine per cent of his forces, while the French General Lecourbe, who disputed his advance foot by foot, lost twenty-two per cent of his effective strength. The still more celebrated forcing of the same pass by Bonaparte was another exploit of this war. The bloodiest action of the war was the heroic encounter of Molitor's brigade with the Russian division of Prince Bagration at Näfels, October 1, 1799; the French lost thirty-six per cent and the Russians thirty-one per cent killed and wounded.

The following tables show the relative losses in the principal battles:

LOSSES.—FRENCH VICTORIES

| Battle. | French. | | Enemies. | |
|---|---|---|---|---|
| | Killed and wounded. Per cent. | Prisoners. Per cent. | Killed and wounded. Per cent. | Prisoners. Per cent. |
| Verona, 1799 | 10·0 | 2·0 | 9·0 | 6·0 |
| San Giuliano | 7·0 | — | 12·0 | 17·0 |
| Bergen | 4·5 | 9·0 | 9·5 | 9·0 |
| Zurich, September 25 | 13·0 | — | 26·5 | 8·5 |
| Linth, September 25 | 5·0 | — | 15·0 | 35·0 |
| Castricum | 5·0 | 1·0 | 7·5 | 5·0 |
| Engen, 1800 | 3·6 | — | 4·2 | 5·5 |
| Mösskirch | 5·7 | — | 5·1 | 3·3 |
| Biberach | 9·0 | — | 6·5 | 13·5 |
| Montebello | 25·0 | — | 13·0 | 14·0 |
| Marengo | 23·2 | 5·4 | 22·4 | 13·0 |
| Hohenlinden | 4·5 | — | 9·6 | 17·5 |
| Mincio | 6·0 | — | 8·2 | 8·0 |

LOSSES.—FRENCH DEFEATS

| Battle. | French. | | Enemies. | |
|---|---|---|---|---|
| | Killed and Wounded. Per cent. | Prisoners. Per cent. | Killed and wounded. Per cent. | Prisoners. Per cent. |
| Ostrach, 1799 | 18·0 | 3·0 | 3·2 | 1·3 |
| Stockach | 5·5 | 5·5 | 6·3 | 6·7 |
| Feldkirch | 25·0 | — | 12·0 | — |
| Magnano | 8·5 | 11·0 | 8·7 | 4·3 |
| Cassano | 14·3 | 25·0 | 7·3 | 2·3 |
| Zurich, June 4 | 2·9 | 0·7 | 4·0 | 2·5 |
| Trebbia | 29·0 | 21·0 | 13·5 | 1·3 |
| Novi | 20·0 | 11·5 | 14·0 | 4·0 |
| Genola | 23·0 | 27·0 | 7·3 | 1·0 |

The memorable siege of Genoa in 1800 cost the lives of 8,000 French soldiers and of 15,000 inhabitants who died of hunger and disease.

### G. *Santo Domingan Expedition*, 1802–3

Under the leadership of the negro chief, Toussaint-L'Ouverture, the island of Santo Domingo, which was one of the finest of the French colonies, had thrown off the dominion

of France. Subsequently a factional warfare between the different races which disputed for the mastery—whites, divided again between republicans and old royalists (creoles), negroes, and mulattoes—had since 1790 been spreading strife, ruin, and terror over the island. In order to subjugate the colony, First Consul Bonaparte in 1802 charged his brother-in-law, General Leclerc, with the task of restoring order and French rule. Leclerc's expeditionary army numbered 35,000 picked soldiers, commanded by leaders who had distinguished themselves in the preceding wars. The negro troops were defeated after an obstinate resistance, and Toussaint and most of his men were forced to lay down their arms. But when the French army was attacked and decimated by yellow fever, the negroes again took up arms, and, aided by the mulattoes and royalist creoles, re-established negro domination. When the Peace of Amiens was broken in 1803, English fleets came to the assistance of the blacks against the disorganized wreck of the French army, which the fever continued to devour. After stubborn but futile efforts, the last strongholds of the French portion of the island fell in rapid succession, and the ships which attempted to escape with some remnants of the troops either fell into the hands of the English or were sunk at sea. In this attempt to restore the old colonial régime twenty generals perished, including the commander-in-chief Leclerc, and thirty odd thousand French soldiers—an army equal in number and in military efficiency to the army of occupation of Egypt. Two French generals succeeded in prolonging the resistance for a while; Rochambeau surrendered in November 1803 to the English, while Frerand maintained himself in the ancient Spanish portion of the island until 1810, when he was forced to capitulate to the negro chief Christophe.

## CHAPTER VII

### THE NAPOLEONIC WARS, 1804–15

At the accession of Napoleon I to the throne, France was at war only with England. The gigantic preparations of the new Emperor for the passage of an army into England alarmed that nation and forced her to form a new coalition; and Austria, still smarting under the humiliating Treaty of Lunéville, Russia, and Sweden concluded treaties of alliance with Great Britain. Napoleon in turn had assured himself of the support of Spain, Bavaria, Württemberg, and the Duchy of Baden, besides the new Kingdom of Italy whose crown he also wore, and which was put in readiness to co-operate by means of an auxiliary army.

The ensuing War of the Third Coalition inaugurated the long period of the Wars of the First Empire which convulsed Europe for eleven years and ended only with the definitive overthrow of Napoleon in 1815. It was the period of greatest military tension experienced in modern times.

France was at war with England during the whole reign of Napoleon. The war with England lasted from 1803 until 1814, and broke out again in 1815 during the Hundred Days.

France was at war with Austria in 1805, 1809, 1813–14 and in 1815; with Russia from 1805 to 1807, 1812 to 1814, and 1815; with Prussia from 1806 to 1807, 1813 to 1814 and in 1815; with Spain from 1808 to 1814; with Portugal from 1807 to 1814; with Sweden from 1805 to 1807 and 1812 to 1814; with the Kingdom of Naples from 1806 to 1807; with Sardinia in 1814 and 1815 and with Holland the same years; with Bavaria, Württemberg, and the Grand Duchy of Baden from 1813 to 1814 and in 1815; and with Saxony in 1806, 1813–14 and in 1815.

During this period, of all the countries of Europe only

Turkey and Denmark were not at some time at war with France.

It is an indisputable fact that Napoleon I was the most bellicose of the monarchs of all time; but in spite of this incontestable truth, to impute to him all the wars of his reign would be to falsify history. The wars of which he was in fact the instigator are the following:

1. War with Naples, 1806.
2. War with Portugal, 1807.
3. War with Spain, 1808–14.
4. War with Russia, 1812.
5. War of the Hundred Days, 1815.

The other wars of the First Empire, which were really thrust upon France, were:

1. War of the Third Coalition, 1805.
2. War with Prussia, 1806.
3. War with Austria, 1809.
4. Wars of Liberation, 1813–14.

As to the war with England, of 1803 to 1814, the two nations were equally instigators.

The wars of the First Empire witnessed the mustering of enormous armies, the largest in proportion to the populations of the countries that had ever been put into the field. The numbers in the opposing lines frequently exceeded 300,000. The table (p. 118) gives the figures for both sides in the more important battles.

With regard to the numerical strength of the forces opposed, the battle of Leipsic remained the greatest in history down to 1905, when in the battle of Mukden the number of combatants passed the 600,000 mark.

The absolute and relative losses increased *pari passu* with the augmentation in the size of the armies. The percentage of killed and wounded on many occasions surpassed even the bloodiest battles of Louis XIV and Frederick the Great. The bitterness of the struggle, the stubbornness of combats

hand-to-hand and at the bayonet's point, the desperate efforts of weaker forces against superior numbers, the employment of compact columns and the use of masses of cavalry against unyielding infantry, all contributed toward making the losses higher than the military history of the nations had previously seen.

| *Battle.* | *Date.* | *Forces of French and Auxiliaries.* | *Enemies.* | *Forces of Enemies.* |
|---|---|---|---|---|
| Leipsic | 1813 | 175,000 | Allies | 325,000 |
| Smolensk | 1812 | 180,000 | Russians | 120,000 |
| Dresden | 1813 | 100,000 | Allies | 200,000 |
| Wagram | 1809 | 160,000 | Austrians | 130,000 |
| Bautzen | 1813 | 167,000 | Allies | 97,000 |
| Borodino | 1812 | 124,000 | Russians | 122,000 |
| Lutzen | 1813 | 144,000 | Allies | 93,000 |
| Waterloo | 1815 | 72,000 | Allies | 120,000 |
| Aspern | 1809 | 66,000 | Austrians | 99,000 |
| La Rothière | 1814 | 41,000 | Allies | 123,000 |
| Heilsberg | 1807 | 65,000 | Russians | 95,000 |
| Eylau | 1807 | 75,000 | Russians | 83,000 |
| Ligny | 1815 | 71,000 | Prussians | 84,000 |
| Jena | 1806 | 96,000 | Prussians | 54,000 |
| Ratisbon | 1809 | 72,000 | Austrians | 78,000 |
| Vittoria | 1813 | 60,000 | Allies | 90,000 |
| Dennewitz | 1813 | 70,000 | Allies | 80,000 |
| Laon | 1814 | 50,000 | Allies | 100,000 |
| Austerlitz | 1805 | 65,000 | Allies | 83,000 |
| Friedland | 1807 | 87,000 | Russians | 61,000 |

No other man has sacrificed so many human victims to the god of war as did Napoleon I; no other man has sowed death broadcast on such a scale; no commander ever cared less for the lives of his soldiers than he.

The table (p. 119) gives the numerical and proportional losses of the greatest battles of the Napoleonic era.

The bloodiest battles for the French armies were those of Waterloo and Trafalgar, where their losses in killed and wounded reached forty per cent; they lost a third of their effective strength at Essling, Albuera, Eylau, Borodino, and Malo Jaroslawez, and at the passage of the Bérésina, and about one-fourth at Auerstädt, Salamanca, Kulm, Leipsic, and Craonne.

| Battle. | Date. | Napoleonic Armies. | | | | Enemies' Armies. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Effective strength. | Killed and wounded. | | Prisoners. | Effectives. | Killed and wounded. | | Prisoners. |
| | | | No. | Per cent. | Per cent. | | No. | Per cent. | Per cent. |
| Austerlitz | 1805 | 65,000 | 10,000 | 15 | — | 83,000 | 16,000 | 16 | 26 |
| Trafalgar | 1805 | 20,000 | 8,000 | 40 | 40 | 16,000 | 1,700 | 11 | — |
| Jena | 1806 | 96,000 | 6,000 | 6 | — | 54,000 | 12,000 | 22 | 28 |
| Auerstädt | 1806 | 27,000 | 7,000 | 26 | — | 50,000 | 10,000 | 20 | 6 |
| Eylau | 1807 | 75,000 | 22,000 | 31 | — | 83,000 | 23,000 | 28 | 4 |
| Heilsburg | 1807 | 65,000 | 12,500 | 19 | — | 95,000 | 9,000 | 11 | — |
| Friedland | 1807 | 87,000 | 12,000 | 14 | — | 61,000 | 20,000 | 33 | — |
| Essling | 1809 | 66,000 | 23,000 | 35 | 3 | 99,000 | 21,500 | 22 | 2 |
| Wagram | 1809 | 160,000 | 33,000 | 21 | 4 | 130,000 | 26,000 | 20 | 9 |
| Talavera | 1809 | 47,000 | 7,000 | 15 | — | 54,000 | 6,000 | 11 | — |
| Ocana | 1809 | 33,000 | 2,000 | 6 | — | 50,000 | 4,000 | 8 | 28 |
| Busaco | 1810 | 58,000 | 4,500 | 8 | — | 32,000 | 1,300 | 4 | — |
| Albuera | 1811 | 23,000 | 8,000 | 35 | — | 32,000 | 7,000 | 22 | 2 |
| Salamanca | 1812 | 42,000 | 10,000 | 24 | 17 | 46,000 | 5,200 | 11 | — |
| Polotzk | 1812 | 34,000 | 6,000 | 18 | — | 22,000 | 6,000 | 27 | — |
| Borodino | 1812 | 124,000 | 42,000 | 34 | — | 122,000 | 52,000 | 43 | — |
| Malo Jaroslawez | 1812 | 24,000 | 8,000 | 33 | — | 24,000 | 8,000 | 33 | — |
| Krasnoi | 1812 | 50,000 | 10,000 | 20 | 24 | 90,000 | 5,000 | 6 | — |
| Bérésina | 1812 | 33,000 | 10,000 | 30 | 30 | 87,000 | 8,000 | 9 | 2 |
| Lützen | 1813 | 144,000 | 20,000 | 14 | — | 93,000 | 12,000 | 17 | — |
| Bautzen | 1813 | 167,000 | 21,000 | 13 | — | 97,000 | 11,000 | 11 | — |
| Dresden | 1813 | 100,000 | 12,000 | 12 | — | 209,000 | 15,000 | 8 | 12 |
| Vittoria | 1813 | 60,000 | 6,000 | 10 | — | 90,000 | 5,000 | 6 | — |
| Pyrénées | 1813 | 60,000 | 11,000 | 19 | 7 | 55,000 | 8,000 | 15 | 2 |
| Katzbach | 1813 | 60,000 | 8,000 | 13 | 30 | 80,000 | 4,000 | 5 | — |
| Kulm | 1813 | 37,000 | 9,000 | 24 | 22 | 103,000 | 11,000 | 11 | 1 |
| Dennewitz | 1813 | 70,000 | 8,000 | 12 | 23 | 80,000 | 9,000 | 18 | 2 |
| Leipsic | 1813 | 175,000 | 50,000 | 29 | 9 | 325,000 | 75,000 | 23 | 2 |
| Craonne | 1814 | 23,000 | 5,600 | 25 | — | 23,000 | 5,000 | 22 | — |
| Paris | 1814 | 42,000 | 7,000 | 17 | 3 | 100,000 | 9,000 | 9 | — |
| Toulouse | 1814 | 32,000 | 4,000 | 13 | — | 60,000 | 7,000 | 11 | — |
| Ligny | 1815 | 71,000 | 11,000 | 16 | — | 84,000 | 12,000 | 14 | 11 |
| Quatre-Bras | 1815 | 21,000 | 4,000 | 19 | — | 32,000 | 5,600 | 16 | 2 |
| Waterloo | 1815 | 72,000 | 30,000 | 42 | 17 | 120,000 | 23,000 | 19 | — |

The losses of the opposing forces were relatively lighter, except where veteran Russian troops were engaged; these uniformly made a stout resistance. Even in many of their greatest victories, the French lost more heavily than their defeated antagonists, especially where they were the aggressors.

The number of pitched battles and great field engagements in the Napoleonic wars was enormous, that of the sieges relatively small. Taking account only of actions where the

total loss was at least 2,000 men, the number of engagements of various classes for each war is shown in the following table :

NUMBERS OF BATTLES IN NAPOLEONIC WARS

| *War.* | *Date.* | *Land battles.* | *Naval battles.* | *Sieges.* | *Capitulations in open field.* |
|---|---|---|---|---|---|
| War of the Third Coalition | 1805 | 17 | — | 1 | 5 |
| War with Naples . . | 1806–7 | 1 | — | 1 | — |
| War with Prussia . . | 1806–7 | 19 | — | 20 | 7 |
| War with Spain . . | 1808–14 | 60 | — | 30 | 2 |
| War with Austria . . | 1809 | 27 | — | 6 | 1 |
| Russian Campaign . . | 1812 | 30 | — | 2 | — |
| Wars of Liberation . . | 1813–14 | 58 | — | 28 | — |
| War of the Hundred Days | 1815 | 9 | — | 3 | — |
| Naval War . . . | 1803–15 | — | 7 | — | — |
| Total . . . | | 221 | 7 | 91 | 15 |

It is and must remain impossible to ascertain the exact figures for the loss of life which these wars of the First Empire cost the countries engaged, as records on the subject do not exist. The archives of the different governments contain only statements of the killed, wounded, and missing in the most important battles. Statistics of the lesser engagements are totally wanting, a fact especially regrettable in view of the prodigious number of actions of this class. Besides this, the recording of the number who died of disease and hardship was entirely neglected, which is also very unfortunate, as these losses are known to have played a most important rôle in all the armies. There are grounds for believing that, in the Napoleonic armies at least, the losses from disease and exhaustion actually exceeded those inflicted by the weapons of the enemy.

Such an assertion gains in probability from the consideration of the insalubrious climate of some of the regions which were among the principal theatres of war, such as the marshes of Italy, Spain, Russia, and the Netherlands. It is known, for example, that in the space of a few days the English lost 20,000 men in the Island of Walcheren in 1809, and that from the very beginning of the Russian campaign soldiers by

thousands perished of disease. Campaigns in the over-sea colonies in a tropical climate also claimed a large number of victims, both in the colonial armies and the navies. The superhuman exertions which the Emperor required of his troops, forced marches, short rations, the burning sun of Spain and the bitter Russian cold, must have cost more lives than did the great battles.

As already remarked on more than one occasion, it is impossible to give the figures for the losses either of France or of her adversaries. The archives do not contain so much as the total number killed and wounded in a single campaign, and it is only with the greatest difficulty that lists for the great battles are to be found. Data for the calculation of total losses in these wars are simply not to be had. Nevertheless, we shall make an attempt to reach an estimate of the losses in killed and wounded of the armies of France and her allies. The possibility of making a reasonably probable estimate is due to recent labours of the military bureaus, through which have been published the losses of the armies in officers killed and wounded, based on a careful search of the records. Since on the one hand the proportional number of men per officer in the different armies and the various arms of service is known, and since on the other hand the number of men killed or wounded per officer killed or wounded varies but little in the course of the wars of a given country, it is possible from the known number of officers disabled in a campaign to form an idea of the total casualty losses of the troops. The writer has calculated the officer-losses for every engagement, even the minor skirmishes, of all the campaigns of the wars of the First Empire, and he believes it is possible to deduce from them the probable losses of the men. In the appendices will be found tables containing lists of the French officers killed, drowned, assassinated, died of wounds, or disappeared, also those wounded but not fatally, in each war from 1805 to 1815. Corresponding lists contain the numbers of officers of the French auxiliary troops, and still others those of allied forces

which fought for Napoleon in these wars. According to these data, the number of officers of the French and allied armies disabled by the weapons of the enemy are tabulated below:

OFFICER-LOSSES OF THE NAPOLEONIC ARMIES (FRENCH AND ALLIES)

| *War.* | *Date.* | *Officers killed.* | *Officers wounded.* | *Total.* |
|---|---|---|---|---|
| War of the Third Coalition | 1805 | 276 | 1,170 | 1,446 |
| War with Prussia and Russia | 1806–7 | 1,028 | 3,588 | 4,616 |
| War with Naples | 1806–11 | 129 | 439 | 568 |
| Peninsular War | 1808–14 | 3,093 | 9,438 | 12,531 |
| War with Austria | 1809 | 1,152 | 4,191 | 5,343 |
| Russian Campaign | 1812 | 2,920. | 6,290 | 9,210 |
| Wars of Liberation | 1813–14 | 2,720 | 11,415 | 14,135 |
| War of the Hundred Days | 1815 | 510 | 2,275 | 2,785 |
| Naval War | 1805–15 | 338 | 532 | 870 |
| Defence of the Colonies | 1805–15 | 115 | 277 | 392 |
| Defence of the Coasts | 1805–15 | 31 | 162 | 193 |
| Miscellaneous Enterprises | 1805–15 | 31 | 102 | 133 |
| Grand total | | 12,343 | 39,879 | 52,222 |

The above losses were distributed among the different classes of troops as follows:

| *Troops.* | *Officers killed.* | *Officers wounded.* | *Total.* |
|---|---|---|---|
| French | 10,102 | 32,722 | 42,824 |
| Auxiliaries | 356 | 978 | 1,334 |
| Allies | 1,885 | 6,179 | 8,064 |
| Grand total | 12,343 | 39,879 | 52,222 |

The numbers for the officers killed include the killed outright, died of wounds, assassinated, drowned, and unaccounted for; the wounded are those wounded either lightly or severely, but who survived their wounds at least two years. The figures given are those actually taken from the archives. It is probable that these lists are somewhat incomplete, especially in the case of the allies, and the actual number of officers killed and wounded may well have reached the enormous total of 60,000.

The following tables give the distribution of the officer-losses among the different arms:

OFFICER-LOSSES BY ARMS

| | | *Killed.* | *Wounded.* | *Total.* |
|---|---|---|---|---|
| General Staff Service | French | 564 | 3,001 | 3,565 |
| | Auxiliaries | — | — | — |
| | Allies | 70 | 407 | 477 |
| Total | | 634 | 3,408 | 4,042 |
| Infantry | French | 7,062 | 1,025 | 28,087 |
| | Auxiliaries | 337 | 858 | 1,195 |
| | Allies | 1,372 | 3,968 | 5,340 |
| Total | | 8,771 | 25,851 | 34,622 |
| Cavalry | French | 1,387 | 6,114 | 7,501 |
| | Auxiliaries | 19 | 120 | 139 |
| | Allies | 329 | 1,559 | 1,888 |
| Total | | 1,735 | 7,793 | 9,528 |
| Artillery | French | 490 | 1,088 | 1,578 |
| | Auxiliaries | — | — | — |
| | Allies | 56 | 127 | 183 |
| Total | | 546 | 1,215 | 1,761 |
| Engineer Corps | French | 115 | 340 | 455 |
| | Auxiliaries | — | — | — |
| | Allies | 17 | 35 | 52 |
| Total | | 132 | 375 | 507 |
| Wagon Train | French | 68 | 183 | 251 |
| | Auxiliaries | — | — | — |
| | Allies | 2 | 9 | 11 |
| Total | | 70 | 192 | 262 |
| Navy | French | 416 | 971 | 1,387 |
| | Auxiliaries | — | — | — |
| | Allies | 39 | 74 | 113 |
| Total | | 455 | 1,045 | 1,500 |
| Grand total | | 12,343 | 39,879 | 52,222 |

The average ratio of killed and wounded was thirty-two officers wounded to ten killed or died of wounds; but these figures vary greatly according to the arm of the service, as more clearly shown in the following table, which gives the ratio for the different arms:

PROPORTION OF KILLED TO WOUNDED (OFFICERS)

| *Arm.* | *Ratio of killed to wounded.* |
|---|---|
| General Staff | 10 : 54 |
| Infantry | 10 : 29 |
| Cavalry | 10 : 44 |
| Artillery | 10 : 22 |
| Engineer Corps | 10 : 29 |
| Wagon Train | 10 : 27 |
| Navy | 10 : 23 |

These proportional figures show that officers in the artillery and the navy received in general the most dangerous wounds, the cavalry and staff-officers (also usually mounted), the lightest. It must also be taken into account that staff-officers, of whom the majority were of high rank, received more prompt and probably more careful surgical aid.

The next table shows the number of officers disabled in order of commission and rank:

OFFICER-LOSSES BY RANKS

| *Rank.* | *Officers killed.* | *Officers wounded.* | *Total.* |
|---|---|---|---|
| Army Commanders | — | 3 | 3 |
| Marshals of France | 3 | 20 | 23 |
| Corps Commanders | 3 | 19 | 22 |
| Division Commanders | 41 | 197 | 238 |
| Brigadier-Generals | 124 | 498 | 622 |
| Colonels | 264 | 1,045 | 1,309 |
| Lieutenant-Colonels and Majors | 102 | 459 | 561 |
| Battalion or Squadron Commanders | 764 | 2,718 | 3,482 |
| Captains | 3,806 | 12,299 | 16,105 |
| Lieutenants | 4,001 | 12,053 | 16,054 |
| Sub-Lieutenants | 3,235 | 10,568 | 13,803 |
| Total | 12,343 | 39,879 | 52,222 |
| General Officers | 171 | 908 | |
| Other Superior Officers | 1,130 | 5,352 | |
| Total Superior Officers | 1,301 | 6,260 | |

RATIOS BY RANKS

Killed { 1 General Officer to 72 Officers.
1 Superior Officer to 9 Officers.

Wounded { 1 General Officer to 44 Officers
1 Superior Officer to 6 Officers.

The above proportions prove incontestably the courage and valour of the leadership. The losses were divided between France and her allies as follows:

FRANCE

| | *Killed.* | *Wounded.* |
|---|---|---|
| Generals | 144 | 812 |
| Other Superior Officers | 886 | 4,521 |
| Total Superior Officers | 1,030 | 5,333 |

AUXILIARIES AND ALLIES

| | *Killed.* | *Wounded.* |
|---|---|---|
| Generals | 27 | 96 |
| Other Superior Officers | 244 | 831 |
| Total Superior Officers | 271 | 927 |

These French losses in superior officers are unique in military history, being unequalled by those of any other country.

The army commanders who were wounded were: Napoleon I, wounded at Ratisbon, April 23, 1809; Murat, King of Naples, wounded at Winkowo, October 18, 1812; and Prince Eugène Beauharnais, Viceroy of Italy, wounded at Legnago, November 27, 1813.

Special lists have been compiled giving the number of officers killed and wounded of the auxiliary and allied troops by nationalities. Another compilation gives, in chronological order, the number and rank of all the officers killed and wounded in the principal land and naval engagements and sieges of the wars of the First Empire, including French, auxiliaries, and allies.

The tables which follow show by years and by campaigns the total losses in killed and wounded, as estimated by the writer on the basis of the officer-losses. In the calculations, account has been taken of the arm of service to which the disabled officers belonged, and of the corresponding relative losses of officers and proportions of officers to men.

### *Russian Campaign and Retreat*, 1812

In this gigantic military enterprise, one of the greatest in human history, more than a million combatants stood in the opposing lines, and over half of these perished. These enormous losses have been calculated with a fair degree of accuracy. The Grande Armée was composed of the following units:

INFANTRY

| | *Battalions.* |
|---|---|
| French troops | 265 |
| Auxiliaries and Allies | 291 |
| Total | 556 |

The effective strength of the infantry, including foot artillery, was 512,000.

CAVALRY

| | *Squadrons.* |
|---|---|
| French | 219 |
| Auxiliaries and Allies | 261 |
| Total | 480 |

| | |
|---|---|
| The effective strength of the cavalry, including mounted artillery, was | 100,000 |
| Total number of combatants who crossed the Russian frontier | 612,000 |
| Employees, domestics, and labourers | 25,000 |
| Grooms and stable-boys | 43,000 |
| Grand total (68,000 non-combatants) | 680,000 |

These 680,000 men crossed the frontier with 300,000 horses, 1,242 pieces of field artillery, and 130 siege guns. The combatants of the army, numbering 612,000, were divided between 300,000 French and 312,000 auxiliary and allied troops. The latter were distributed among various nationalities as follows:

AUXILIARY AND ALLIED TROOPS

| *Nationality.* | *Number.* |
|---|---|
| Poles and Lithuanians | 90,000 |
| Italians, Spaniards, Portuguese | 32,000 |
| Austrians | 40,000 |
| Prussians | 23,000 |
| Bavarians | 30,000 |

AUXILIARY AND ALLIED TROOPS—*continued*

| *Nationality.* | *Number.* |
|---|---|
| Saxons | 23,000 |
| Westphalians | 21,000 |
| Württembergers | 15,000 |
| Swiss | 9,000 |
| Badenese | 6,000 |
| Hessians | 5,000 |
| Bergians (Grand Duchy) | 5,000 |
| Germans (Minor Principalities) | 13,000 |
| Total | 312,000 |

The Russian forces opposed to Napoleon consisted of the following:

| | |
|---|---|
| Troops of the first line | 190,000 |
| Troops of the second line | 137,000 |
| Troops of the third line | 161,000 |
| Troops of the fourth line | 135,000 |
| Total | 623,000 |

Of this total, 64,000 were Cossacks and 31,000 militia.

The fate of the Napoleonic forces is shown in the following list:

| | |
|---|---|
| Number who returned to the frontier | 112,000 |
| Prisoners of war | 100,000 |
| In hospitals | 50,000 |
| Deserters | 50,000 |
| Killed in battle | 100,000 |
| Died of hunger, exhaustion, cold, or disease | 200,000 |
| Total | 612,000 |

Of the 68,000 non-combatants, half deserted and the other half perished, so that about 340,000 men, or half of the total number of 680,000, lost their lives in the campaign.

The Austrian and Prussian contingents, forming respectively the right and left wings of the army, suffered relatively the lightest losses, approximately 30,000 Austrians and 16,000 Prussians recrossing the frontier. In engagements with the enemy the Grande Armée lost 100,000 men killed,

drowned, died of wounds, or unaccounted for, of whom 70,000 were French and 30,000 auxiliaries and allies; 120,000 French and 60,000 auxiliaries and allies were wounded. These figures show that the French troops, though somewhat inferior in the number of effectives to those of the auxiliaries and allies, bore the brunt of the enemy's attacks. The Russian armies lost 200,000 killed, 50,000 dispersed or deserted, and 150,000 wounded who recovered. This was the greatest and most costly in human life of any of the wars of the Napoleonic era, in spite of the fact that it lasted but a few months.

LOSSES IN KILLED AND WOUNDED BY YEARS

1805

| *Campaign.* | *Killed.* | | | *Wounded.* | | | *Grand total.* |
|---|---|---|---|---|---|---|---|
| | *French.* | *Allies.* | *Total.* | *French.* | *Allies.* | *Total.* | |
| Austrian Campaign | 5,300 | 300 | 5,600 | 22,200 | 1,200 | 23,400 | 29,000 |
| Italian Campaign | 2,100 | 100 | 2,200 | 5,300 | 400 | 5,700 | 7,900 |
| Naval War | 4,300 | 1,200 | 5,500 | 3,700 | 1,600 | 5,300 | 10,800 |
| Colonial Defence | 200 | — | 200 | 400 | — | 400 | 600 |
| Coast Defence | 100 | — | 100 | 400 | — | 400 | 500 |
| Totals | 12,000 | 1,600 | 13,600 | 32,000 | 3,200 | 35,200 | 48,800 |

1806

| *Campaign.* | *Killed.* | | | *Wounded.* | | | *Grand total.* |
|---|---|---|---|---|---|---|---|
| | *French.* | *Allies.* | *Total.* | *French.* | *Allies.* | *Total.* | |
| Prussian Campaign | 7,200 | 300 | 7,500 | 20,000 | 800 | 20,800 | 28,300 |
| War with Naples | 1,500 | 250 | 1,750 | 5,000 | 1,500 | 6,500 | 8,250 |
| Fighting in Dalmatia | 300 | — | 300 | 1,000 | — | 1,000 | 1,300 |
| Naval War | 700 | — | 700 | 1,500 | — | 1,500 | 2,200 |
| Colonial Defence | 50 | — | 50 | 200 | — | 200 | 250 |
| Coast Defence | 50 | — | 50 | 100 | — | 100 | 150 |
| Totals | 9,800 | 550 | 10,350 | 27,800 | 2,300 | 30,100 | 40,450 |

1807

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Prussian Campaign | 19,000 | 1,800 | 20,800 | 53,000 | 8,000 | 61,000 | 81,800 |
| War with Naples | 500 | 50 | 550 | 1,500 | 300 | 1,800 | 2,350 |
| Fighting in Dalmatia | 50 | — | 50 | 200 | — | 200 | 250 |
| Naval War | 200 | — | 200 | 300 | — | 300 | 500 |
| Colonial Defence | 50 | — | 50 | 200 | — | 200 | 250 |
| Coast Defence | — | — | — | 100 | — | 100 | 100 |
| Totals | 19,800 | 1,850 | 21,650 | 55,300 | 8,300 | 63,600 | 85,250 |

1808

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 7,000 | 1,800 | 8,800 | 23,000 | 5,200 | 28,200 | 37,000 |
| War with Naples | 100 | 100 | 200 | 500 | 400 | 900 | 1,100 |
| Fighting in Dalmatia | 100 | 50 | 150 | 250 | 150 | 400 | 550 |
| Naval War | 500 | — | 500 | 1,100 | — | 1,100 | 1,600 |
| Colonial Defence | 200 | — | 200 | 700 | — | 700 | 900 |
| Coast Defence | — | — | — | 100 | — | 100 | 100 |
| Totals | 7,900 | 1,950 | 9,850 | 25,650 | 5,750 | 31,400 | 41,250 |

1809

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 13,000 | 6,000 | 19,000 | 36,000 | 16,000 | 52,000 | 71,000 |
| War with Austria | 25,000 | 5,000 | 30,000 | 73,000 | 17,000 | 90,000 | 120,000 |
| War with Naples | 150 | 300 | 450 | 400 | 1,000 | 1,400 | 1,850 |
| Naval War | 400 | — | 400 | 1,000 | — | 1,000 | 1,400 |
| Colonial Defence | 500 | — | 500 | 1,500 | — | 1,500 | 2,000 |
| Coast Defence | 300 | — | 300 | 1,000 | — | 1,000 | 1,300 |
| Fighting in Germany | 100 | 400 | 500 | 400 | 1,200 | 1,600 | 2,100 |
| Fighting in Poland | — | 800 | 800 | — | 3,000 | 3,000 | 3,800 |
| Totals | 39,450 | 12,500 | 51,950 | 113,300 | 38,200 | 151,500 | 203,450 |

1810

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 10,300 | 2,000 | 12,300 | 23,700 | 5,800 | 29,500 | 41,800 |
| War with Naples | 200 | 500 | 700 | 600 | 1,500 | 2,100 | 2,800 |
| Naval War | 300 | — | 300 | 700 | — | 700 | 1,000 |
| Colonial Defence | 300 | — | 300 | 1,100 | — | 1,100 | 1,400 |
| Coast Defence | 100 | — | 100 | 400 | — | 400 | 500 |
| Totals | 11,200 | 2,500 | 13,700 | 26,500 | 7,300 | 33,800 | 47,500 |

1811

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 15,000 | 2,000 | 17,000 | 33,000 | 6,000 | 39,000 | 56,000 |
| War with Naples | 50 | 150 | 200 | 200 | 500 | 700 | 900 |
| Naval War | 500 | 200 | 700 | 900 | 400 | 1,300 | 2,000 |
| Colonial Defence | 1,700 | — | 1,700 | 3,300 | — | 3,300 | 5,000 |
| Coast Defence | 50 | — | 50 | 200 | — | 200 | 250 |
| Totals | 17,300 | 2,350 | 19,650 | 37,600 | 6,900 | 44,500 | 64,150 |

1812

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 10,000 | 1,500 | 11,500 | 28,000 | 4,500 | 32,500 | 44,000 |
| Russian Campaign | 70,000 | 30,000 | 100,000 | 120,000 | 60,000 | 180,000 | 280,000 |
| War with Naples | — | 100 | 100 | — | 400 | 400 | 500 |
| Naval War | 300 | — | 300 | 500 | — | 500 | 800 |
| Colonial Defence | — | 50 | 50 | — | 200 | 200 | 250 |
| Coast Defence | 50 | — | 50 | 200 | — | 200 | 250 |
| Totals | 80,350 | 31,650 | 112,000 | 148,700 | 65,100 | 213,800 | 325,800 |

1813

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 17,500 | 1,000 | 18,500 | 40,000 | 4,000 | 44,000 | 62,500 |
| German Campaign | 53,500 | 6,500 | 60,000 | 156,500 | 39,500 | 196,000 | 256,000 |
| Italian Campaign | 1,200 | 1,200 | 2,400 | 5,000 | 5,000 | 10,000 | 12,400 |
| Naval War | 500 | — | 500 | 700 | — | 700 | 1,200 |
| Coast Defence | 200 | — | 200 | 400 | — | 400 | 600 |
| Fighting in Denmark | — | 200 | 200 | — | 600 | 600 | 800 |
| Totals | 72,900 | 8,900 | 81,800 | 202,600 | 49,100 | 251,700 | 333,500 |

1814

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Spanish War | 4,000 | — | 4,000 | 12,000 | — | 12,000 | 16,000 |
| Campaign in France | 15,000 | — | 15,000 | 50,000 | — | 50,000 | 65,000 |
| Italian Campaign | 1,500 | 500 | 2,000 | 4,000 | 2,000 | 6,000 | 8,000 |
| Naval War | 400 | — | 400 | 600 | — | 600 | 1,000 |
| Coast Defence | 100 | — | 100 | 300 | — | 300 | 400 |
| Totals | 21,000 | 500 | 21,500 | 66,900 | 2,000 | 68,900 | 90,400 |

1815

| Campaign. | Killed. | | | Wounded. | | | Grand total. |
|---|---|---|---|---|---|---|---|
| | French. | Allies. | Total. | French. | Allies. | Total. | |
| Campaign in Belgium | 13,000 | | | 35,000 | | | 48,000 |
| Defence of Fortified Points | 1,300 | | | 3,700 | | | 5,000 |
| Fighting in Vendée | 300 | | | 700 | | | 1,000 |
| Naval War | 100 | | | 100 | | | 200 |
| Totals | 14,700 | | | 39,500 | | | 54,200 |

RECAPITULATION: LOSSES IN KILLED AND WOUNDED, NAPOLEONIC WARS

BY YEARS

| Year. | Killed. | Wounded. | Total. |
|---|---|---|---|
| 1805 | 13,600 | 35,200 | 48,800 |
| 1806 | 10,350 | 30,100 | 40,450 |
| 1807 | 21,650 | 63,600 | 85,250 |
| 1808 | 9,850 | 31,400 | 41,250 |
| 1809 | 51,950 | 151,500 | 203,450 |
| 1810 | 13,700 | 33,800 | 47,500 |
| 1811 | 19,650 | 44,500 | 64,150 |
| 1812 | 112,000 | 213,800 | 325,800 |
| 1813 | 81,800 | 251,700 | 333,500 |
| 1814 | 21,500 | 68,900 | 90,400 |
| 1815 | 14,700 | 39,500 | 54,200 |
| Totals | 370,750 | 964,000 | 1,334,750 |

DISTRIBUTION BETWEEN FRENCH AND ALLIES

| | French. | Auxiliaries and Allies. |
|---|---|---|
| Killed | 306,000 | 65,000 |
| Wounded | 764,000 | 200,000 |
| Total disabled | 1,070,000 | 265,000 |

BY WARS

| *War.* | *Date.* | *Killed.* | *Wounded.* | *Total.* |
|---|---|---|---|---|
| War of the Third Coalition | 1805 | 8,000 | 29,000 | 37,000 |
| War with Naples | 1806–12 | 4,000 | 13,000 | 17,000 |
| War with Prussia and Russia | | 28,000 | 82,000 | 110,000 |
| War in Spain | 1808–14 | 91,000 | 237,000 | 328,000 |
| War with Austria | 1809 | 31,000 | 95,000 | 126,000 |
| Russian Campaign | 1812 | 100,000 | 180,000 | 280,000 |
| Wars of Liberation | 1813–14 | 80,000 | 262,000 | 342,000 |
| War of the Hundred Days | 1815 | 15,000 | 40,000 | 55,000 |
| Naval War | 1805–15 | 9,750 | 16,000 | 26,000 |
| Colonial Defence | 1805–15 | 3,000 | 8,000 | 11,000 |
| Coast Defence | 1805–15 | 1,000 | 2,000 | 3,000 |
| Total | | 370,750 | 964,000 | 1,334,750 |

We repeat that these estimates relate only to the losses inflicted on the French troops and those of their allies by the weapons of the enemy. The deaths from exhaustion and from disease, and the victims of cold and of hunger, are not included in the above figures, which give only the losses in battle itself.

In the chapter on the Russian campaign were discussed the total losses of both the opposing armies. It is more difficult to estimate the total losses for other wars and campaigns. Several writers have essayed to estimate the losses of France in all the wars of the First Empire; we concede that we have not the temerity to follow their example, for the reason that as the necessary documents do not exist, we could give only vague conjectures not founded on official records.

Historians have placed the loss of human lives by France in consequence of the wars of the First Empire at over 2,000,000 persons; their mode of reasoning is as follows: The number of men placed by the Senate at the disposal of Napoleon I in the course of his reign, is calculated at 2,023,000; to these are added the cavalry levy of 17,000 in January, 1813, the general levy of 1814, estimated at 143,000, and the volunteers and the national guard of 1814 and 1815, estimated at 817,000. Thus computed the sum total of all the men the Emperor had under his command would have been 3,000,000.

Deducting from this the number under arms, prisoners, or mustered out at the close of the wars in 1815, estimated at 802,600 men, the remainder, or 2,197,400, should represent the number who lost their lives.

We confess that we cannot accept either the above figures or the method of reasoning by which they are obtained. If Napoleon had had 817,000 men at his disposal in 1814 and 1815, the wars of that date would probably have taken a different course. It is agreed that the military resources of France were absolutely exhausted at the time, that the lack of men to oppose to the double and treble numbers of the hostile coalitions forced her to abandon the struggle. Again, it must be remembered that many French regiments were recruited by conscription in provinces newly conquered and united to France, and that these soldiers commonly deserted or went over to the enemy at the first favourable opportunity. Another consideration not to be overlooked is the fact that a large proportion of the French prisoners—about 800,000 were taken by each side from 1805 to 1815—elected not to return home, and remained permanently in the hostile countries.

According to our calculation of the losses, the number who were killed or died of wounds in the Napoleonic armies could not have exceeded 400,000. Admitting that 600,000 may have perished by disease, exhaustion, and accidental causes, or fallen victims to starvation or to the rigours of an inhospitable climate, 1,000,000 men is probably a fair approximation of the total number of fatalities suffered by France and her allies in the wars of the period of the First Empire. As her enemies were repeatedly defeated in bloody battles and suffered their share of disasters, their losses could not have been much inferior to hers. Hence it will not be far from the truth to assert that the wars of the First French Empire cost Europe about 2,000,000 men killed, besides an equal number wounded of whom perhaps fifteen to twenty per cent were disabled for life.

### *The Naval War with England*, 1803–15

The Peace of Amiens proved but the truce of a year. The conflict of interests between France and England was too great and the differences too important, the questions unsettled or badly settled by the treaty too numerous, to guarantee a long period of peaceful relations.

The vast superiority of England in the number of ships, in material resources, in experienced seamen and gunners and especially in officers and admirals of the first rank, this time enabled her to accomplish her purpose and annihilate the navies of the French and their allies. The war, which lasted eleven years, cost England over £600,000,000, but it assured her uncontested supremacy on all the seas of the world. She was the only nation that was never forced to bow to the will of Napoleon I, the only one which suffered no defeat and came out absolutely victorious from the wars of the First Empire. She owed her salvation and her success to her island position and the inadequacy of the French navy, especially its lack of able naval commanders, as well as to her own maritime superiority. After 1809, there practically no longer existed a French squadron which dared to venture outside a port and keep to sea. The English troops were transported to Spain and Portugal by powerful fleets and co-operated in the liberation of those countries by lending them not only experienced soldiers but superior leadership; at the same time other fleets captured or destroyed on every sea the remnants of what had once been a great navy, or convoyed other troops which took possession of the colonies of France and her allies. The losses of France in this disastrous war were enormous, surpassing anything of the kind which had hitherto been seen. The indisputable bravery of the French crews, who only struck their flags after a stubborn and heroic struggle, rendered the naval actions very destructive of life.

The battle of Trafalgar cost the Franco-Spanish fleet forty per cent of its personnel in killed and wounded (twenty-five per cent killed) and forty per cent prisoners; the battles

of Cape Ortegal (1805) likewise cost them forty per cent of the personnel killed or wounded, together with sixty per cent prisoners; that of Santo Domingo (1806), thirty per cent killed and wounded and thirty-five per cent prisoners. The English losses in killed and wounded in these encounters hardly exceeded ten per cent. Thanks to several recent publications issued under the direction of the Military Archives at Paris, the present writer has been able to ascertain the losses of officers killed and wounded in all the actions of the Napoleonic fleets and armies from 1805 to 1815. As the officer-losses represent on the average one-twentieth those of the troops, it is possible to estimate approximately the total loss of the armies in killed and wounded.

The maritime war was carried on at sea, in the colonies, and on the coasts of France and allied countries.

The following table shows the losses of officers killed and wounded in naval combats and in the defence of the colonies and coasts:

OFFICER-LOSSES.—NAVAL BATTLES, ETC.

| Year. | *Naval battles.* | | *Colonial defence.* | | *Coast defence.* | | *Total.* | |
|---|---|---|---|---|---|---|---|---|
| | *Killed.* | *Wounded.* | *Killed.* | *Wounded.* | *Killed.* | *Wounded.* | *Killed.* | *Wounded.* |
| 1805 | 177 | 242 | 13 | 18 | 3 | 4 | 193 | 264 |
| 1806 | 22 | 90 | 1 | 18 | 2 | 3 | 25 | 111 |
| 1807 | 4 | 4 | 1 | 3 | — | 4 | 5 | 11 |
| 1808 | 20 | 27 | 13 | 31 | — | 8 | 33 | 66 |
| 1809 | 20 | 40 | 20 | 69 | 13 | 75 | 53 | 184 |
| 1810 | 16 | 32 | 8 | 53 | 2 | 15 | 26 | 100 |
| 1811 | 22 | 52 | 57 | 81 | — | 12 | 79 | 145 |
| 1812 | 18 | 27 | 2 | 4 | — | 5 | 20 | 36 |
| 1813 | 26 | 17 | — | — | 6 | 26 | 32 | 43 |
| 1814 | 12 | 18 | — | — | 1 | 6 | 13 | 24 |
| 1815 | 1 | 5 | — | — | 4 | 4 | 5 | 9 |
| Total | 338 | 554 | 115 | 277 | 31 | 162 | 484 | 993 |

In the officers killed are included all who died of wounds or were drowned or unaccounted for.

The figures include the losses of France and of her allies, Spain, Italy, Naples, and Holland. France alone lost 439

officers killed and 905 wounded, or more than ninety per cent of the total officer-losses. The total French losses in these battles may be estimated at about 10,000 killed and 16,000 wounded. The number of prisoners must have been considerable, since in the capture of a war vessel or the conquest of a colony the entire crew or garrison become prisoners of war.

The number of deaths from disease would naturally have been large on the war vessels and in the colonies, and doubtless greatly exceeded the number killed in battle; but unfortunately records are entirely wanting upon which any estimate of these losses might be based.

The officer-losses given in the table above were distributed as follows:

OFFICER-LOSSES.—NAVAL WAR

| | *Killed.* | *Wounded.* |
|---|---|---|
| Ships' Officers | 271 | 404 |
| Marine Artillery Officers | 18 | 39 |
| Infantry and Artillery Officers | 150 | 462 |
| Total | 439 | 905 |

It will be seen that the naval losses in killed were relatively much higher than those of the land forces. The losses of higher officers were also proportionately greater in the navy than in the army, as shown in the tables which follow:

LOSSES OF SUPERIOR OFFICERS.—NAVY

| | *Killed.* | *Wounded.* | *Total.* |
|---|---|---|---|
| General Officers | 1 | 3 | 4 |
| Captains of Ships of the Line | 17 | 19 | 36 |
| Captains of Frigates | 27 | 31 | 58 |
| Total Superior Officers | 45 | 53 | 98 |
| Total Officers (all classes) | 289 | 443 | 732 |

LOSSES OF SUPERIOR OFFICERS, REGULAR AND COLONIAL FORCES

| | *Killed.* | *Wounded.* | *Total.* |
|---|---|---|---|
| General Officers | — | 4 | 4 |
| Colonels | 5 | 9 | 14 |
| Lieutenant-Colonels | 6 | 7 | 13 |
| Battalion Commanders | 7 | 25 | 32 |
| Total Superior Officers | 18 | 45 | 63 |
| Total Officers (all classes) | 150 | 462 | 612 |

PROPORTIONS: NAVY

Killed: 6 Officers to 1 Superior Officer.
Wounded: 8 Officers to 1 Superior Officer.

PROPORTIONS: LAND TROOPS

Killed: 9 Officers to 1 Superior Officer.
Wounded: 10 Officers to 1 Superior Officer.

In addition to those given above, the French navy suffered other considerable losses in the wars of the First Empire. Naval forces were employed in the numerous sieges of the war in Spain, and the marine artillery played an especially important rôle in the Wars of Liberation in 1814 and 1815. In the latter war this arm of the service lost 127 officers killed and 403 wounded, which would indicate a probable loss in men of 3,000 killed and 9,000 wounded.

The loss of war-vessels as well as that of men was stupendous in this war for the naval supremacy. During the twelve years of its duration, England was forced to fight at some time practically all the smaller navies of Europe and even that of the United States, as well as that of France. She was at war with Turkey from 1807 to 1813, with Spain from 1805 to 1808, with Holland from 1803 to 1810 (the period of union of that kingdom with France), with Russia from 1808 to 1809, and with the United States from 1812 to 1814; besides all these, the small navies of Italy and the kingdom of Naples were also opposed to her. The writer has been able to obtain authentic figures for the losses of these various navies, and a comparison of these losses with those of England give a clear idea of the immense superiority of the British Navy over all the others of the world combined at the period in question. The losses are shown in tabular form (p. 138).

Thus England captured from her foes in the course of this war, 39 ships of the line and 113 frigates carrying 5,382 guns and about 50,000 men (killed and wounded are included in the number captured); she lost but one ship of the line and 14 frigates carrying 496 guns and crews of about 4,000 men. On the other hand, she lost 70 ships of war sunk, wrecked

or destroyed, against 75 lost in the same way by her enemies. In the absence of records on the subject, the writer has been unable to ascertain the losses among the naval crews caused by drowning or in the sinking of ships. Supposing that half the crews of such ships were able to save themselves, the number drowned would exceed 25,000, of whom 11,000 should be attributed to England, 8,000 to France, and 6,000 to other countries.

LOSSES IN SHIPS

| *Nation.* | *Ships of the line.* | | | | *Frigates.* | | | |
|---|---|---|---|---|---|---|---|---|
| | *Captured.* | *Guns.* | *Sunk or destroyed.* | *Guns.* | *Captured.* | *Guns.* | *Sunk or destroyed.* | *Guns.* |
| France | 19 | 1,344 | 18 | 1,326 | 70 | 2,484 | 28 | 946 |
| Spain | 5 | 376 | 5 | 452 | 12 | 370 | 3 | 98 |
| Holland | — | — | 5 | 340 | 7 | 222 | 2 | 68 |
| Denmark | 15 | 1,140 | 4 | 266 | 17 | 506 | 3 | 92 |
| Turkey | — | — | 1 | 64 | 3 | 118 | 5 | 184 |
| Russia | — | — | 1 | 74 | — | — | — | — |
| United States | — | — | — | — | 4 | 136 | — | — |
| Total | 39 | 2,860 | 34 | 2,522 | 113 | 3,836 | 41 | 1,388 |
| Great Britain | 1 | 54 | 17 | 1,170 | 14 | 442 | 53 | 1,758 |

## CHAPTER VIII

### WARS OF MODERN FRANCE FROM 1816 TO 1871

### A. *Minor Wars and Expeditions*

UNDER the head of minor military enterprises may be named the armed intervention of France in Spain in 1823, the participation of a French squadron in the naval battle of Navarino in 1827, the conquest of Morea in 1828, the Belgian expedition and siege of Antwerp in 1832, the Roman expedition of 1849, and the defence of Rome against Garibaldi in 1876.

All these expeditions combined did not occasion a loss exceeding 6,000 men killed and wounded, at the most.

The intervention in Spain in 1823 cost 110 officers and about 3,000 men disabled. The naval battle of Navarino cost the French squadron 43 men killed and 144 wounded. The losses of the other Powers engaged were as follows: England, 75 killed and 197 wounded; Russia, 59 killed and 139 wounded; Turko-Egyptian fleet, 4,000 killed and wounded. In the siege of Antwerp in 1832 the French forces lost 34 officers and 772 men by the fire of the enemy, and the capture of Rome in 1849 cost 74 officers and about 1,500 men.

These losses, it will be seen, are infinitesimal in comparison with the numbers of casualties under the First Empire.

### B. *The Insurrections of* 1830, 1848, *and* 1851

It is a gloomy fact that intestine struggles and civil wars in the period under consideration cost France vastly greater sacrifices than those suffered in foreign military operations. The losses of the rebels in these barricade combats, it must be remembered, were also French losses, and these were much heavier than those of the troops opposed to them. The following table shows the destruction of life in those dark days:

CASUALTIES IN INSURRECTIONS

| *Year.* | *Government forces killed and wounded.* | | *Insurgents killed and wounded.* |
|---|---|---|---|
| | *Officers.* | *Men.* | |
| 1830 | 60 | 1,200 | 4,500 |
| 1848 | 206 | 4,000 | 6,000 |
| 1851 | 18 | 400 | 1,000 |

In the 'June Days' of 1848 the army lost 7 generals, 9 other superior officers, and 45 subalterns killed, and 5 generals, 18 other superior officers, and 122 subalterns wounded.

### C. *Oversea Expeditions and Colonial Wars of this Period*

Some of these enterprises were of minor importance; such were the expeditions to Mexico of 1838 and 1839 (San Juan

d'Ulloa and Vera Cruz); to the Marquis Islands and Tahiti (1844 and 1846); and to Argentina and Uruguay in 1845 (battle of Obligado), where the crews of the fleet had occasion to distinguish themselves and sustained some losses. Of greater significance were the two Chinese wars of 1856–60 and 1862–4, and the expedition to Cochin China in 1858–62 in which France participated as the ally of England. In addition to these, there were two enterprises of the first importance: the first was the expedition to and occupation of Algeria in 1830, which inaugurated the French colonization of northern Africa, and the other was the Mexican expedition of 1861–7, a disastrous attempt to establish French law and increase French influence in America.

The extent of the losses suffered by the expeditionary forces in these various enterprises is unknown. In view of the unhealthful climate for Europeans, of the epidemic diseases which are known to have infected the troops in those distant regions, of the lack of medical attendance, and of the often defective administrative organization, the losses must have been heavy. We have been able to find the losses in officers killed and wounded, and so are in a position to calculate approximately the losses caused by the enemy's fire, except for the engagements in China and Cochin China, where records are wanting.

From 1830 to 1870 hardly a year passed without encounters in Algeria, and the conquest and pacification of the new colony and the frequent clashes with the neighbouring Moroccans cost a large number of lives.

In the course of those forty years the French forces lost 411 officers killed and 1,360 wounded, which would correspond to about 10,000 private soldiers killed and 35,000 wounded. The number of deaths from disease, exhaustion, and hardships must have been much larger. Among the officers killed were counted one commander-in-chief (Denys de Damrémont, killed at the attack on Constantina in 1837), 4 brigadier-generals, 8 colonels, 5 lieutenant-colonels, 31

battalion commanders, and 362 subalterns. The wounded officers included 3 division commanders, 15 brigadier-generals, 16 colonels, 21 lieutenant-colonels, 86 battalion or squadron commanders, and 1,222 subalterns.

The Mexican expedition lost 211 officers killed and wounded and about 5,000 men disabled in the various engagements with the enemy. A foe more destructive than the fire of the opposing forces, however, was the fever, which made enormous ravages in the ranks of the army of occupation.

### D. *The Crimean War*, 1854–6

Although a victory for the arms of France and her allies, the English, Turks, and Piedmontese, this great war is bitterly remembered in France for the cruel losses it inflicted on the army, losses amounting to a third of its total effective strength.

The greatest event of the war, the memorable siege of Sebastopol, lasted over a year and cost the allies 54,000 men killed and wounded, while the Russians lost over 100,000. The bloodiest battle was that at Inkermann, where the loss percentages of the forces engaged recall the battles of the First Empire; the victorious allies lost twenty-three per cent and the defeated Russians fully thirty-three per cent of their effectives. In the battles of Alma and of Traktir the losses were lighter—eight per cent and five per cent for the allies, seventeen per cent for the Russians. But it was not the losses by the enemy's fire—high as these were—which so deplorably thinned the ranks of the two antagonists; it was the ravages of typhoid fever and dysentery and especially of cholera, which raged in the camps and on the war-ships and levied a heavy toll in human lives. The inadequacy of the ambulance and hospital service was cruelly felt on both sides. Official records exist of the enormous losses of both antagonists, and the numbers are shown in the following tables:

FORCES AND CLASSIFIED LOSSES OF THE DIFFERENT COUNTRIES

| *Nationality.* | *Effective strength put in the field.* | *Killed or died of wounds.* | *Died of disease.* | *Total fatalities.* | *Wounded but not fatally.* |
|---|---|---|---|---|---|
| French | 310,000 | 20,240 | 75,375 | 95,615 | 47,000 |
| English | 98,000 | 4,602 | 17,580 | 22,182 | 13,000 |
| Piedmontese | 21,000 | 28 | 2,166 | 2,194 | Unknown |
| Turks | 230,000 | Unknown | Unknown | 35,000 | Unknown |
| Russians | 500,000 | 40,000 | 60,000 | 100,000 | 120,000 |

NOTE.—The figures for the Russian losses are approximate.

The two commanders-in-chief of the allies, Marshal Leroy de Saint-Arnaud and Lord Raglan, died of cholera, as did also Admiral Bruat, the commander of the French fleet. The next table classifies the officer-losses of the French army.

LOSSES OF OFFICERS.—FRENCH ARMY

| *Rank.* | *Killed or died of wounds.* | *Died of disease.* | *Wounded but not fatally.* | *Total.* |
|---|---|---|---|---|
| Marshal | — | 1 | — | 1 |
| General of Division | 3 | 1 | 6 | 9 |
| Brigadier-General | 7 | 3 | 11 | 21 |
| Colonel | 14 | 7 | 29 | 50 |
| Lieutenant-Colonel | 13 | 9 | 25 | 47 |
| Battalion Commander | 55 | 31 | 90 | 176 |
| Captain | 295 | 132 | 753 | 1,180 |
| Lieutenant | 198 | 111 | 464 | 773 |
| Sub-lieutenant | 227 | 76 | 538 | 841 |
| Chaplain | — | 13 | — | 13 |
| Administrative Officers | — | 32 | — | 32 |
| Health Officers | — | 70 | — | 70 |
| Total | 812 | 486 | 1,916 | 3,214 |

The officer-losses in battle were distributed among the different arms as shown in the following table:

FRENCH OFFICER-LOSSES BY ARMS

| *Arm.* | *Killed or died of wounds.* | *Wounded but not fatally.* | *Total.* |
|---|---|---|---|
| General Staff | 10 | 17 | 27 |
| Other Staff Officers | 11 | 30 | 41 |
| Infantry of the Line | 700 | 1,578 | 2,278 |
| Cavalry | 3 | 15 | 18 |
| Artillery | 47 | 166 | 213 |
| Engineer Corps | 27 | 49 | 76 |
| Navy | 12 | 38 | 50 |
| Administration | 1 | — | 1 |
| Health Service | — | 18 | 18 |
| Constabulary | 1 | 5 | 6 |
| Total | 812 | 1,916 | 2,728 |

## E. *The Italian War*, 1859

This was one of the shortest wars in history. In two and a half months the liberation of the Italian States from the dominion of Austria and their union under the hegemony of Piedmont were secured by the victories of the French and Piedmontese troops.

Two hundred thousand men were put in the field by each side in Lombardy, which was the principal scene as well as the principal object of the struggle.

The significant engagements were two battles and three lesser encounters. The allies were victorious in all, though they achieved little glory by their successes. The relative losses were much lighter than at the period of the First Empire, never exceeding ten per cent in killed and wounded. They are shown for the different battles in the table following:

LOSSES BY BATTLES

| *Battle.* | *Losses of Allies.* | | *Austrian losses.* | |
|---|---|---|---|---|
| | *Killed and wounded. Per cent.* | *Prisoners. Per cent.* | *Killed and wounded. Per cent.* | *Prisoners and dispersed. Per cent.* |
| Montebello . . . | 10·0 | 1 | 6 | 2 |
| Palestro . . . | 4·0 | — | 9 | 3 |
| Magenta . . . | 8·0 | 2 | 9 | 7 |
| Melegnano . . . | 2·5 | — | 4 | 14 |
| Solférino . . . | 10·0 | 2 | 10 | 7 |

The next table shows by rank and nationality the number of officers killed and wounded.

The number of men killed or fatally wounded may be estimated at 5,500 French, 1,500 Piedmontese, and 8,000 Austrians. The relative casualty losses of the Piedmontese reached 10 per cent, of the French 12 per cent, and of the Austrians 12·5 per cent of their effective strength, which was 60,000, 140,000, and 200,000 respectively.

OFFICER-LOSSES

| | *French.* | | *Piedmontese.* | | *Total Allies.* | | *Austrians.* | |
|---|---|---|---|---|---|---|---|---|
| | *Killed.* | *Wounded.* | *Killed.* | *Wounded.* | *Killed.* | *Wounded.* | *Killed.* | *Wounded.* |
| General of Division | 1 | 2 | — | — | 1 | 2 | 0 | 5 |
| Brigadier-General | 4 | 6 | 1 | 1 | 5 | 7 | 2 | 6 |
| Colonel | 14 | 16 | 2 | 5 | 16 | 21 | 6 | 9 |
| Lieutenant-Colonel | 11 | 7 | 2 | 1 | 13 | 8 | 6 | 12 |
| Battalion Commander | 27 | 49 | 3 | 11 | 30 | 60 | 14 | 29 |
| Captain | 105 | 287 | 27 | 59 | 132 | 346 | 80 | 236 |
| Lieutenant | 75 | 255 | 29 | 60 | 104 | 315 | 68 | 204 |
| Sub-Lieutenant | 74 | 225 | 32 | 77 | 106 | 302 | 97 | 533 |
| Total | 311 | 847 | 96 | 214 | 407 | 1,061 | 273 | 836 |

SUMMARY OF LOSSES

| | *French.* | *Piedmontese.* | *Austrians.* |
|---|---|---|---|
| Killed and Wounded | 16,600 | 6,100 | 25,000 |
| Missing and Prisoners | 2,400 | 1,500 | 15,000 |
| Total | 19,000 | 7,600 | 40,000 |

## CHAPTER IX

### THE FRANCO-GERMAN WAR, 1870–1

IN its results and consequences this great war was the most important of modern times, since it forged the union of the German Empire and conferred upon it a position of military pre-eminence. It remains to the present day the war *par excellence*, the one which is studied and commented on by the military men and general staffs of the world. One would be tempted at first thought to suppose that for such a conflict the records of the numbers of effectives, of the mobilization, the losses, &c., would be complete.

The records on the German side, indeed, are all that could be desired in this respect; but the French documentation was neglected to a very regrettable degree. Among others, the chapter of greatest interest for the present discussion, pertaining to the official records of losses, is especially defec-

tive. For some even of the great decisive battles we are still forced to be content with estimates based finally on conjectures.

These imperfections are excusable to some extent when we bear in mind the circumstances surrounding the events of the war of 1870–1. It will be recalled that the constitution of the armies in the second part of the war was decidedly of an improvised character; there were numerous and varied corps of new formation, the military operations were complex and the armies subdivided, and finally, the greatest political confusion attended the last period of this war so disastrous for France. All these facts are to be noted, for they constituted so many obstacles to the making complete and preserving entire the archives of the general staff and of the various army units.

The present writer has exerted every effort to get at the most reliable sources; search has been made in Paris itself, the authors most worthy of credence have been consulted, and finally, the calculations and estimates have been executed with the most painstaking care. Unfortunately the resulting figures cannot be offered as exact and beyond attack, but the reader is asked to accept them as the fruit of long and arduous search. If not correct they are at least probable and no doubt are not far from the truth as to the total losses of the French armies. The exact truth is not and may never be known.

In the following pages will be found comparative tables of the officer-losses of the French and German armies in the principal engagements of the war. These show the effective strength and total losses, and the number of officers disabled, both French and German, in the different campaigns, including the operations of the German armies against the army of the Rhine, the army of Metz; the armies of Châlons, of the defence of Paris, of the Loire, of the East and of the North, and finally against fortified points.

The authenticated records of the French officers killed and wounded have served as a basis for the calculation of the losses in men.

The official publications of the German General Staff list among the officers of that army the grades of *Portepée-fahnrich* (ensign) and *Vize-Feldwebel* (sergeant). It has seemed best to eliminate the figures for the losses of men of these ranks, for two reasons: In the first place, the grades did not exist in the French army at the time (they now exist there under the title of *aspirants*), and hence our comparisons between the two armies would be vitiated. Moreover, the duties pertaining to these grades were hardly those of true officers, but rather those of petty officers. Their number in the lists of killed and wounded is over 900.

The following table shows the losses in killed and wounded of both sides in the sixteen most important battles of the war:

RELATIVE LOSSES

| *Battle.* | *German losses. Per cent.* | *French losses. Per cent.* |
|---|---|---|
| Wörth | 11·3 | 29·2 |
| Spicheren | 12·9 | 10·4 |
| Borny | 8·3 | 3·8 |
| Rézonville | 23·7 | 14·4 |
| Gravelotte | 10·5 | 9·5 |
| Beaumont | 5·0 | 8·5 |
| Sédan | 5·2 | 18·0 |
| Villiers | 6·8 | 7·7 |
| Champigny | 12·5 | 7·8 |
| Loigny | 9·2 | 8·7 |
| Orléans | 2·4 | 4·7 |
| Beaugency | 11·7 | 8·4 |
| Le Mans | 4·8 | 7·0 |
| Héricourt | 4·0 | 3·0 |
| Butzenval | 3·0 | 4·8 |
| St. Quentin | 7·7 | 7·4 |

It will be noted that there were only two battles where the losses on either side exceeded twenty per cent; the Germans lost twenty-four per cent at Rézonville and the French nearly thirty per cent at Wörth. In both cases the high proportion of the losses is explained by a great inferiority of numbers in comparison with the enemy. In the decisive battles of Wörth, Gravelotte, and Sédan, the Germans outnumbered the French nearly two to one; in the second part of the war

the French armies generally had the superiority in numbers but not in regular troops, their armies consisting at this time principally of unseasoned recruits.

The German losses were naturally much heavier early in the war when they were opposed by the old soldiers of the regular French army.

In spite of the perfection of firearms, longer range rifles, rifled artillery, and machine-guns, the average losses in killed and wounded fall far short of those of the First Empire.

The following tables show the effective strength of the two antagonists and their losses, according to the campaigns into which the war was divided:

GERMAN EFFECTIVE STRENGTH

| | *Officers.* | *Men.* |
|---|---|---|
| Number who crossed the frontier | 33,101 | 1,113,254 |
| Number who remained in Germany | 9,319 | 338,738 |
| Total number mobilized | 42,420 | 1,451,992 |

FRENCH EFFECTIVE STRENGTH

| | *Officers.* | *Men.* |
|---|---|---|
| Troops of the line and reserves who left the stations from July 15, 1870, to March 1, 1871 | 20,740 | 915,000 |
| Newly formed corps | Unknown | 735,000 |
| National Guard of Paris | Unknown | 330,000 |
| Total number mobilized | | 1,980,000 |

At the cessation of hostilities on March 1, 1871, there were 720,000 German soldiers in France and 250,000 ready to entrain in Germany. The next table shows the total military resources of France at the same date:

FRENCH STRENGTH, MARCH 1, 1871

| | |
|---|---|
| Active armies | 542,000 |
| Number in military divisions | 354,000 |
| Mobilized in instruction camps | 55,000 |
| Provisionally mobilized by Prefects | 54,000 |
| New recruits, Class of 1871 | 132,000 |
| Married men from 21 to 30 years of age subject to call | 250,000 |
| Total | 1,387,000 |

Hardly ten per cent of this theoretical potential strength, however, consisted of troops of the line.

We now turn to the losses by campaigns, which are shown in the next two tables :

GERMAN LOSSES

| *Campaign.* | *Killed and died of wounds.* | *Wounded, not fatally.* | *Missing and prisoners.* | *Total.* |
|---|---|---|---|---|
| Against Army of the Rhine | 2,800 | 12,200 | 2,000 | 17,000 |
| Against the Army of Metz . | 12,600 | 31,400 | 3,000 | 47,000 |
| Against the Army of Châlons | 3,300 | 9,700 | 1,000 | 14,000 |
| Before Paris . . . | 2,000 | 8,600 | 1,400 | 12,000 |
| Against Armies of the Loire | 4,500 | 16,200 | 3,300 | 24,000 |
| Against Armies of the East | 1,500 | 4,500 | 1,000 | 7,000 |
| Against Armies of the North | 1,000 | 4,000 | 1,000 | 6,000 |
| Before Fortifications . | 700 | 2,000 | 300 | 3,000 |
| Total . . . | 28,400 | 88,600 | 13,000 | 130,000 |

FRENCH LOSSES

| *Campaign.* | *Killed and died of wounds.* | *Wounded, not fatally.* | *Missing and prisoners.* | *Total.* |
|---|---|---|---|---|
| Army of the Rhine . . | 7,000 | 18,000 | 5,000 | 30,000 |
| Army of Metz . . . | 12,000 | 30,000 | 148,000 | 190,000 |
| Army of Châlons . . | 9,000 | 16,000 | 90,000 | 115,000 |
| Armies of Defence of Paris | 10,000 | 20,000 | 4,000 | 34,000 |
| Armies of the Loire . . | 12,000 | 30,000 | 40,000 | 82,000 |
| Armies of the East . . | 5,000 | 13,000 | 20,000 | 38,000 |
| Armies of the North . . | 2,500 | 8,000 | 12,000 | 32,500 |
| Defence of Fortresses . | 2,500 | 5,000 | 51,000 | 58,500 |
| Total . . . | 60,000 | 140,000 | 370,000 | 580,000 |

The average strength of the German armies in the war, taking account of diminutions caused by losses and disease and of successive additions of reinforcements, may be placed at 887,000 men. This number has been taken as a basis for the percentage calculation of the total German losses, which are classified in the following table :

GERMAN LOSSES.—KILLED

| | *Officers.* | *Men.* |
|---|---|---|
| Killed in battle . . . . | 1,046 | 16,539 |
| Died of wounds . . . . | 671 | 10,050 |
| Died from accident . . . . | 9 | 281 |
| Committed suicide . . . . | 3 | 26 |
| Died from diseases . . . . | 207 | 11,940 |
| Dispersed, lost, presumed dead . . | 3 | 4,006 |
| Total . . . . | 1,939 | 42,842 |

TOTAL GERMAN LOSSES

| | *Officers.* | *Men.* | *Percentage of effective strength (887,000).* |
|---|---|---|---|
| Killed | 1,939 | 42,842 | 5·0 |
| Wounded | 3,725 | 86,007 | 10·1 |
| Missing, Prisoners | 103 | 10,026 | 1·14 |
| | 5,767 | 138,875 | 16·24 |

The diseases which made the greatest ravages in the German ranks were typhus fever and dysentery, the former causing 7,000 deaths and the latter 2,000.

The exact number of the French losses is not known; many historians have placed them at double those of the Germans. It would appear that this estimate must be accepted, as the officer-losses indicate much higher figures for the French than for the Germans. The table shows by arm and class the numbers of French officers killed and wounded, and the total for the German army.

FRENCH OFFICER-LOSSES. KILLED AND WOUNDED

| *Arm.* | *Killed and died of wounds.* | *Wounded, not fatally.* | *Total.* |
|---|---|---|---|
| Staff | 67 | 210 | 277 |
| Infantry of the Line | 1,530 | 3,248 | 4,778 |
| Cavalry | 112 | 326 | 438 |
| Artillery | 98 | 329 | 427 |
| Engineer Corps | 15 | 41 | 56 |
| Wagon Train | 1 | 4 | 5 |
| Navy | 79 | 153 | 232 |
| National Guard (Mobile) | 253 | 771 | 1,024 |
| National Guard (Mobilized) | 98 | 161 | 259 |
| National Guard (Stationary, *sédentaire*) | 12 | 17 | 29 |
| Free Corps | 80 | 142 | 224 |
| Grand total | 2,345 | 5,402 | 7,747 |
| Total German Officer-losses | 1,717 | 3,725 | 5,442 |

There was thus an excess of 2,305 French officers killed and wounded (628 killed) over the corresponding losses on the German side. The French losses in general officers and superior officers were more than double those of the Germans, as shown in the following comparative table:

FRENCH AND GERMAN OFFICER-LOSSES BY RANK

| Rank. | German. | | | French. | | |
|---|---|---|---|---|---|---|
| | *Killed.* | *Wounded.* | *Total.* | *Killed.* | *Wounded.* | *Total.* |
| Army Commanders | 0 | 0 | 0 | 0 | 2 | 2 |
| Corps Commanders | 1 | 2 | 3 | 2 | 2 | 4 |
| Division Commanders | 0 | 4 | 4 | 5 | 14 | 19 |
| Brigadier-Generals | 6 | 23 | 29 | 18 | 55 | 73 |
| Colonels | 27 | 45 | 72 | 32 | 74 | 106 |
| Lieut.-Colonels | 18 | 48 | 66 | 49 | 115 | 164 |
| Majors and Battalion Commanders | 86 | 162 | 248 | 151 | 357 | 508 |
| Captains | 346 | 672 | 1,018 | 842 | 1,852 | 2,694 |
| Lieutenants | 320 | 686 | 1,006 | 627 | 1,512 | 2,139 |
| Sub-Lieutenants | 899 | 2,082 | 2,981 | 625 | 1,432 | 2,057 |
| Totals | 1,717 | 3,725 | 5,442 | 2,351 | 5,415 | 7,766 |

The Germans had 36 general officers disabled, of whom 7 were killed; the French 98 disabled, 25 killed; 422 German superior officers were killed or wounded against 876 French. These figures afford eloquent proof that if fortune did not favour the French arms, it was not because of any lack of merit on the part of the officers, whose bravery was worthy of a better fate. The following tables give the proportional losses in officers of the two armies:

FRENCH OFFICER-LOSSES BY ARMS

| *Arm.* | *Per cent of killed and wounded.* |
|---|---|
| Staff | 19·7 |
| Imperial Guard | 17·5 |
| Infantry of the Line | 36·3 |
| Cavalry | 12·0 |
| Artillery | 20·0 |
| Engineer Corps | 17·5 |

GERMAN OFFICER-LOSSES BY ARMS

| *Arm.* | *Per cent of killed and wounded.* |
|---|---|
| Staff | 14·0 |
| Prussian Guard | 29·6 |
| Infantry | 27·5 |
| Cavalry | 9·4 |
| Artillery | 18·0 |
| Engineer Corps | 8·4 |
| Wagon Train | 1·4 |

The Germans lost 4 general officers and 12 superior officers by death from disease, the French 5 general officers and 68 superior officers from the same cause, which is sufficient indication that the French army must have suffered much heavier losses by disease than did the Germans. During the Crimean War, in which over 75,000 men of the French contingent perished from this cause, the number of superior officers who died did not exceed 52.

The most probable estimates place the total losses of the French armies in 1870–1 at 280,000 officers and men killed and wounded, distributed approximately as follows:

| | |
|---|---|
| Killed and died of wounds | 60,000 |
| Died in prison | 17,000 |
| Died in Switzerland and Belgium (after being disarmed) | 2,000 |
| Died of disease or exhaustion | 61,000 |
| Total | 140,000 |
| Wounded, not fatally | 140,000 |
| Grand total (including Officers) | 280,000 |

The number of French prisoners was enormous, surpassing anything of the kind down to recent times. The armies of Châlons and of Metz, each of over 100,000 men, were captured entire, and became prisoners of war. The prisoners were classified as follows:

| | *Officers.* | *Men.* |
|---|---|---|
| Prisoners captured and sent into Germany | 11,860 | 372,000 |
| Disarmed at the capitulation of Paris, but not obliged to change residence | 7,456 | 242,000 |
| Entered Switzerland, disarmed by Swiss troops | 2,192 | 88,000 |
| Entered Belgium after the disaster of Sedan, disarmed by Belgian troops | 300 | 6,000 |

At the time of the capitulation of Paris, 21,808 officers and 708,000 men were either in captivity among the enemy or disarmed at Paris or in neutral territory. Many sick and wounded were included among the prisoners.

Typhus fever and small-pox raged furiously in the French camps, causing almost as great loss of life as the enemy's fire. These diseases were also responsible for the death of multitudes among the civil population.

Official statistics show an excess of deaths over the number for the year 1869 of 183,000 for 1870, and 407,000 for 1871.

The French losses in munitions of war were likewise enormous, and without a parallel in history; 107 standards and flags, 1,915 field pieces, 5,526 pieces of fortress artillery, 855,000 infantry rifles, 12,000 wagons of all kinds, 50 locomotives, and 600 railway cars fell into the hands of the enemy, who themselves lost only 2 flags and 6 field guns.

The money cost of the war to France has been estimated at 14,000,000,000 francs, distributed as shown below:

| | *Francs.* |
|---|---|
| Expenses under the Empire | 1,000,000,000 |
| Requisitions by the Enemy | 593,000,000 |
| National Guard of Paris | 140,000,000 |
| Cost of organization of the national defence in the provinces | 600,000,000 |
| Value of property destroyed | 6,667,000,000 |
| Indemnity paid to Germany | 5,000,000,000 |
| Total | 14,000,000,000 |

This was the greatest war of the nineteenth century, and the most disastrous that France has ever waged in all her history.

## CHAPTER X

### THE COMMUNARD INSURRECTION, 1871

THE fratricidal struggle which immediately followed the war with Germany came as a climax to the misfortunes of France. For two months, or from March to May, 1871, the army of Versailles, 100,000 strong, waged a merciless war, and conducted a second siege of Paris, defended by the revolting Communards. The rebels had organized an army of 8,866 officers and 205,000 men, composed of battalions of the national guard of Paris, which had been formed during the war just closed. The second siege of Paris was a murderous struggle in the streets and barricades, and cost

the French army losses equal to those of a bloody battle. A large part of the German troops were still in France, and were spectators of the insurrection, which, like an epilogue of the great drama that had just closed, was enacted before their eyes. The victory of the army of Versailles was hotly contested, and Paris had to be taken by assault.

The Versailles army lost about 15,000 men killed and wounded, of whom nearly a third were killed or died of wounds. Five general officers were killed and 6 wounded, 14 other superior officers were killed and 48 wounded; 159 officers in all were killed or died of wounds, and 554 more wounded. The insurgents suffered enormous losses: 15,000 were killed or wounded in the battles outside the fortifications, and 25,000 in the fighting in the streets and barricades; 41,000 were taken prisoners, of whom 3,000 died in prison, 270 were executed, and 7,500 were deported.

It will be seen that the numbers of the losses in this insurrection were equal to those of an important war.

## CHAPTER XI

### THE COLONIAL WARS OF FRANCE SINCE 1871

THE colonial policy of France after the *année terrible* frequently forced the Government to employ a part of its land and naval forces in over-sea expeditions. Some of these were required to re-establish French power by suppressing insurrections in districts previously conquered, as the insurrection in Algeria in 1871, and the extension of French dominion in Senegal and in Cochin China; others were for the founding of new colonies, as Madagascar, Tonkin, Tunis, and Morocco. These expeditions into distant regions, often with a climate very unhealthful for Europeans, cost the lives of many brave soldiers and marines. The ravages of diseases, and especially of fever, caused many more deaths than the fire

of the enemy. The battles themselves, however, must have occasioned very considerable losses, as the number of officers killed or wounded has been large. Our own investigations on this subject fix the number of officers killed in all the over-sea expeditions from 1871 to 1908 at 287, which would indicate a loss of about 8,000 privates killed or fatally wounded; similarly, the 590 officers wounded correspond to a figure of about 18,000 for the troops. We give below a table of the officer-losses by colonies or expeditions:

OFFICER-LOSSES BY COLONY OR EXPEDITION (1871–1908)

| *Colony, &c.* | *Killed.* | *Wounded.* | *Total.* |
|---|---|---|---|
| Algeria | 42 | 124 | 166 |
| Tunis | 15 | 25 | 40 |
| Senegal and Soudan | 25 | 64 | 89 |
| Cochin China | 3 | 7 | 10 |
| Dahomey, expedition 1890 | 2 | 5 | 7 |
| Dahomey, expedition 1892 | 10 | 25 | 35 |
| War of Tonkin | 131 | 202 | 333 |
| Madagascar, expedition 1895 | 1 | 7 | 8 |
| Madagascar, pacification | 12 | 13 | 25 |
| China, 1900, 1901 | 7 | 20 | 27 |
| Morocco, 1907, 1908, 1911 | 39 | 98 | 137 |
| Total | 287 | 590 | 877 |

For some of the over-sea expeditions the total losses are known; these are given in tabular form below.

DAHOMEY EXPEDITION, 1890

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 2 | 29 |
| Wounded | 5 | 101 |
| Died of Disease | — | 9 |

DAHOMEY EXPEDITION, 1892

| | *Officers.* | *Men.* |
|---|---|---|
| Killed | 10 | 67 |
| Wounded | 25 | 436 |

TONKIN WAR, 1884–5

| | |
|---|---|
| Killed and wounded | 333 officers, 3,889 men |
| Died of disease | 5,223 men |
| Money cost | 335,000,000 francs |

MADAGASCAR EXPEDITION, 1895

| | Deaths. |
|---|---|
| Officers | 35 [1] |
| Soldiers | 3,441 |
| Marines | 1,137 |
| Non-combatants | 1,143 |
| Total | 5,756 [2] |

PACIFICATION OF MADAGASCAR, 1896–9

| | Officers. | Men. |
|---|---|---|
| Killed and drowned | 12 | 201 |
| Died of disease | 21 | 280 (Europeans) 478 (Natives) |
| Wounded | 13 | 422 |
| Total | 46 | 1,381 |

## CHAPTER XII

### CONCLUSION

THE stagnant position of the population in France has given rise to a discussion by many writers of the question as to whether the wars of the nineteenth century in which that nation has played so large a part may be in any degree responsible for this lamentable condition.

The first part of the present discussion has proved, we think, that France has been the most warlike nation of modern times. Now wars have always cost and must always cost large numbers of human lives; and as the lives extinguished are largely or exclusively those of soldiers, the individuals removed from society are the relatively young, strong, and healthy, and hence those most likely to leave strong and healthy offspring. When a large number of the youth of a country, of its best blood, are exterminated either in battle or by disease and hardship, the population must surely and immediately feel the effects of such a loss.

[1] Thirty-four from disease.
[2] Nearly all from disease.

The wars of the Revolution certainly cost France a million human lives, the wars of the First Empire wrought an equal destruction, and those of recent times probably claimed another equal number of victims. That is, from 1792 to 1914, war has deprived France of 3,000,000 men. The evidence seems convincing that these losses have played their large part in bringing about the present state of stagnation. Again, we must not lose sight of the fact that a large proportion of the soldiers who escape the perils of war bear through life the marks of their campaigns in enfeebled health or disfiguring wounds, while a large number of unfortunates emerge as invalids or are disabled for life. Such elements are not likely to contribute to the improvement of the race. As France, of all the nations of the world, has made the largest sacrifices of human life in prosecuting the longest and bloodiest wars of modern times, we range ourselves on the side of those who affirm that war has had its large share in producing the present stagnation or even decrease in the French population.

# MILITARY SELECTION AND RACE DETERIORATION

## A PRELIMINARY REPORT AND DISCUSSION

BY

VERNON LYMON KELLOGG

# PREFACE

At an early stage in the pursuance of the study outlined in the present paper, Dr. John Bates Clark, Director of the Division of Economics and History, wrote me a letter of suggestions, which so thoroughly gathers together the related matters pertinent to any investigation of the possible influence of militarism in race-modification, that I venture, with Dr. Clark's permission, to use it as a note of preface to the present paper. Dr. Clark writes:

'In a scientific study of the *direction* of changes in the quality of a population resulting from war, such facts as the following need to be considered.

'In the study of the amount of these changes the various influences need, if possible, to be separately measured.

'In a statistical test, it will be easier to get a resultant of all the influences or of a number of them than it will be to test the particular influences, each by itself.

'E. g. it may be possible to test the general effects of the Napoleonic Wars on the general population, but not to analyse quantitatively the separate causes thereof.

'In a quantitative study even of the resultant effects, a comparison should be made between the effects of warfare and those of other causes, e. g. industrial development.

'In warfare, selections for survival take place:

'A, between the contestants.

'B, between combatants and non-combatants in each country. The contest for survival in each of these cases is modified by progressive changes in the mode of warfare.

A

'1. As between contestants, primitive conflicts to the death tend to exterminate the less fit and enable the hardier to survive.

'2. Changes in modes of warfare affect the degree but not the direction in which this principle works. Quite to the present time armies made of hardy material stand the test of campaigns and battles better than those made of weak material.

'3. Progress in warfare includes improvement in organization and in sanitation, and the superiority of the personally hardy may become a less dominant factor, though still a factor.

'4. This progress early substitutes enslaving conquered enemies for exterminating them. While the stronger are likely, in war, to conquer the weaker, the slaves taken may or may not, after a lapse of time, be the weaker element in the conquering population.

B

'1. As between combatants and non-combatants in each country the necessities of the case compel a selection of a hardy part of the population in wars that test the strength of the countries engaged. The destruction of a part of the force so selected reduces the ratio its numbers sustain to that of the whole population.

'2. If the war draws out the whole fighting strength of a people or nearly the whole, the survival of a larger part of the stay-at-homes and a smaller part of the fighters may become less important than the survival of the more hardy in the ranks of the fighters.

'3. In proportion as deaths in actual battle become less numerous than those incurred by disease, exposure, exhaustion, or the after-effects of wounds, the campaigns tend to sift out the less fit among the troops. This condition is approached in proportion as a modern European army draws out more and more nearly the whole fighting strength of a nation. Selection between different qualities of fighters gains in importance, and selection between combatants and non-combatants loses importance. As between combatants the stronger have the better chance of survival.

'4. In the case of standing armies like that of England there is a possibility that the less hardy may drift into the army. The London "hooligan" may replace "Tommy Atkins" of the old type. In this event frequent small wars tend to weed out an unfit part of the population.

'5. The development of city employments as compared with rural ones greatly depresses the physical quality of the general population. This fact gives opportunity for a selection of the poorer material for the army.

'6. Under the conditions thus described, army life may do something, in intervals of peace, toward redeeming the poor material.

'7. Under general and compulsory service army life in time of peace may improve the physical condition of the soldiers (Germany) of most classes. This discipline may reduce the physical ravages of war, when war occurs.'

V. L. K.

*Stanford University,*
*December* 1914.

# A PRELIMINARY REPORT AND DISCUSSION

## I

WHAT would seem logically to be the inevitable consequence of the human selection exercised by war in its actual removal from a given population of an undue proportion of sturdy men by death from wounds and disease, and in its removal in both war and peace times of still larger numbers of its stronger young men from their normal and needed function of race perpetuation, has been pointed out by a few writers from the times of the Greeks to the present. Perhaps the logic of the matter has been more clearly and strongly stated by two philosophical biologists than by most of the others. Herbert Spencer and David Starr Jordan have clearly enunciated and strongly emphasized the thesis that the removal by war of the strongest and the leaving at home of the weakest men to propagate the race is bound to have as result a physical deterioration of the population concerned. It is, these men claim, a simple, easily understood phenomenon of artificial selection. If it is, then one ought to be able to find and expose some specific and even measurable instances of it. For there has been enough war, and war of a serious enough kind, to produce race-deteriorating effects if they are really produced by it.

This paper presents some of the results of a special study made of the conditions and results attending military selection with particular regard to their relation to possible race injury or race betterment. For there have been not only writers to criticize the claim that militarism injures the race, but writers to claim that it actually betters the race. The study, as undertaken by the present writer, is made

primarily from the point of view of the biologist concerned with changes in actual racial heredity rather than with changes in social heritage or race tradition.

## II

Dr. L. R. Villermé [1] called attention, in 1833, to certain notes written by Dr. Tenon in 1785, presenting various facts about human height and weight. Tenon was led by his studies to conclude that human stature is more largely determined by heredity than by environment. And on one of the note-sheets, Villermé found a statement of Tenon's to the effect that all the facts from all the documents and statistics which he had been able to assemble touching this matter of human stature, made it necessary for him to conclude that 'wars, and especially long wars, reduced the average height [in a population] by using up the tallest men'. But Villermé was unable to find in the notes any particular assembling of facts on which this conclusion had been based.

This is the first reference I have found to a declaration based on an examination of particular statistics of the race-modifying effect of war. In fact, Buffon and Tenon were probably the first men to busy themselves seriously with statistical studies of human stature.

Villermé [2] himself, in 1829, that is four years before publishing Tenon's notes, published a valuable pioneer study of the height of French conscripts, with a direct, if somewhat timid and suppressed, suggestion to the effect that a certain reduction of the average height of French young men noted by him in the years after the Restoration, was due to the deteriorating effects of the earlier Napoleonic

[1] L. R. Villermé, 'Extrait de notes ms. relatives à la stature et au poids de l'homme, lesquelles notes ont été trouvées dans les papiers de feu Tenon, membre de l'Institut de France, in *Annales d'Hygiène publique*, 1re série, tome x, pp. 27–35, 1833.

[2] L. R. Villermé, 'Mémoire su la taille de l'homme en France,' in *Annales d'Hygiène publique*, 1re série, tome i, pp. 351–99, 1829.

campaigns. Villermé notes that after the Restoration, when the minimum height of the conscripts for service had been raised to 1,670 mm.—it had been reduced by Napoleon from 1,624 mm. to 1,598 mm., and then to 1,544 mm.—certain cantons were not able to make up their complement of soldiers, according to the proportion of their population, on account of their lack of young men of sufficient height and vigour.

In 1833, Benoiston de Chateauneuf,[1] in an admirable, full paper, documented by statistics, and touching such matters as numbers in the French army in different years, the changing height figures for conscripts, the proportions and causes of deaths in garrison and camp in the army in times of peace, &c., quotes approvingly from a writing by one M. de Petigny, a 'conseiller de préfecture', entitled, 'Observations sur le Recrutement', as follows:

> Conscription has destroyed not only the generations exposed to it; it has struck at its very source the life of the generations to come. In constantly taking from the nation the *élite* of its youth, it has left in France only the infirm and adolescent. Consequently marriages are made only with soldiers used up by the fatigues of war, or with youths hardly escaped from infancy, who hasten to find a protection, in these immature marriages, from the rigour of the conscription laws. Such ill-made unions have been able to produce only a degenerate race, and the proof of this is found in the increase, in recent years, of the numbers of exempts [conscripts excused from joining the colours for undersize or infirmity]. According to the report of the War Office, the proportion of exempts averaged, in 1827, for all France, forty-three per hundred, or one of every three and forty-seven hundredths.

De Chateauneuf himself adds:

> A weakened constitution, an enfeebled health, arrest the flow of the sap of life and the development of the body. Man remains feeble, small, stunted. Louis XIV bequeathed to his successors a people dwarfed by long wars, and Louis XV, after him, was obliged to reduce the required height of the soldiers to five feet.
>
> Since Louis XV, the same causes have continually compelled the

[1] Benoiston de Chateauneuf, 'Essai sur la mortalité dans l'infanterie française,' in *Annales d'Hygiène publique*, 1re série, tome x, pp. 239–316, 1833.

lessening of the height requirement. It is at present four feet and ten inches (1 metre, 57 centimetres), but in spite of this continual lowering, in spite of the more advanced age at which the young soldier now enters the service, an age at which the development of the body is indeed near its full limit, although the militia takes possession of him at his very emergence, so to speak, from infancy, at sixteen and eighteen years of age—this low stature of the young men is, to-day, together with the accompanying condition of infirmity, one of the commonest causes of exemption from service.

These first papers have been followed by many others of similar general subject, varying, of course, in their importance and pertinence to the special subject of the direct relation of war to physical race-modification. Their very variety, however, and their special consideration of other possible and probable race-modifying influences, and the varying attitude of their authors as regards the relative importance of heredity and of nurture as determining human stature and general physical condition—all this variousness of subject-matter and predilection of the authors renders these papers of particular service to the unbiased student of the influence of war. For they include data and conclusions which serve him both as material and as suggestions for his own difficult study.

It would be beyond the needs of this present report to abstract or even to list these papers in any attempted completeness, but those of Lelut,[1] Boudin,[2,3] Broca,[4] Cham-

[1] F. Lelut, 'Essai d'une détermination ethnologique de la taille moyenne de l'homme en France,' in *Annales d'Hygiène publique*, 1re série, tome xxxi, pp. 297–316, 1844.

[2] M. Boudin (Médecin-en-chef de l'Hôpital Militaire de Saint-Martin), 'Histoire médicale du recrutement des armées et de quelques autres institutions militaires chez divers peuples anc ens et modernes', in *Annales d'Hygiène publique*, 2me série, Tome xx, pp. 5–82, 1863.

[3] M. Boudin, 'Études ethnologiques sur la taille et le poids de l'homme chez divers peuples,' in *Recueil de Mémoires de Médecine, de Chirurgie et de Pharmacie militaire*, 3me série, tome ix, pp. 169–207; tome x, pp. 1–43, 1863.

[4] Paul Broca, 'Sur la prétendue dégénérescence de la population française,' in *Bull. de l'Acad. Imp. de Médecine*, tome xxxii, pp. 547 ff., 1867.

pouillon,[1] Tschouriloff,[2] Ecker,[3] Carlier,[4] Livi,[5] Collignon,[6] Brandt,[7] Ammon,[8] and the Report of the British Inter-Departmental Committee on Physical Deterioration,[9] represent most of the various points of view as well as both the kinds of statistics and the methods of their treatment characteristic of most of the students of racial modifications, especially as studied on the basis of military anthropology.

The underlying problem is, of course, the classic one of nature and nurture. Are one's stature and general physical make-up determined by heredity or by acquirement due to environment? Or, if both factors are contributory, which plays the major part?

The approach to the problem of possible race-modification through excessive militarism leads the investigator at once to this formidable crucial question of the relative importance—because certainly there is no absolute control by either—of the modifying influence of inheritance working through selection, and of environment working through repetitive acquirement.

It is nearly superfluous to say that biologists, anthro-

[1] M. Champouillon (Médecin-en-chef de l'Hôpital Militaire de Saint-Martin), 'Étude sur le développement de la taille et de la constitution dans la population civile et dans l'armée en France,' in *Recueil de Mémoires de Médecine, de Chirurgie et de Pharmacie militaire*, 2me série, tome xxii, pp. 239–64, 1869

[2] M. Tschouriloff, 'Étude sur la dégénérescence physiologique des peuples civilisés,' in *Revue d'Anthropologie*, pp. 605–64, 1876.

[3] A. Ecker, 'Statistik der Körpergrösse im Grossherzogthum Baden,' in *Archiv für Anthrop.*, Bd. x, Heft 4, pp. 257–60, 1877.

[4] G. Carlier (Médecin-major de l'Armée), 'Des rapports de la taille avec le bien-être,' in *Annales d'Hygiène publique*, 3me série, tome xxvii, 1892.

[5] Livi, Ridolfo, *Antropometria militare*, 1893.

[6] R. Collignon (Médecin-major à l'École de Guerre), 'Anthropologie de la France: Dordogne,' in *Mémoires de la Soc. d'Anthrop. de Paris*, 3me série, tome i, 1894.

[7] G. Brandt, *Die Körpergrösse der Wehrpflichtigen des Reichslandes Elsass-Lothringen*, 1898.

[8] Ammon, Otto, *Zur Anthropologie der Badener*, 1899.

[9] Report of the Inter-Departmental Committee on Physical Deterioration, in vol. xxxii of the British Parliamentary Papers for 1904.

pologists, and sociologists are strongly divided in opinion in regard to this great question. They have been from the beginnings of any study of the question up to the present day. This difference of opinion is revealed even in the earliest of the selected references I have just given, and it would be as clearly evident in any representative set of references revealing the attitude of present-day students of race modifications.

For example, in the face of the great preponderance of modern opinion that heredity is the guiding control in animal development, Franz Boas, the well-known American anthropologist, in his recently issued *Mind of Primitive Man* (1911), makes argument wherever he can for the modifying influence of environment on human structure and physiology. He fights for nurture as against nature, acquirement as against heredity. Although Boas admits that with regard to anthropometric traits, as head form, &c., heredity seems to be the chief control, he holds that there is one marked exception to this rule. This exception is that, 'in all cases in which the anthropometric traits undergo very considerable change during the period of growth, the influence of favourable or unfavourable environmental causes makes itself felt'.

The investigations conducted by Gould and Baxter during the war of the rebellion have shown that the representatives of European nationalities born in America have statures higher than the representatives of the same nationalities born in Europe, and it has been assumed that better nutrition, or perhaps better hygienic and economic conditions in general, might increase the stature of the people. These conclusions were confirmed by Bowditch's measurements of the school children of Boston and by Peckham's anthropometric work in Milwaukee.

These changes in stature due to changing conditions have recently been demonstrated in Europe, where Ammon has shown that the population of Baden has materially increased in size during the last thirty years.

It may be added that Boas claims, on the basis of his own observations among the immigrants and posterity of

immigrants in New York, to have demonstrated marked changes in stature due to changed conditions.

It would not be difficult to criticize the conclusions of Boas and those who believe with him in the marked race-modifying influence of environment. It is not at all improbable that these changes, which may equally well be called differences, of stature among poor and well-to-do people are due to the same cause that is responsible in large degree for their poverty or prosperity—namely to their differences in inherited capacity. The children of the poor are perhaps not small because their parents are poor, but the reason for the poverty of the parents as well as the small size of the children may be that they come from defective stock, have the inheritance of incapacity, lack of vigour, and small size. And exactly this criticism is strongly driven home by the believers in the dominant influence of heredity.

There is no doubt that among biologists and anthropologists, at least, and probably also among sociologists, there is a strong preponderance of belief in the major importance of nature, that is heredity, as compared with nurture, that is environmental influences, in the determination of racial characteristics and racial modifications. The character of the inheritance, which is determined by the character of the stocks from which the race is reproduced, is the great factor in the determination of the kind of man any given population shall represent. All the recent extraordinary advance in the study and knowledge of the results of heredity lends its weight to this belief. Therefore in our search for a possible race-modifying influence of militarism, a modification either for better or for worse, we are justified in expecting to find the most important of these influences to be those depending on heredity, that is on a selective reproduction within a given population, rather than to be such influences as seem to depend on environment, or differences in *bien-être*. To be sure, the possibility of the presence of the results of environmental influence in any case of apparent

race modification must, of course, never be lost sight of, and the fact that such results can be directly produced by certain conditions of militarism, will tend to keep the student of race modification open-minded and catholic in face of the possible explanation of any such modification that may be offered to him, or which he may be inclined to offer to others.

## III

Race modification through inheritance due to direct military selection must obviously be difficult to distinguish with complete satisfaction from fluctuating modifications due to environmental causes, such as industrial changes, &c., which owe their existence to wars of great mortality, or such as excessive conscription in times of peace as a means of military preparedness. And for the defender of the thesis that excessive militarism modifies the general population, such a distinction may seem of no great importance. For in both cases the apparent results may be about the same. But it is of great importance to determine the real character of the results. And it is also important to find answers to the following questions: Are these results all bad ones? Are they all good ones? Or if some be bad and some good, which outrank the other?

Some of the many conditions which may guide one in the undertaking of a study of militarism in relation to race are presented in the words of Professor John Bates Clark, as given in the note of preface to this paper.

In the face of so many and such various considerations that must be taken into account in any attempt to trace the consequences of war, and militarism generally, on the constitution of the race, it is not surprising that in a pioneer study much time is likely to be spent in the acquirement of statistics and facts whose bearing on the subject becomes very difficult or even impossible to determine in a first attempt to draw up a balance sheet of results. And exactly

this condition obtains in regard to the present study. It is with some dismay that I perceive how large a part of my gatherings cannot be considered in a first or trial balance-sheet. This is not to say, however, that with the growth of an understanding of the ramifying relations of militarism to human biology and sociology, these data may not have their positive use.

The kind of data which among others seem to me obviously to be such as bear upon the subject, and in the search for some of which I have at least made a beginning, may be suggested by the following list taken from some notes which I made at the commencement of my search, for my personal guidance.

Definite statistics and facts with regard to the physical requirements of recruits and conscripts; physical selection among conscripts; proportion of men selected for war, by voluntary recruiting or conscription to total males in a given population; numbers of soldiers lost by death and disease, both in war and peace times; numbers returned wounded, or injured by temporary disease or affected by chronic disease; other changes in character in returning legions, such as acquired licentiousness, mental inertia and lack of initiative due to machine work during military service, &c.

Facts and statistics of the rate and character of births in a stay-at-home population during protracted wars compared with that during times of peace; the nature of the death-rate in a stay-at-home population during war and during peace (changes in proportion, in causes, &c.); character of the stay-at-home population as revealed by possible stagnation of progress, by lack of appearance of unusual men and by a lessened mental, mechanical, industrial, political, literary, and artistic productiveness.

Facts and statistics of the types and prevalence of diseases and congenital troubles among the stay-at-home population during war compared with conditions before war, and after the return of the legions. Facts and statistics of the physical

status (including mental diseases, &c.) of a population long at war with such status of the same population before the war and with such status in a comparable population never or but little at war.

To these categories of data may easily be added others. And in any search for statistics and data bearing upon war's effects, one constantly finds oneself attracted by the opportunity to acquire data of categories that, while of no such obvious relation to these effects as are the data listed in the above paragraphs, yet may be thought likely to yield something worth while in the final working over of material.

Also it is immediately discovered by the investigator that the past and the present state of the gathering and preservation of vital statistics render most of the categories of data listed above extremely difficult to approach. However, some are certainly approachable, and it is to the setting out of the character and the significance of certain of these data that this preliminary report is devoted.

## IV

Military selection obviously concerns soldiers, first of all, and not all of a given population is ever composed wholly of soldiers. It is then a first matter of interest and importance to determine how many and what kind of persons of a population are soldiers. This, of course, varies for different populations and for each of these for different times. But it is not difficult to determine closely enough for our purpose, for any population, just how large and of just what particular character the soldier part of the population is.

In the first place it is a group of individuals not chosen at random from the population, representing both sexes, all ages and weak and strong alike, but it is a part of the population chosen first for sex, then for age, and finally for stature, strength, and freedom from infirmity and disease. It is chosen either from groups of young men voluntarily offering

their services, or from the whole group of young men of a certain age, final choice from this group being made by lot. The first is the method of voluntary enlistment as exemplified in England and the United States; the second is that of conscription, typically exemplified in France and Germany.

The requirements that these young men must meet in order to be accepted or chosen to 'join the colours' are much the same in all countries in times of peace, making reservation of differences due to average racial differences of height, &c. But in times of war these requirements may change swiftly, depending on the need of increasing materially the proportion of soldiers to the total population, and on the serious results of long-continued wars in draining the population of young men of the most desired type.

For example, in the Roman Empire the minimum age for soldiers was normally seventeen years and the maximum thirty-five. But at various times men were liable to military duty from seventeen to forty-five, and even to fifty and sixty. In the most strenuous times, enrolment was made entirely without reference to age. Rome, in maintaining an army of about 350,000 men, required an annual recruitment of nearly half that number. The time came, however, says Seeck, when actually not more than 10,000 suitable men of Roman citizenship could be raised each year.

In France, Louis XIV in 1701 fixed the minimum height of soldiers at 1,624 mm. But Napoleon reduced it in 1799 to 1,598 mm. (an inch lower), and in 1804 he lowered it two inches further, namely to 1,544 mm. It remained at this figure until the Restoration, when (1818) it was raised by an inch and a quarter, that is, to 1,570 mm. In 1830, at the time of the war with Spain, it was lowered again to 1,540 mm., and finally in 1832 again raised to 1,560 mm. Napoleon had also to reduce the figure of minimum military age.

Taking countries and centuries together, however, the requirements of recruiting and conscription result in making

a selection of a greater or less number of men between eighteen and twenty-five years of age measuring in height and girth of chest not less than fixed minima which are the average of the well-developed racial type of that age, and notably free from infirmity and disease.

For special service a premium is often put on special development and vigour. For example, in the British Army the standard for men in 1786 raised 'for the Light Cavalry and the Infantry shall be five feet five inches; no recruit is to be taken even of that size who exceeds thirty-five years of age, or who is not stout and well made. Lads between sixteen and eighteen years of age, who are well-limbed and likely to grow, may be taken as low as five feet four inches'.[1]

In 1811, while recruits for the infantry were not to be less than five feet five inches nor over thirty years, 'except growing lads may be five feet four inches', those for the light cavalry could not be less than five feet seven inches nor over twenty-five years.[2]

In 1895, while the height requirements for the infantry of the line service had dropped to five feet four inches, the age being between eighteen and twenty-five years, and the chest measurement from thirty-three to thirty-five inches, the height of recruits for the First and Second Life Guards and Royal Horse Guards was fixed at five feet eleven inches to six feet one inch, and the chest at thirty-six inches. Heavy Dragoons were five feet eight inches to five feet eleven inches, with chest of thirty-four to thirty-five inches, the Medium Dragoons at five feet seven inches to five feet nine inches, chest thirty-four to thirty-five inches, and the same for the Lancers. The Light Hussars were from five feet six inches to five feet eight inches, with chest from thirty-four to thirty-

[1] From Military Orders of 1786, 'Regulations and Instructions for Carrying on the Recruiting Service for His Majesty's Forces Stationed Abroad'. War Office, printed 1896.

[2] 'Regulations and Instructions for Carrying on the Recruiting Service of His Majesty's Forces in the United Kingdom of Great Britain and Ireland'. London, 1811.

five inches. In the Infantry the Foot Guards had to measure five feet nine inches and upward, with chest of thirty-four to thirty-five inches.[1]

In other armies where enlistment is voluntary similar premiums are put on extra vigour and development for services which demand special size and chest measurement and which carry special privileges. In armies raised by conscription similar special arms are maintained by selection from among the total body of conscripts.

In addition, however, to meeting the requirements for age, stature, and chest measurement, young men offering themselves for enlistment must undergo a medical examination to determine their physical and mental fitness otherwise. The catalogue of diseases and infirmities the presence of any of which renders the recruit unfit for service and hence determines his rejection, is a long one. At least one-half of the men who offer themselves to the recruiting sergeants of England for enlistment are finally rejected for disease, infirmity, or lack of stature.

For example, in the decade 1893–1902, out of a total 679,703 men offering themselves for enlistment in England, 34·6 per cent were rejected as unfit for service, ·9 per cent were rejected after three months' provisional acceptance, and 2·1 per cent were discharged as invalids within two years. Thus a total of 37·6 per cent of all those applying were turned back into the civil population as not physically fit men. In 1911, of the 64,538 men who offered themselves for enlistment in England, Scotland, and Wales, 28,900, or 44·78 per cent, were rejected for physical unfitness by the examining board.[2]

And these figures by no means reveal the closeness of this selection, for the requirements of height and chest measurements are so well known that men obviously under size or

[1] Regulations for Recruiting, Printed from Her Majesty's Stationery Office, 1895.

[2] These figures are derived from the Great Britain Army Medical Department Reports, published annually in the Parliamentary Papers.

obviously infirm do not offer themselves, or if they do are at once rejected by the recruiting sergeants, so that they never reach the regular examining boards. Evidence presented to the Inter-Departmental Committee on Physical Deterioration in the United Kingdom indicates that out of every one hundred men who offer to enlist in the British Army only forty are accepted, sixty being returned to the civil population as physically unfit. And although it is probably true that the flower of the British working classes do not offer themselves for enlistment, yet it is admittedly true that the British army is not composed exclusively, nor indeed largely, of British riff-raff.

The possible objection that the better classes of young men avoid army service can at any rate have no bearing in the case of France and Germany, where compulsory service obtains. In these countries the whole body of young men arriving at military age each year is liable to service, a certain proportion from it being chosen by lot to join the colours. For nearly a hundred years France has regularly rejected, as physically unfit, from thirty to forty per cent of those examined each year.[1]

It will be of profit to examine a little more in detail the conditions which attend the selection of that part of the population which is to form the army of a nation in which (as in most of the countries of Europe) conscription obtains.

Every Frenchman reaching the age of twenty years—and about sixty per cent of all male children born in France do reach that age—is bound to respond to the obligation of military service. For each year a list is made of all the youths who reached the age of twenty on or before December 31 of the year preceding. This list constitutes the 'class' of the year from which the contingent which shall actually join the colours is chosen. This contingent has of course varied in numbers at different times in the history of France. In the years around 1820, with a population of 30,000,000, the con-

[1] *Comptes rendus du Recrutement de l'Armée*, 1830 to date.

tingents were of 40,000 men; in 1825, the contingents were raised to 60,000; in the forties and early fifties, with a population of about 35,000,000, the annual contingents were 80,000. After that time, with the population slowly climbing toward 40,000,000, the contingents were 100,000 except in 1854, 1855, 1856, and 1859, when they were 140,000. In 1870 and 1871 and since then the contingents have been practically all the young men of the class eligible to service. The number, for each year, of young men in France reaching the age of twenty is now and has been for many years about 250,000.

From each class drawings are made by lot to determine who shall actually compose the contingent for the year. These drawings have to include about twice as many men as the contingent actually numbers, for the Conseils de Revision have to examine just about 200,000 men to find 100,000 that come up to the recruiting requirements of stature and freedom from infirmities. That is, practically every other man, or fifty per cent of the whole, is rejected. In order, then, that France may maintain her standing army in times of peace on its present footing, she has to draft for examination nearly all her young men reaching twenty every year, and actually take nearly one-half of them for actual service under the colours. And this is true also of Germany.

The point of all this consideration of the methods and facts of conscription and voluntary enlistment is that the maintenance of a large standing army results in the temporary or permanent removal from the general population of a special part of it, and the deliberate exposure of this part of it to death and disease—disease that may have a repercussion on the welfare of the whole population to a possibly much greater degree than is apparent at first glance. And this part of the people, so removed and injured, is in quite a special way a part of great importance to the preservation of the racial integrity of the population. For in the first place it is composed exclusively of men, its removal thus tending to disturb the sex

equilibrium of the population, and to prevent normal and advantageous sexual selection. Next, these men are both all of the age of greatest life expectancy,[1] after reaching maturity, and of greatest sexual vigour and fecundity.[2] Finally, they are men none of whom fall below and most of whom exceed a certain standard of physical vigour and freedom from infirmity and disease. And for each of these men so removed from the general population, at least one other man, falling below this standard, has been retained in the civil population.

All this is, in effect, the establishment of a kind of selection, a military selection, whereby a most desirable element of the population is restrained from contributing its full and its particularly important influence in the determination, through heredity, of the racial standard of the population. And this element, as regards numbers of the persons who compose it, is not at all to be regarded as a negligible one in estimating the influences making for racial modification of a population. The standing armies of Germany and France include more than five per cent of each country's men between the ages of eighteen and thirty-five. Provision exists to increase this proportion materially at any period of serious war.

## V

What happens to the soldiers? This is naturally the next question after the determination of the first query, which is, Who are the soldiers? The answer is not a simple one, for many things may happen to them, and numerous things really do. They are, first of all, removed from their homes, for a longer or shorter period, kept together in barracks and

[1] See the actuarial tables of any life insurance company.

[2] Duncan and Lewis have separately shown on the basis of Scottish statistics that the proportion of husband-fathers to husbands is greatest for the age-group 15 to 19 (58·3 per cent), and gradually decreases by five-year age-groups to the end of life (10·6 per cent for the age-group 45–49, 5·1 per cent for 50–54, and so on).

camps, exercised and trained physically and to some extent mentally, and influenced, for weal or woe, to some extent morally. But of most of these happenings it is difficult to get any even approximate measure of the extent, and hence difficult to speak with any considerable degree of certainty of their good or ill results. But of certain other happenings, namely disease and death, more definite statements can be made.

It is, in the first place, obvious that in war-time there is a higher death-rate among soldiers, that is among the members of this selected part of the population, than in the population outside of the soldiers. The disproportion of these two death-rates can, of course, and does in times of serious war, become very considerable.

It is not so obvious that these death-rates should be markedly different in times of peace. Yet until very recent years, the death-rate from disease in all armies, in times of peace, has been notably higher than that of the civil population. And this has not been due alone to the extra-prevalence of such characteristically army barracks and army camp diseases as enteric (typhoid) fever, dysentery, &c., but the death-rate from other diseases which should not, on the face of it, be particularly encouraged by barrack life, has been higher among soldiers than among civilians.

The annual deaths from typhoid fever in the civil population of France during the seventies and eighties averaged about five per 10,000 inhabitants, while in the army at home they averaged nearly thirty.[1] In the thirteen years previous to 1888 the total number serving in the French army in France, Algeria, and Tunis amounted to 5,375,409 men, with a mean annual strength of 413,493 men. The mean annual number of cases of typhoid in the army were 11,640 or one typhoid case to every thirty-six soldiers. It must, however, be borne

[1] Figures derived from *Recueil des Travaux du Comité consultatif d'Hygiène publique de France*, vols. xviii (1888), xx (1890), xxi (1891), and xxix (1899).

in mind that the incidence of typhoid fever is particularly heavy at the age-period from fifteen to thirty, which include most of the army ages, and is particularly light at the ages from thirty-five on, which are ages well represented in the civil population.

In recent years typhoid has notably been brought under control in the French army. In the years 1875 to 1889 the army in 329 garrisons in France lost an annual average of 25·5 per 10,000 men by typhoid. In the years 1890–6 the loss in the same garrisons was but 10·7 per 10,000 men. In the years 1876–80, deaths from typhoid in the whole French army averaged 32·1 per 10,000 men; in 1881–5, 24·3 per 10,000 men; in 1886–90, 16·4 per 10,000 men; in 1891–5, 11 per 10,000 men; in 1896–1900, 8·7 per 10,000 men; in 1901, 5·7 per 10,000 men.[1]

Phthisis or consumption is, or was, notoriously prevalent in most of the European armies. The following table computed in 1887 by Sir Robert Lawson, Inspector-General of Military Hospitals in England, shows the proportions of deaths from phthisis in the British army through nearly fifty years compared with that for men of the same ages in the civil population:

| | *Deaths from phthisis in army as they should have occurred according to civil population rates per* 1,000. | *Deaths from phthisis as they actually occurred in the army, per* 1,000. |
|---|---|---|
| 1837–46 | 5·09 | 9·38 |
| 1860–4 | 3·63 | 5·77 |
| 1865–9 | 3·81 | 4·83 |
| 1870–4 | 3·39 | 4·64 |
| 1875–9 | 3·21 | 4·67 |
| 1880–4 | 2·70 | 3·63 |

As a matter of fact the modern conditions of barrack and camp life should make the death-rate among soldiers notably less than among men of the same ages in civil life. The army is one of the first places in which modern medicine and

[1] From the Report of the Commission supérieure consultative d'Hygiène et d'Épidémiologie militaires, made to the Minister of War in 1906.

sanitary engineering find welcome and immediate practical appreciation. Add to this the selected character of the individual soldiers, received into the army only after passing an inspection which weeds out most organic and all obvious disease or infirmity, and the conditions are such that a notably low death-rate in the army at home in peace time should obtain.

A notable disproportion, however, between civil and army death-rates, in favour of the latter, does not yet appear, although a beginning in favour of the soldiers is manifest. For example, the Annual Report for 1909 (published in 1912) of the Registrar-General for England and Wales, the annual mortality of males of the civil population of age twenty is put at 3·658 per 1,000; of age twenty-five, 5·271 per 1,000; and of age thirty-five, 9·102 per 1,000. For the same year the British army at home (i.e. in England and Wales) had a death-rate of 3·1 per 1,000. Its soldiers are mostly included in the ages between twenty and thirty-five. These figures show a distinct disproportion in favour of the army.

But if the death-rate of the soldiers in times of peace is now perhaps no greater or is even less than the rate for men of corresponding age in the civil population, there is no question that it is much greater in times of war; and this from two causes, first, the actual mortality of battles, and, second, the almost always greater mortality from disease. For the protection from disease thrown around the soldiers in times of peace breaks down in war time. The exigencies of hasty camping, the undue crowding, the lack of care of food and water supplies, and the necessary exposure and over-exertion incident to protracted fighting and swift moving, or long sieges, or of being besieged, inevitably result in conditions of morbidity far graver than those that prevail in barracks in time of peace.

The imposing figures of actual human mortality due to war have drawn the attention of many students of human biology. To state that 5,000,000 men were lost in the twenty years of

the Wars of the Revolution and of the Empire is indeed to give food for thought. And one becomes more thoughtful when one learns that one-third of all these lost men came from a single nation whose total population at the beginning of the period was but 25,000,000. The Thirty Years' War is reputed to have cost Germany nearly three-fourths of her fighting men. In the third quarter of the nineteenth century the direct war losses totalled several millions.

The actual losses in dead and severely wounded in battle cannot well be summated as an average, but must be given as percentages or actual figures for specific battles and campaigns. At Austerlitz, for example, the French lost fourteen per cent, the Russians about thirty per cent, and the Austrians the enormous proportion of forty-four per cent of the men engaged. At Waterloo the French lost about thirty-six per cent and the English and Prussians about thirty-one per cent. Taking a score or more of the more important and unusually bloody battles of the last three centuries, the losses on both sides together of dead and wounded run from twenty per cent to thirty-five per cent. In many bloody battles the losses of a single side have gone up to fifty per cent. These are of course the higher figures. At Magenta the French lost seven per cent and the Austrians eight per cent; at Lützen the French lost about thirteen per cent and the Prussians and Russians fourteen per cent. At Antietam one man out of every five engaged was killed or wounded. In fourteen months the English army under Wellington in the Peninsula lost four per cent by gun-fire, but it lost twelve per cent from disease.

And this brings us to the consideration of the proportion between the losses in war-time by gun-fire and by disease. It is notorious that the losses by disease in any protracted campaign are much greater than those due to gun-fire. The Duke of Wellington laid it down as a rule that in all times the sick list of an army on active service amounts to at least 10 men in 100. But the data show that actually 20 men to 100 were constantly sick in Wellington's Peninsular army.

In October 1811, 330 men per 1,000 of his whole strength were in the hospitals.

The highest rate of sickness among the French soldiers in the Peninsular War was 194 per 1,000, the lowest 103 per 1,000, and the average 130 per 1,000.

During the Napoleonic campaigns there were several instances of the loss of more than half a total army from disease, and almost as severe losses were met with in the Crimean Wars. 'In the month of January, 1855, the mortality by disease in the English army in the Crimea exceeded the mortality of the terrible month of September of the Great Plague in London in 1665' (Laveran).

During the long continuous war period of 1793 to 1815 (only one or two years of peace in all this time) the annual ratio of mortality from all causes in the English army was 56·21 per 1,000. The mortality from disease (from 1793 to 1812) was 49·61 per 1,000. The loss from disease was seven times as great as that from gun-fire.

The ten to thirty per cent of mortality by gun-fire in such bloody affairs as Austerlitz and Wagram, Moscow, Lützen, Magenta, Solférino and Waterloo was increased by disease in the same campaigns to the appalling proportion of sixty and even seventy per cent.

Turning to more modern wars, we find no change from the rule that disease reaps an inevitable harvest from the armies in times of war, and a harvest practically always larger than that from gun-fire. It is a death-rate also that is always much greater than the death-rate for the same time in the civil population.

In the short decisive Franco-Prussian War of 1870–1 the losses by gun-fire nearly equalled those by disease, but the extension of the war for but a few months longer would have increased materially the disease losses.

In the late Spanish-American War the United States, with a modern scientifically-advised war department, lost ten times as many men by disease as by gun-fire.

Japan is the only nation that has maintained a fairly effective control of disease during serious war. But this only makes the terrible losses of its army by gun-fire, mines, &c., stand out the more vividly.

There is, however, no question in any one's mind of the actual mortality both from gun-fire and from disease in the ranks of the soldiers during times of war. That is indeed the most conspicuous and dramatic part of war, this bloody and pitiful sacrifice of the men directly engaged in it.

Another aspect of this matter of mortality, however, and one not so evident, is that of an increase in the death-rate among the civil population of a state seriously engaged in war. Dr. Dumas has recently shown that the death-rate in the civil population of both France and Germany was noticeably higher in 1870 and 1871 than in the years immediately preceding and immediately following these two years of strenuous war. In France, for example, it was 2·34 per 100 in 1869, 2·83 in 1870, 3·48 in 1871, and 2·19 in 1872. Dumas found similar examples in the mortality records of Austria, Denmark, and Germany.

There have been recorded many specific observations of the introduction or distribution of disease in the civil population by the movements of armies or return home of soldiers from a distant war. The diffusion of typhus in Europe by the Napoleonic Wars, the introduction of syphilis into Scotland by Cromwell's troops and into Sweden in 1762 by the Swedish troops returning from the Seven Years' War, are examples. During Napoleon's Egyptian campaign nearly every soldier out of an army of 32,000 men was affected by trachoma, and the return of these soldiers initiated a spread of the disease through almost all the European armies. The great European epidemic of small-pox of 1871, especially notable in Germany, is believed to be associated with the Franco-Prussian War. Clemow declares, indeed, that there is scarcely a war in ancient or modern times which does not furnish examples of the special distribution of disease.

But great mortality in itself is not necessarily a great racial catastrophe. Indeed it is, in the face of the geometrical progression by which reproduction advances, one of the veritable conditions of advance in animal life. Throughout all the kingdom of life, plant as well as animal, the overproduction of individuals and their reduction by death to a fractional part of the original number is one of the basic conditions of progress, if Darwinism is a sound explanation of organic evolution. For this death will be in the nature of things selective, and hence will make for the modification of the species toward a condition of better adaptation to life conditions. Indeed, the upholders of war have used precisely the argument of war's real beneficence to the race. Ammon, for example, consistently develops this thesis, cold-bloodedly, to its logical extreme, and Seeck and numerous others are attracted by it in certain degrees.

The crux in the matter is the character of the selection which this mortality determines. We have just referred to three different categories of mortality produced by war: a mortality among the civil population; a mortality among the soldiers due to exposure and disease; and a mortality among the soldiers due to gun-fire, &c., in actual fighting. We may now consider each of these categories in their relation as a possible influence on race modification.

## VI

If the incidence of the increased mortality in the civil population from disease during serious and protracted war falls on all the population alike, and it is serious enough to have a selective value, it cannot fairly be counted in the scale against war; that is, against war as a dysgenic influence. It must stand on the same footing as disease induced by any other special social conditions. If disease tests a people and leaves behind it a population rid of its weaker and non-immune elements, as the rigorous natural selectionist students

of human biology maintain, then disease in the civil population specially engendered by war may be looked on as beneficial.

And this same reasoning might at first sight seem to apply to the mortality due to disease among the soldiers. If it did apply, then war would largely be in truth a brutal and cruel but purifying and eugenic factor in race-modification. For the mortality in armies due to disease in war-time, and in peace-time also in all armies except those cared for according to the standards of modern science, is a great mortality. Indeed, it is disease that is, as already pointed out, the principal cause of the high death-rate in armies.

But the difference between the race-modifying influence of disease striking the whole population generally and disease striking soldiers alone is that in the latter case it is striking exclusively and unusually powerfully an already selected part of the population, and one of particular racial value to the people—its vigorous, full-sized, and clean-blooded young men. Almost every man lost from this group is a eugenic loss to the population. It is a weakening of that part or element of the population on which the race particularly depends for vigour and physical well-being. It is a happening which gives special opportunity to a weaker element in the population to reproduce itself, and thus to increase its proportion within the race, and to give the race a stamp more like itself.

It is undoubtedly true that disease raging among soldiers, especially such a prevalent zymotic disease as enteric fever, does exercise a definite selection within the army. It destroys first the weaker and less immune. To that extent it re-tests this already tested part of the population. After the experience of exposure to army life, those soldiers who return to the civil population may be looked on as an extra-selected group, as far as physical vigour and resistance to disease goes. But the lessening of its numbers for the sake

of this advantage may well be looked on as a calamity outweighing the advantage. For already it was a group distinctly above the average in strength and physical make-up, but limited in numbers, and any reduction of these numbers must be viewed as a racial danger.

With regard to the mortality among soldiers due to the gun-fire, mine explosions, &c., of actual battle there can be no question. It is a mortality itself practically non-selective —or if selective, actually removing first the braver and hardier—working on an already selected group of the population. Its influence, to whatever extent it exists, is all dysgenic in effect.

There must be recognized, of course, in connexion with any attempt to weigh the effects of war on the soldiers participating in it, and hence on the two or more populations furnishing these selected parts of themselves for its maintenance, that differences in the duration and the seriousness of the campaigning and fighting may entail considerable differences in the effect on the populations. A swift decisive war should entail, not only by its lower percentage of losses but by the very character of its selective working, less injurious effects than more protracted and exhausting wars. A certain quick and positive exposure to privations and diseases of militarism may quickly rid an army of the few weak and non-immune members of the soldier group, where the longer exposure and continued strain would injure even the best of the group. It will be noted, in fact, in the next section of this paper, that certain measurable race-modifying results of the severe but short Franco-Prussian War of 1870–1 seem to uphold this statement of a possible eugenic effect of war. In contrast, however, will be noted what I believe to be the statistical proofs of the seriously race-injuring effects on the French people of the long and terrible wars of the Napoleonic campaigns.

## VII

The methods of organizing and maintaining armies determine that a particular part of the population, especially selected for sex, youth, physical development, and vigour, shall compose the army and be especially exposed to the destructive effects of war. These effects are such as to increase notably the death-rate in this selected part of the population over the death-rate in the rest of the population. These facts, added to our biological knowledge of heredity and the method of the production of racial modifications through selection and inheritance, tend strongly to create a presumption in favour of the probability of the racially disadvantageous working of exaggerated militarism. A human population exposed to any considerable degree of military selection ought to be, in the light of these conditions, racially injured by it. We may ask, now, if there is any direct evidence of this injury.

To an attempt to find an answer to this question I have devoted not a little time and energy. I realized from the beginning of this attempt that the obvious complexity of the influences that may affect human racial modification made the search a very difficult one. The difficulty, alluded to in the second section of this report, of distinguishing between modifications in the structural and physiological character of a people or population due primarily to selection and heredity, and those due to external influences affecting a single generation or several generations in their developmental stages—that is, in the immature or forming periods of the individuals composing the generations—is a difficulty very real, and one very well adapted to make an unequivocal answer to our important question nearly impossible to obtain. Add to this the meagreness and the possible unreliability of the vital statistics, and the necessity, for the sake of safe interpretation, of a considerable knowledge of the industrial life and social conditions of the population

which these statistics concern, and the difficulty increases. Yet in the face of all this I believe that the attempt to test the workings of military selection by appeal to vital statistics is not a hopeless one, and that from examination and analysis of a certain group of statistics and facts I am justified in making some positive affirmation in regard to the racial effects of militarism.

This group of facts is contained in the records of stature and physical condition of practically all the young men of France arriving at the age of twenty in each of the years since 1816 to the present time, contained, since 1830, in the official Comptes rendus du Recrutement of the French army, and before 1830 in the official records of the War Office, available for reference although not published.

These figures give a fair measure of the variations in physical condition of the French people through a century.[1] As these records concern a whole great body of people not at all homogeneous as to race, nor existing under identical climatic, industrial, and social conditions, but all exposed to the one common rigorous condition of liability to military service and equally shared exposure to the selective effects of conscription and war, we have in them an indication and measure of the race-modifying action of this common influence.

It is necessary to consider these figures in a large way. It is highly probable that in times of war or threatened war, with the necessity of taking larger contingents from the annual classes, the rigour of the examinations for fitness may be relaxed so that fewer young men would be exempted, and the leaning of the measurers would be toward securing larger figures of height rather than smaller ones. Also, it is important to recognize that varying environmental

[1] I have taken full cognizance of the severe criticisms of recruiting statistics by Bischoff (*Ueber die Brauchbarkeit der in verschiedenen europäischen Staaten veröffentlichten Resultate des Rekrutirungs-Geschäftes zur Beurtheilung des Entwicklungs- und Gesundheits-Zustandes ihrer Bevölkerungen*, 1867, München), and find them strongly overdrawn.

(industrial, &c.) conditions in separate small homogeneous parts of the country running their influence through one, two, or a few years together, may influence the physical condition of the young men coming of age in directions opposed to the larger, less acute movement of selection and inheritance. But by taking the country and the population all together, and the years in a full and extended series, opportunity is given the movement by heredity, that is, the really racial movement, to make itself manifest. And the character of the recruiting statistics is exactly that which should reveal such a racial movement, if it exists at all.

From these recruiting statistics, as officially recorded, it may be stated with confidence that the average height of the men of France began notably to decrease with the coming of age, in 1813 and on, of the young men born in the years of the Revolutionary Wars (1792–1802), and that it continued to decrease in the following years with the coming of age of youths born during the wars of the Empire. Soon after the cessation of these terrible man-draining wars, for the maintenance of which a great part of the able-bodied male population of France had been withdrawn from their families and the duties of reproduction, and much of this part actually sacrificed, a new type of boys began to be born—boys who, indeed, had in them an inheritance of stature that carried them, by the time of their coming of age in the later 1830's and 1840's, to a height one inch greater than that of the earlier generations born in war-time. The average height of the annual conscription contingents born during the Napoleonic Wars was about 1,625 mm.; of those born after the Wars, it was about 1,655 mm.

The fluctuation of the height of the young men of France had as obvious result a steady increase and later decrease in the number of conscripts exempted in successive years from military service because of undersize. Immediately after the Restoration, when the minimum height standard was raised from 1,544 mm. to 1,570 mm., certain French

departments were quite unable to provide their full complement of recruits, under the standards of height and vigour that had been adopted.

Running nearly parallel with the fluctuation in number of exemptions for undersize is the fluctuation in number of exemptions for infirmities. These exemptions increased by one-third in twenty years. Exemptions for undersize and infirmities together nearly doubled in number. But the lessening again of the figure of exemptions for infirmities was not so easily accomplished as was that of the figure for undersize. The influence of the Napoleonic Wars was felt by the nation, and revealed by its recruiting statistics, for a far longer time in its aspect of producing a racial deterioration as to vigour than in its aspect of producing a lessening of stature. And the importance in war, or in anything else, of vigour and capacity over size has been well shown us in late years by the Japanese.

Certain statistics have been interpreted to indicate an opposite result of the working of military selection, or, at least, an absence of any positively ill results, such as I have just indicated for the Napoleonic Wars. Livi,[1] for example, has attempted to show on the basis of the Italian data, the absence of any disadvantageous working of military selection on the Italian peoples, but from his own statistics I gain a different conclusion. While he seems able to make out a case against the thesis of racial injury from militarism, through comparative statistics for certain of the northern departments, his figures tell a different story for North Italy as a whole. There a quantitative race-deterioration in certain critical periods is demonstrable.

The apparent possibility of an actual racial advantage from the selective influence of a short, swift war which may serve to go no further in its destructiveness than to weed out the weaker from the armies and return fairly intact the stronger and the great majority of the whole after only

[1] R. Livi, *Antropometria militare*, 1893, Rome.

a short absence from home, seems illustrated by the figures for the physical condition of the French recruits for 1892 (class of 1891) from the Dordogne. These figures have been commented on by Collignon [1] in his study of the physical character of the population of the Dordogne. The recruits of the class of 1891 are those conceived and born during the year 1870 and the first three months of 1871, that is during and immediately after the Franco-Prussian War. The recruiting statistics show that these recruits, although of lower average height than recruits of the ten years just before, were especially vigorous and free from infirmities, as indicated by the fewer exemptions for unfitness by reason of infirmities. This latter condition Collignon explains on the basis of the preponderance in number of vigorous young men included in this class born in November and December 1871 as the children of fathers just returned in March and April from the war. These returning soldiers were the stronger of those who went away the year before, the weaker having been eliminated by disease during the campaign. Ammon [2] has also pointed out that no lesser stature is shown by the Badenese recruits of the early nineties, which include the recruits conceived in 1870 and 1871 and immediately thereafter, than by the classes of other years. If war had worked an injurious selection these classes of the early nineties should show it.

But in these attempts to see serious significance in the statistics for a year or two concerning the recruits of a limited region, the totals being small, and the special environmental conditions, hence possible influence on the stature of a given geographic and chronologic group of young men being not especially inquired into, one can only recognize the difficulty and danger that must attend most efforts to get at this complex matter. As a matter of fact, Vacher de Laponge

[1] R. Collignon, 'Anthropologie de la France : Dordogne,' in *Mém. de la Soc. d'Anthrop. de Paris*, série III, tome i, 1894.

[2] Ammon, Otto, *Zur Anthropologie der Badener*, 1899, Jena.

(*Les Sélections sociales*) comes to very different conclusions from an analysis of the recruiting figures for the classes of 1891–2 from the Hérault. He finds that in certain cantons the average stature of the recruits of these classes is less than that of earlier classes.

## VIII

I have reserved for a final section the presentation of certain facts and a brief discussion of them, which refer to the conspicuous presence and prevalence among soldiers of a certain disease or small group of diseases that have an unusual importance in their relation to race deterioration.

Not all nor most soldiers attacked by disease during war-time or in barracks in peace-time die from its effects. But the excessive prevalence of disease, especially of certain types of disease, can be, nevertheless, of real dysgenic influence, however difficult it may be to get at the importance of this influence in any quantitative way. The problem of the inheritance of disease, or of the inheritance of the diathesis of disease, is only in the last few years coming to receive the scientific elucidation necessary to its proper consideration from the eugenic point of view. And the racial effect of the injury to a selected group of young men by disease, outside any question of the direct transmission of disease by inheritance, is a matter that might well be given a serious and careful attention by students of the relation of excessive militarism to racial integrity. It has not yet had such attention.

But concerning the congenital transmission and racial importance of one terrible disease, or group of diseases, and one that more than any single other is characteristic of military service, there is no shadow of doubt. It is a disease communicable by husband to wife, by mother to children, and by these children to their children. It is a disease that causes more suffering and disaster than phthisis

or cancer. It is a disease accompanied by a dread cloud of other ills that it causes, such as paralysis, malformations, congenital blindness, idiocy, and insanity, all of them particularly dysgenic in character. It is a disease that renders marriage an abomination and child-bearing a social danger. And as a crowning misfortune, this disease does not kill, but only ruins its victims. While phthisis and cancer carry off their subjects at the rate,[1] in England to-day, of 1,000 per year to each 1,000,000 of population, syphilis kills but 50 persons a million. It is, then, not a purifying but wholly a contaminating disease. It does not select by death. It is a disease of great possibilities and importance in relation to racial deterioration.

Syphilis and the other venereal diseases are a scourge fostered especially by militarism. The statistics reveal this at once. Venereal disease is the cause of more hospital admissions among soldiers than any other disease or group of related diseases. It caused 31·8 per cent of the total military inefficiency in the British army in 1910.[2] It was the cause of one-fifth of all the British military hospital admissions for that year, yet it caused but one one-hundredth of the total military deaths. It causes one-third of all the illness of the British navy, both at home and abroad. In 1910 the navy force included 113,530 men, of whom nearly 15,000 were ill of venereal diseases. From 1865 to 1872 the hospital admissions of soldiers in the United Kingdom for venereal diseases averaged more than one case to every five men, in some years four men, in the army. In the fourteen years ending 1883, the average admission rate for the whole British army in India for venereal disease was 225 cases per 1,000 men. In 1895 these admissions reached the enormous proportion of 537 per 1,000 men. I hasten to add

[1] These and other similar data in this section are derived from the Annual Reports of the Registrar-General for England and Wales.

[2] These and other similar figures in this section are derived from the British Army Medical Reports.

that this frightful condition has been greatly ameliorated. In 1900 there were but 295 cases per 1,000 men. But even this is nearly one for every three men!

In very recent years the figures for the British army have been notably lowered. In 1908, for example, the lowest figures on record up to that time were reached. These were 76·8 hospital admissions per 1,000 men of total strength of the troops in the United Kingdom and Europe. From 1903 to 1907 the average admissions were 122·3 per 1,000 men of the whole army. For the troops in the United Kingdom the average was 95 per 1,000; in India, 165 per 1,000; in Egypt, 210 per 1,000; and in North China, 335 per 1,000.

Nor is the British army by any means the greatest sufferer from the scourge. The army of the United States has twice as many hospital admissions for the same cause. Russia has about the same percentage as Great Britain, Austria and France less, and Germany least of all. Germany, indeed, has done much more to control the disease than any other great nation, unless it be Japan, for which I have not been able to get data. The following figures from the British Army Medical Report for 1910 show the rates of prevalence of venereal disease in different armies:

| | | |
|---|---|---|
| Germany | 1905–6 | 19·8 per 1,000 |
| France | 1906 | 28·6 „ „ |
| Austria | 1907 | 54·2 „ „ |
| Russia | 1906 | 62·7 „ „ |
| United Kingdom | 1907 | 68·4 „ „ |
| United States | 1907 | 167·8 „ „ |

A measure of the prevalence of syphilis and other venereal disease in the civil population is difficult to get at. But certain facts are most suggestive. Of the young men who offered themselves for enlistment in the British army in 1910, 15 per 10,000 were rejected because of syphilis, while for the same year in the army, 230 per 10,000 were admitted to hospital with syphilis. And for all venereal disease the proportion was 31½ per 10,000 of those applying for enlistment rejected, and 1,000 per 10,000 of those in the army

admitted to hospital. In the ten-year period, 1899–1908, 2·28 men per 1,000 offering themselves as recruits in the United Kingdom were rejected because of syphilis.[1] During the same period the hospital admissions in the army in the United Kingdom averaged annually more than 100 per 1,000 men. In other words, while the army recruiting-boards discover in the civil population and reject back into it but two or three syphilitic men per 1,000, the army finds within itself a constant proportion of attainted men of many times that number.

I have said that venereal disease ruins but does not kill. It does not select itself out by death. The deaths from venereal disease in the British army have rarely ranked more than one to 1,000 of strength, while the cases have ranked as high as 500, and only in the last few years have got as low as 100. Deaths from venereal disease in the civil population of England and Wales were, for 1909, from syphilis 47 per 1,000,000; from gonorrhœa, one per 1,000,000. The total deaths from syphilis in Paris in 1909 were ·397 per 10,000 inhabitants, of which ·24 per 10,000 were of children under one year of age.[2] The deaths from tuberculosis of the lungs were 40·53 per 10,000 inhabitants; from heart disease, 13·67 per 10,000.

It is obvious from these figures that venereal disease finds in armies a veritable breeding-ground. That such disease is highly dysgenic, i. e. race-deteriorating in influence, is indisputable. The frightful effects of syphilis, and its direct communication from parents to children, are fairly well known popularly. But with regard to the serious effects of

[1] It is, of course, not maintained that the comparison gives a fair view of the relative prevalence of syphilis in the army and in the civil population. Men suffering from syphilis in its acute phases do not frequently offer themselves as recruits, as it is generally known that such men will be rejected. Nevertheless, the percentage among recruits could hardly be so low if the disease were as common in the civil as in the military population.

[2] *Annuaire statistique de la Ville de Paris*, Année xxx, 1909 (pub. 1910, Paris).

gonorrhœa, the popular mind is not equally well impressed. Indeed, it is too commonly regarded as a mild and not very shameful disease. But medical opinion is really doubtful whether it is not, in some of its effects, as bad as or even worse than syphilis. About fifty per cent of women infected are made barren by it. Many are made chronic invalids. It is the commonest cause of infant blindness (*ophthalmia neonatorum*). In Prussia, 30,000 such blind persons are to be found.

The congenital transmission of venereal disease is what gives it its particularly dysgenic importance. Such transmission has all the force of actual inheritance. Indeed, if tainting the germ-cells so that the fertilized egg is predetermined to develop into a syphilitic individual is heredity, then syphilis is literally an hereditary disease. But as between a taint at conception and one at birth, either of which can be handed on to successive generations, there is little choice from the point of view of the student of race-deterioration. The effect is typically that of heredity transmission. Indeed, as an authority has strongly put it, 'Syphilis is the hereditary disease *par excellence*. Its hereditary effects are more inevitable, more multiple, more diverse, and more disastrous in their results on the progeny and the race than in the case of any other disease. Syphilis, in fact, has a more harmful influence on the species than on the individual.'

### Summary

As the incidence of the deaths from the wounds and disease of war falls not at random on the general population but on a specially selected part of it, namely, its sturdy young and middle-aged men, and men often not alone of especial physical fitness but of unusual boldness and loyalty of spirit, and as these deaths may in times of severe and protracted wars be very considerable in number and take a heavy toll for several or many successive years from this particular part of the

population, thus lessening materially the share which it would otherwise take in the reproduction of the population, it would seem to be inevitable, in the light of the knowledge of the reality of race-modification by selection, that serious wars should lead to a racial deterioration in the populations concerned. And such is actually the claim made by not a few philosophical biologists, sociologists, and anti-militarists. Little attempt has been made, however, to find and expose any specific and measurable instances of race-deterioration produced by military selection. Yet there has been enough war, and war serious enough in its mortality, to reveal this result if it does actually occur. It is desirable, therefore, to test the logical claim of a race-deteriorating effect of military selection, by a scrutiny of facts.

The serious undertaking of a study of the possible race-modifying results of militarism makes manifest immediately very great difficulties in distinguishing between the possible racial injuries produced by military selection and the more temporary personal injuries to many or all of the individuals of a population produced in a few or even many successive years by unfavourable environmental conditions coincident, or even directly associated, with war. It is also conceivable that there are certain possible advantages to a population from war, particularly from wars that are not too serious or protracted. Also, the care and training of soldiers in times of peace may be of such a nature as to seem to be racially advantageous to the population. There may also exist at any given time, in the complexity of influences making toward race-modification, such ones tending toward race-betterment as may mask or overcome a single, even important, one tending toward race-deterioration. Thus there may be cases of populations exposed at times to serious war, which, despite the actual race-deteriorating influence on them of this war, may show in their history a steady racial improvement, due to the favourable resultant of the many other influences forming the great complex of race-modifying conditions.

In this preliminary contribution of the results of a special study undertaken to test the claim that excessive militarism must lead to race-deterioration, or at least must be an influence making for race-deterioration, three points, all of which go to substantiate this claim, are particularly brought out: first, the conditions of the formation of armies (selection of soldiers); second, a case of actual, measurable, physical, racial deterioration caused by excessive militarism; third, the conspicuous association with militarism of certain race-deteriorating diseases.

The recruiting of soldiers from the general population, both by the methods of voluntary enlistment and of compulsory service and conscription, results in the rejection back into the general (civil) population of just about one-half of the young men offering themselves voluntarily or forming the annual classes reaching the military age, for physical unfitness (undersize or infirmities and disease), and the acceptance and taking out temporarily or, in case of death in war, permanently from the general population of the other half of these groups of young men. These groups form a fraction of varying size of the general population especially characterized by good physical development and vigour. This selected fraction is then prevented for a longer or shorter time from taking part in the reproduction of the population and is deliberately exposed to the extinguishing and weakening effects of war, if war comes, and whether war comes or not, to an unusual degree of danger of contracting certain race-deteriorating diseases. The men rejected as unfit for service in the army and retained in the civil population are given, therefore, special opportunity and importance in the reproduction of the population. Thus the methods of the selection of soldiers and the condition of the maintenance of armies combine to form a positive factor of race-deterioration.

For a hundred years France has had a compulsory army service, all of its young men arriving at military age (twenty years for most of this time) being liable (if physically fit and

not subject to exemption for any one of a few other causes) to be called to join the colours. Those who actually are called are determined, first, by a drawing of lots, and then by an examination for physical fitness. This annual examination of a considerable fraction (from one-half to nearly all) of the young men of France reaching the age of twenty, the results of which are preserved in the official records of the War Department, and are accessible for examination, affords students of race-modification an important source of evidence touching the racial modification of the French people in the last century. Any physical racial changes indicated by these statistics are not those simply of a small isolated and homogeneous population subject to common environmental changes due to varying industrial conditions, but are those of a large and heterogeneous population with comparatively few common factors of selective or environmental influence. One such important factor that has determined a selective influence in the history of the French people is the bloody and protracted series of Wars of the Revolution and Empire (the Napoleonic Wars). The race-modifying character of the military selection of this period and of the cessation of this selection after the end of the wars is shown by the fact (revealed by the statistics of recruitment just referred to) that the average height of the men of France began notably to decrease with the coming of age in 1813 and on of the young men born in the years of the Revolutionary Wars, 1792–1802, and that it continued to decrease in the following years with the coming of age of youths born during the Wars of the Empire; and, then, that with the coming of age, about 1840 and thereafter, of the boys born in the years after these wars the stature began to increase and continued until it reached a height one inch greater than that of the earlier generations born in war-time. The average height of the annual conscription contingents born during the Napoleonic Wars was about 1,625 mm.; of those born later it was about 1,655 mm. The recruiting statistics show also a fluctuating

increase and then decrease of numbers of exemptions made necessary for infirmities and diseases running parallel with this decrease and then increase in height. That is, the race-modifying influence on the French people of the military selection due to the Napoleonic Wars was to reduce the stature and increase the youthful infirmities and disease (due to inherited lack of vigour and disease-resistance) of its male population. And the cessation of this military selection resulted in an increase in stature and decrease of youthful infirmity and disease.

The racial effect of venereal disease (syphilis, gonorrhoea) is admitted. Syphilis may be transmitted from man to woman, from woman to her children, and from these children to their children. It manifests itself in many and terrible forms, all of them weakening and degenerating in character, but its death-rate is very low. Gonorrhoea, although familiarly held to be a disease of no very serious consequences, is being discovered to have very serious consequences indeed, and consequences of particular race-weakening character. It is transmissible from man to woman and produces, as a very common result, chronic invalidism and barrenness on the part of the woman and congenital blindness of her children. Venereal disease is extraordinarily fostered by militarism, as the medical statistics of all War Departments show. Only Germany, and perhaps Japan, and these countries in only very recent years, have brought venereal disease in their armies under some reasonable degree of control. In the ten-year period 1899–1908 2·28 men per 1,000 offering themselves as recruits in the British army in the United Kingdom were rejected because of syphilis. During the same period the hospital admissions in the army in the United Kingdom averaged annually more than 100 per 1,000 men of strength. In other words, while the army recruiting boards discover among the young men offering themselves for service but two or three syphilitic men per 1,000, the army finds within itself a constant proportion of attainted men of many times

that number, and most of these men, who are not killed in service, are returned, attainted and racially dangerous, to the general population. Deaths from all venereal disease in England and Wales average about fifty per million inhabitants. Deaths from such diseases as phthisis and cancer are nearly one hundred times as many. Venereal disease is racially contaminating and deteriorating. It does not select the less vigorous types by death. It is a very harmful influence on the species, and it is an influence strongly fostered by militarism.

# INDEX

# GENERAL APPENDIX

## PUBLICATIONS OF THE DIVISION OF ECONOMICS AND HISTORY

THE Conference which met at Berne in 1911, under the auspices of the Division of Economics and History of the Carnegie Endowment for International Peace, appointed three Commissions to draft the questions and problems to be dealt with by competent authorities in all countries. The first Commission was entrusted with *The Economic and Historical Causes and Effects of War*; the second with *Armaments in Time of Peace*; the third with *The Unifying Influences in International Life.* Subsequently the suggestions of the three Commissions were considered and approved by the entire Conference.

The questions are to be discussed scientifically, and as far as possible without prejudice either for or against war; and their discussion may have such important consequences that the questions are presented below *in extenso.*

### Report of the First Commission

THE ECONOMIC AND HISTORICAL CAUSES AND EFFECTS OF WAR

The Conference recommends the following researches:

1. Historical presentation of the causes of war in modern times, tracing especially the influence exercised by the striving for greater political power, by the growth of the national idea, by the political aspirations of races and by economic interests.

2. Conflicts of economic interests in the present age:

(*a*) The influence of the growth of population and of the industrial development upon the expansion of States.

(*b*) The protectionist policy; its origin and basis; its method of application and its influence upon the relations between countries; bounties (open and disguised, public and private); most-favoured-nation treatment; the attitude towards foreign goods and foreign capital; the boycott; discouragement of foreign immigration.

(*c*) International loans; the policy of guarantees; the relations of the creditor to the debtor States; the use of loans for gaining influence over other States.

(*d*) Rivalry among States with respect to capitalist investments in foreign countries:

1. The endeavour to obtain a privileged position in banking enterprises, in the opening and development of mines, in the letting of public contracts, in the execution of public works, in the building of railways (Siberian, Manchurian, Persian Bagdad Railway, Adriatic Railway, &c.); in short, the organization of larger capitalistic enterprises in foreign countries.

2. The hindering of foreign countries by convention from executing productive enterprises on their own soil, e.g. from building railways in their own countries.

3. The anti-militarist movement, considered in its religious and political manifestations. (Only opposition to all military organization is here to be considered.)

4. The position of organized labour and the socialists in the various States on the questions of war and armaments.

5. Is it possible to determine a special interest of individual classes making for or against war, for or against standing armies?

6. The influence of women and woman suffrage upon war and armaments.

7. The extension of obligatory military service in the different States, in times both of war and of peace.

(*a*) The conditions of military service; the system of enlistment and of general obligatory service, the actual position of aliens.

(*b*) The ratio of the persons obliged to render military service to the entire population.

(*c*) The influence of the present system of military obligation and the organization of armies upon warfare and upon its duration.

8. The economic effects of the right of capture and its influence upon the development of navies.

9. War loans provided by neutral countries; their extent and influence on recent warfare.

10. The effects of war:

(*a*) Financial cost of war. The methods of meeting it: Taxation; International Loans; External Loans.

(*b*) Losses and gains from the point of view of public and private economic interests; checks to production and the destruction of productive forces; reduction of opportunities for business enter-

prises; interruption of foreign trade and of the imports of food; the destruction of property; shrinkage of values of property, including securities; financial burden caused by new taxes, debts, and war indemnities; effects upon private credit and upon savings banks; advantages to those industries which furnish military materials; advantages and disadvantages to neutral countries.

(*c*) The effects of war upon the supply of the world with food and raw materials, with special reference to those States which are in large degree dependent upon other countries for such supplies, e.g. Great Britain and Germany; by diversion of capital from those countries which produce food and raw materials (especially the stoppage of railway building and of new investments in agriculture and other industries).

(*d*) The condition of the victorious State: manner of levy and use of contributions and war indemnities; influence upon industry and social life.

(*e*) The manner in which the energy of nations is stimulated or depressed by war.

11. Loss of human life in war and as a result of war: influence upon population (birth-rate, relation between the sexes, ratio of the various ages, sanitary conditions).

12. The influence of war and of the possibility of war upon the protective policy, upon banking conditions (especially upon banks of issue), and upon monetary systems.

13. The influence of annexation upon the economic life of the annexing States, and upon the State whose territory has been annexed.

14. The annexation of half-civilized or uncivilized peoples, considered especially from the point of view of the economic interests, which act as motive powers; the methods through which private enterprises take root in such regions and through which they bring influence to bear upon their own governments; the effects of such annexations upon the development of trade with the annexing State and with other countries, as well as upon the economic and social life of the natives.

15. The progressive exemption of commercial and industrial activities from losses and interferences through war.

16. Influence of the open-door policy upon war and peace.

# GENERAL APPENDIX

## Report of the Second Commission

ARMAMENTS IN TIME OF PEACE. MILITARY AND NAVAL ESTABLISHMENTS. THE THEORY, PRACTICE, AND HISTORY OF MODERN ARMAMENTS.

1. Definition. Armaments might be described as 'the preparations made by a State either for defence or for attack'. These would include the provision of food, financial preparations, and also semi-military railways, canals, docks, &c.

2. Causes of armaments. Motives for increasing or commencing them, distinguishing the great from the small powers.

3. Rivalry and competition in armaments. Motives and consequences of rivalry, with the possibilities of limitation.

4. Modern history of armaments, with special fullness from 1872. To be noted as important landmarks:

(*a*) The introduction of conscription into Germany, France, Austria, Italy, Japan, &c.

(*b*) Modern inventions affecting war.

(*c*) The question of privateering and private property at sea.

(*d*) Duration of military service.

(*e*) The traffic in arms.

5. Military budgets from 1872 (distinguishing ordinary from extraordinary expenditures).

6. The burden of armaments in recent times.

(*a*) The proportion of military to civil expenditure.

(*b*) Military expenditure per capita.

(*c*) Military expenditure from loans in time of peace, i.e. a comparison of expenditure from taxes with expenditure from borrowed money.

(*d*) Comparative burdens of individual taxpayers in different countries and the extent to which the differences are due to armaments.

(*e*) Military pensions.

(*f*) It is desirable to ascertain where possible the ratio between the total income of each nation and the total expenditure on armament at various times.

7. The effects of war preparations upon the economic and social life of a nation:

(*a*) On the sustenance of the entire population of a country at war.

(*b*) On railway policy.

(*c*) On public administration and on social legislation.

8. The economic effects of withdrawing young men from industrial pursuits, into the army and navy:

(*a*) Compulsory.

(*b*) Of non-compulsory service (specially in the case of mercenary troops).

(Allowance being made for the industrial value of military education and training.)

9. The influence of changes in the occupations of a people upon the composition and efficiency of armies, and the influence of the changes in the composition of armies on the economic life.

10. Loans for armaments (participation of domestic and foreign capital).

11. The industries of war, i.e. the various manufactures and other industries which are promoted and encouraged by military and naval establishments, distinguishing between:

(*a*) Government undertakings (arsenals, dockyards, &c.).

(*b*) Private undertakings, including the history and working of the great armament firms, which sell to foreign customers as well as to their own governments.

12. War materials (munitions of war). Their recent development and their cost. This includes arms, ammunition, armour-plate, warships, guns of all kinds, military airships, &c. So far as possible the effect of recent inventions upon offensive and defensive war should be indicated.

## Report of the Third Commission

### THE UNIFYING INFLUENCES IN INTERNATIONAL LIFE

1. The Conference is of the opinion that the economic life of individual countries has definitely ceased to be self-contained; and that, notwithstanding the barriers raised by fiscal duties, it is becoming in ever-increasing measure a part of an economic life in which the whole world participates.

2. It desires that this change be studied with the object of ascertaining to what extent the economic life of individual nations has ceased to be self-contained, and the causes which are bringing about the greater interdependence of nations.

3. Special attention should be paid to the following factors:

(*a*) How far the growth of population is responsible for the changes that have occurred and are in progress.

(*b*) The extent to which the insufficiency of the natural resources of individual countries for their own requirements has contributed to it.

(*c*) Whether the increasing economic unity of the world is the cause or the result of the rising in the standard of living, and how far the increasing welfare of nations has been caused by the growing unity.

(*d*) In what measure the need of individual countries to obtain materials of production from other lands and to find new markets for their own products is responsible for the growth of international dependence.

4. The Conference desires that investigations be made into:

(*a*) The volume of the world's production of all the many articles of food, of the various raw materials, and of the principal manufactures.

(*b*) The productions of individual countries, and the extent to which they are retained for home consumption or are exported.

(*c*) The consumption of individual countries, and the extent to which the various articles are supplied from home productions or are imported.

5. The Conference wishes to ascertain to what extent the economy of production by large units, instead of by small units, has contributed to the international dependence of nations.

6. The development of this world-embracing economy has taken place in great measure in consequence of the investment of capital by rich countries in less developed lands. Through this there have arisen close relations and a great increase of wealth, not only for the lending and the borrowing countries, but for all nations. The Conference is of the opinion that researches should be made into the extent of the interdependence of the nations in the matter of capital.

7. The Conference desires to institute inquiries into the interdependence of the financial centres of the world.

8. The Conference desires to make the unifying effects of international trade, the building of railways, the progress of shipping, the improvement and extension of all means of communication and the progress of inventions, the subjects of careful investigation.

9. The Conference is in favour of making a comprehensive study of the various international unions and associations, in which the social and economic interests of all classes of society are now either organized or in process of organization, through official or private action.