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FIGHTING POWER

GERMAN MILITARY PERFORMANCE, 1914-1945

by

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Preface

T. N. Dupuy, in A Genius for War, concludes that German units, at a divisional level, were superior to Allied units by a factor of 20-30 percent. This study seeks to determine the factors accounting for that superiority. Professor van Creveld argues that the German secret lay in the more effective use of its human resources. This usage was implemented in the key areas of an army's makeup: its organization; its command technique; its logistical arrangements; and -- most important in combat -- its unit cohesion and morale.

The opinions here expressed are those of the author and do not constitute an expression of official opinion or policy.

in war, the moral is to the
physical as three to one.

Napoleon Bonaparte

graben American
Did not organize as schwenkhardt
bois

- Sagrat A. moras
-- Many fighters with powder in at
random moment

T. character & intelligence
organization & support
Field Force our replacement forces
E. Tactics/structure & other

Balch

"A license without a schwenkhardt
is like a man without character"

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1. The Problem

Throughout history, some armies have been better than others. The Romans in the age of Caesar; the Mongols at the time of Ghenghis Khan; the French during the Napoleonic period; all these are examples of superior fighting organizations.

Though military excellence is inconceivable without victory, victory is by no means the sole criterion of military excellence. A small army may be overwhelmed by a larger one. Confronted with impossible political and economic odds, a qualitatively superior force may go down to defeat through no fault of its own. Not the outcome alone, but intrinsic qualities also must therefore figure in an attempt to measure military (or any other) excellence; omit to do this, and the very notion of quality becomes impossible to maintain.

Within the limits set by its size, an army's worth as a military instrument equals the quality and quantity of its equipment multiplied by what, in the present study, will be termed its Fighting Power. The latter rests on mental, intellectual and organizational foundations; its manifestations are discipline and cohesion, morale and initiative, courage and toughness, the willingness to fight and the readiness to die. Fighting power, in brief, is defined as the sum total of mental qualities that make armies fight.

While weapons and methods of warfare change, the nature of fighting power does not; its constituents are the same today as they were for Caesar's veterans 2,000 years ago. Though good equipment can, up to a point, make up for deficient fighting power (the reverse is also true) an army lacking in the latter is, at best, a brittle instrument. History, including recent history, bristles with examples of armies which, though ostensibly strong and well equipped, disintegrated at the first shock of combat through sheer lack of fighting power.

In what lies the secret of fighting power? Writers from Xenophon on have answered this question by pointing to national character, the relationship between armed forces and society, the powerful influence of religious and ideological beliefs, and primary group cohesion among

other factors. It is, in fact, easy to conjure up a mental picture of an ideal fighting army; such an army should consist of men who are born fighters, are held in high esteem by their society, well trained, well disciplined, well led and so on. To describe an organization that will foster and maintain these qualities, however, is far more difficult. The present study will attempt to do this by way of a historical force which developed fighting power to an almost awesome degree: the World War II German Army.

History is said to consist of reputations; if the reputation of an Army is a measure of its quality the German Army certainly stands second to none.¹ Most historians simply note its superiority in passing, but some have sought to explain its origins.² A few have used it to explain all kinds of ostensibly incomprehensible facts, e.g. that Ultra did not have as much as an effect on World War II as might have been expected.³ The high quality of the German Army has led to its being used as a measuring rod against which other, less successful, forces can be gauged.⁴ Finally, at least one historian has written an entire book with the express intention of showing that the German Army was NOT better than any other -- only to conclude that "in the early years of victory [the Wehrmacht] was to prove so spectacularly successful, and in the years of defeat so tenacious in defence, that its high place in the history of warfare is assured."⁵

If victory is a measure of military quality, the German Army has certainly had its share of Victories. Its campaigns in France (1940), Russia (1941), and North Africa (1941-42) are still regarded

1. Asked to rate the Red Army, the US Army, the Bundeswehr and the former Wehrmacht by military quality, 74.5% of West Germans asked put the last-named force at the head of the list. R. Weltz, Wie steht es um die Bundeswehr (Hamburg, 1964) p. 31.
2. Most recently W V Madej, "Effectiveness and Cohesion of the German Ground Forces in World War II", Journal of Political and Military Sociology, 6, 1978, 233-48.
3. R Lewin, Ultra Goes to War (London, 1978) pp. 155, 344 and passim.
4. R A Gabriel and P L Savage, Crisis in Command; Mismanagement in the Army (New York, 1978), especially chps. 1 and 3.
5. M Cooper, The German Army 1939-1945 (London, 1978) chp. 12.

as masterpieces of the military art and have indeed become almost legendary. Its operations in Norway (1940) and Crete (1941) are examples of smaller-scale triumphs achieved through hair-raising boldness. Confronted with opponents smaller than itself, e.g in Poland and the Balkans, the Wehrmacht displayed unequalled assurance and determination.

A point to be noted about the most important of these victories is that, far from resting on material superiority, they were waged by the Germans in the teeth of considerable numerical odds and, as often as not, inadequate logistic preparations.⁶ As numerous writers have pointed out, the Wehrmacht in 1939 was not prepared for a conflict which, by Hitler's timetable, should have broken out four years later. Owing partly to pressure of time and partly to a deliberate choice on the part of the National Socialist leadership rearmament in depth had not taken place; leaving much of the army's equipment out of date and 80% of its units dependent on horse-drawn transport. Even within the vaunted Panzer divisions, to cite but a single example, two thirds of the tanks had been designed with nothing but training purposes in mind. Condemned to fight a poor man's war, the German Army compensated by developing a high degree of fighting power which enabled it, even though actually inferior in numbers of both men and machines, to defeat France in six weeks -- as against four months that a crushingly superior Allied Force required to drive it out again. In Russia a strongly outnumbered Wehrmacht needed only five months to reach the gates of Moscow; to drive it back to its starting line took a (by then immeasurably superior) opponent fully two and a half years.

It is, however, not on its victories -- however splendid -- that the German Wehrmacht's reputation for fighting power is mainly based. For here the historian is confronted with an Army which, depending on the particular front and category of arms one cares to select, was outnumbered three, five, even seven to one. Yet it did not run. It did not disintegrate. It did not frag its officers. Instead, it doggedly fought on. It fought on even though Hitler's war was never at any time really popular in Germany.⁷ It fought on even though its

6. See the present author's Supplying War: Logistics from Wallenstein to Patton (Cambridge, 1977) chps. 5 & 6.

7. M Messerschmidt, Die Wehrmacht im NS Staat (Hamburg, 1969) pp.

homeland was being bombed to smithereens behind its back. It fought on even though many of its Generals -- and numerous subsequent historians as well -- regarded its commander in chief as little better than a raving lunatic.⁸ It fought at Narvik and it fought at Alamein. It fought on for years after the last hope for victory had gone. Even as late as April 1945, according to the Allied Intelligence Summary,⁹ its troops went on fighting wherever the local tactical situation was at all tolerable. By that time it had already taken 1,800,000 casualties in dead alone and almost half as many again in captives who were to disappear in Soviet prison camps.¹⁰ Yet for all this its units, even when down to twenty percent of establishment, continued to exist and to resist -- an unrivalled achievement for any army.¹¹

As a final and more systematic measure of the German Army's fighting power one may use the tables prepared by Colonel (ret.) Trevor N. Dupuy of the US Army.¹² The method is as follows. First, the numbers of troops who fought on the German and Allied sides during a large number of engagements is compared. Next, their "score", i.e. the average daily number of casualties inflicted on the enemy by "blocks" of 100 men on each side, is calculated. Finally, "score

480-92; M G Steinert, Hitlers Krieg und die Deutschen (Düsseldorf, 1970) pp. 588-98. That Hitler was aware of this fact is brought out by S Haffner, Anmerkungen zu Hitler (Munich, 1978) p. 56.

8. I have put down my views on this question in "Warlord Hitler; Some Points Reconsidered", European Studies Review, 4, 1974, pp. 57-79. Whether Hitler really was a military ignoramus is debatable; that the quarrels between him and his Generals had a negative effect on Germany's war effort is certain.
9. SHAEF Weekly Intelligence Summary for Psychological Warfare, No. 28, 9.4.1945, file 332/52/268 at the National Archives (NA), Washington DC.
10. Figures from B Mueller-Hillebrand, Das Heer (Frankfurt am Main, 1969) iii, pp. 248-66.
11. C Barnett, "The Education of Military Elites", Journal of Contemporary History, ii, 1967, p. 26.
12. A Genius for War (London, 1977) appendix E. For a fuller methodological exposition see the same author's Numbers, Predictions and War (New York, 1979).

effectiveness" is arrived at by dividing "score" by a constant, derived from other calculations, whose value differs in accordance to posture, i.e 1 for Attack (A), 1.3 for Hasty Defence (HD), 1.5 for Prepared Defence (PD), 1.6 for Fortified Defence (FD) and 1.2 for Delaying Resistance (Del).

The following are Dupuy's data in a somewhat modified form. In the column on the right the German score effectiveness was divided by the Allied one in order to obtain the differential.

Table I
German and Allied Effectiveness in 78 Engagements

Engage- ment ¹³	Allied Units ¹⁴	Posture	Score Effect	German Units ¹⁵	Posture	Score Effect	Differen- tial
1	B46ID	A	1.02	16Pz	PD	3.85	1:3.77
2	B56ID	A	0.99	16Pz	PD	2.75	1:2.77
3	US45ID	A	1.12	16Pz	HD	2.45	1:2.18
4	US45ID	HD	1.96	16&29Pz	A	2.51	1:1.28
5	B46ID	HD	1.78	HG Pz	A	2.30	1:1.29
6	B56ID	HD	1.61	16Pz	A	3.86	1:2.39
7	B46ID	HD	1.59	HG Pz	A	1.74	1:1.09
8	B56ID	A	0.98	16Pz	Del	2.02	1:2.06
9	US45ID	A	0.96	16&26Pz	Del	2.44	1:2.54
10	B7AD	A	0.68	15Pz Gr	PD	2.05	1:3.67
11	B56ID	A	1.08	HG Pz	PD	3.94	1:3.23
12	US31ID	A	0.75	HG Pz	PD	2.50	1:3.33
13	US45ID	A	1.26	3&26Pz	Del	1.22	1:0.96
14	US34ID	A	0.58	3Pz Gr	Del	1.66	1:2.86
15	B46ID	A	0.51	15Pz Gr	PD	2.94	1:5.76
16	US34ID	A	0.89	3Pz Gr	Del	1.33	1:1.49
17	B46ID	A	0.93	15Pz Gr	PD	1.73	1:1.86
18	B7AD	A	0.75	15Pz Gr	PD	1.60	1:2.13
19	B7AD	A	0.96	15Pz Gr	PD	1.06	1:1.10
20	B56ID	A	0.76	HG Pz	PD	2.20	1:2.89

13. For list of engagements see Appendix A.

14. B-British; ID-Infantry Division; AD-Armoured Division.

15. Pz- Panzer; Pz Gr - Panzer Grenadier; HG - Herman Goering; Lt-Light; Pa-Paratroopers.

Table I (continued)

Engage- ment	Allied Units	Posture	Score Effect	German Units	Posture	Score Effect	Differen- tial
21	US34ID	A	1.28	3Pz Gr	PD	3.28	1:2.56
22	US31ID	A	1.34	3Pz Gr	FD	2.82	1:2.10
23	US45ID	A	0.54	3Pz Gr	FD	1.59	1:2.94
24	B56ID	A	0.81	15Pz Gr	FD	2.06	1:2.54
25	B56ID	HD	0.42	15Pz Gr	A	2.24	1:5.33
26	US31ID	A	0.66	3Pz Gr	FD	1.36	1:2.06
27	B56ID	A	1.25	15Pz Gr	FD	3.27	1:2.16
28	B46ID	A	0.84	15Pz Gr	FD	2.95	1:3.51
29	US36ID	A	0.59	15&29Pz	FD	1.82	1:3.08
30	B1ID	A	0.81	3Pz Gr	HD	4.60	1:5.67
31	B1ID	HD	0.73	3Pz Gr	A	1.10	1:1.50
32	B1ID	A	0.87	3 Pz Gr	PD	1.71	1:1.96
33	B1ID	HD	3.14	HG Pz	A	3.11	1:0.99
34	B1ID	HD	1.56	3 Pz Gr	A	1.47	1:0.94
35	US45ID	HD	1.40	65ID	A	1.33	1:0.95
36	B1ID	HD	1.35	HG Pz	A	2.08	1:1.54
37	US45ID	A	1.77	715Lt	HD	1.50	1:0.84
38	US45ID	HD	1.88	4 divs	A	1.26	1:0.67
39	B56ID	HD	1.88	65ID&4Pa	A	4.56	1:2.42
40	US45ID	PD	0.78	114Lt	HD	1.28	1:1.64
41	US88ID	A	3.09	94&71ID	FD	2.33	1:1.10
42	US85ID	A	2.62	94ID	FD	4.46	1:1.70
43	US88ID	A	2.89	94&71ID	Del	1.95	1:0.67
44	US85ID	A	1.98	94ID	FD	3.04	1:1.53
45	US88ID	A	2.10	94ID	HD	2.33	1:1.10
46	US85ID	A	2.06	94ID	HD	2.77	1:1.34
47	US88ID	A	1.50	94ID	Del	3.14	1:2.03
48	US85ID	A	1.64	94ID	HD	4.34	1:2.64
49	B5ID	A	2.43	4Pa	FD	1.92	1:0.79
50	B1ID	A	2.48	65ID	FD	1.58	1:0.63
51	US1AD	A	2.04	3&362ID	FD	1.74	1:0.85
52	US31ID	A	2.48	362ID	FD	2.94	1:1.18
53	US85ID	A	1.43	29Pz	HD	1.47	1:1.02
54	US1AD	A	3.84	362ID	FD	3.54	1:0.92
55	US34ID	A	2.29	3Pz Gr	FD	1.45	1:0.63
56	US45ID	A	2.34	65ID	FD	1.76	1:0.75

Table I (continued)

Engage- ment	Allied Units	Posture	Score Effect	German Units	Posture	Score Effect	Differen- tial
57	B51ID	A	1.81	4Pa	FD	1.60	1:0.88
58	US34ID	A	1.97	3Pz Gr	FD	2.24	1:1.13
59	US1&45ID	A	2.02	3&65ID	FD	2.16	1:1.06
60	B1&51ID	A	2.36	4Pa	FD	2.44	1:1.03
61	USXX Cp	A	1.20	1 Army	PD	1.48	1:1.23
62	USXX Cp	A	1.09	1 Army	Del	1.60	1:1.46
63	USXX Cp	A	1.11	1 Army	HD	1.76	1:1.58
64	US7AD	A	1.97	1 Army	HD	2.24	1:1.13
65	US7AD	A	1.03	48ID	PD	2.13	1:2.13
66	US35&26& 4AD	A-HD	1.14	XIII SS Cp	FD-A	3.21	1:2.81
67	US4AD	A	0.87	361ID	Del	3.54	1:4.06
68	US4AD	A	1.27	Pz Lehr& 361ID	HD-A	1.98	1:1.55
69	US4AD	A	1.41	Pz Lehr& 361ID	HD	1.26	1:0.89
70	US4AD	A	1.54	Pz Lehr	HD	1.17	1:0.75
71	US4AD	A	1.01	Pz Lehr	Del	0.76	1:0.75
72	US4AD	A	0.73	11Pz& Pz Lehr	PD	1.93	1:2.64
73	US4AD	A	0.92	25Pz Gr &11Pz	FD	1.52	1:1.65
74	USXII Cp	A	1.69	XIII SS& LXXXIX Cp	Del	2.97	1:1.65
75	USXII Cp	A	1.75	XIII SS& LXXXIX Cp	Del	2.54	1:1.45
76	USXII Cp	A	1.45	XIII SS& LXXXIX Cp	Del	1.82	1:1.25
77	USXII Cp	A	1.13	XIII SS & LXXXIX Cp	Del	1.29	1:1.14
78	USXII Cp	A	1.39	XIII SS & XC Cp	Del	1.47	1:1.05
average differential in 65 Allied attacks							1:1.56
average differential in 13 German attacks							1:1.49
average differential in 50 engagements between US and German units							1:1.55
average in all 78 engagements							1:1.52

The above figures may be broken down in different ways. Similar ones

can be drawn up for the Eastern Front, or for World War I, and this has in fact been done. That the German superiority was not due to Allied inexperience can be shown by using the data from the 41 1944 engagements alone, which yields a differential of 1.45 (1.43 against the Americans only). For our purpose all this does not matter. Suffice it to quote Dupuy's summing up:¹⁶

/the record shows that the Germans consistently outfought the far more numerous Allied armies that eventually defeated them... On a man for man basis the German ground soldiers consistently inflicted casualties at about a 50 percent higher rate than they incurred from the opposing British and American troops under all circumstances. This was true when they were attacking and when they were defending, when they had a local numerical superiority and when, as was usually the case, they were outnumbered, when they had air superiority and when they did not, when they won and when they lost.

The fact that Hitler and his High Command made numerous strategic blunders, beginning at Dunkirk and running through Stalingrad all the way on to the Battle of the Bulge does not affect this conclusion. Indeed, the reverse may well be true; for not the least astonishing aspect of the matter is that the Wehrmacht fought equally well in victory and in defeat, at the gates of Tobruk and in the deathtrap of Tunisia. It is the secret of this consistently high performance, not the ups and downs of Hitler's "genius", that forms the theme of the present study.

To bring out the secret of the German performance, it was essential to have a background against which it could be silhouetted. For this purpose the World War II US Army was selected, not because it was a priori believed to be very different -- like other armies around the world it had copied much of its organization, including in particular the General Staff system, from the German model -- but simply because more information about it was available in print than about any compa-

16. Op. cit., pp. 253-4.

rable force. The choice later turned out to be an inspired one in so far as the US Army, backed by vast economic and technological resources, developed an entirely different style of war. Whether the study does indeed succeed in its aim of brining out the secret of the German Army's fighting power, however, remains for the reader to judge.

2. The Role of National Character

Though some societies are undoubtedly more warlike than others, attempts to correlate this quality with other factors (geography, climate, social life, sexual repression among others) have not to date met with noticeable success.¹ The problem is compounded by the fact that modern troops, unlike their predecessors, require not merely brawn but brain; a goodly supply of primitive cut-throats may still be essential; but it is no longer quite sufficient.

A further complicating factor is introduced by the fact that a people's fighting qualities may change, sometimes with remarkable speed. The German people, the subject of this inquiry, were not regarded as particularly good soldiers before the middle of the last century when they suddenly emerged as the world's most formidable military nation. The Vietnamese, regarded as more or less useless by their French overlords before 1939, decisively defeated those very overlords in 1954 -- and then promptly split into two halves, one of which was indeed useless whereas the other went on to fight magnificently for another two decades. The Arab defeat of 1967 called into being a character known as the "amoral familist" whose nature allegedly rendered him incapable of cooperating with others;² though amoral familists had probably not become an extinct species by 1973, fight the Arab armies undoubtedly did.

If the propensity to go to war is any indication of a people's fighting qualities there would, by Quincy Wright's data, appear to be little to choose between Prussia/Germany and the USA. In considering the following table,³ it should be no means be overlooked that Germany is located right in the center of Europe, whereas the US is so isolated as to constitute virtually the sole Power in an entire hemisphere:

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1. S Andreski, Military Organization and Society (Berkley, 1968) p. 12; also S Bidwell, Modern Warfare (London, 1973) p. 145 ff, and W Nübel, "Das Verhalten von Soldaten im Gefecht", Wehrwissenschaftliche Rundschau, 28, 1979, p. 115.
 2. Y Harkabi, "Basic Factors in the Arab Collapse during the Six Day War", Orbis, ii, 1967, pp. 677-91.
 3. From Q Wright, A Study of War (Chicago, 1965 ed.) tables 36-42.

Table II

Wars in German and American History; Involvement and Duration

name of war	dates	involvement		duration in years	
		Prus/Ger	USA	Prus/Ger	USA
American Revolution	1776-1783		x		7
Bavarian Succession	1777-1779	x		2	
1st Coalition	1792-1797	x		5	
Tripoli-USA	1801-1805		x		4
3rd Coalition	1806-1807	x		1	
War of 1812	1812-1814		x		2
4th Coalition	1813-1814	x		2	
5th Coalition	1815	x		0.15	
Algiers-USA	1815		x		0.3
Mexico-USA	1846-1848		x		2
Denmark-Germany	1848	x		3	
US Civil War	1861-1865		x		4
Prussia-Denmark	1864	x		1	
Prussia-Austria	1866	x		0.15	
Franco-German	1870-1871	x		0.8	
Spanish-American	1898		x		1
Boxer Expedition	1900	x	x	1.5	1.5
Mexican Expedition	1912		x		1
World War I	1914-1918	x	x	4	1.5
World War II	1939-1945	x	x	5.5	3.5
total		12	11	26.1	27.8

This does not take the postwar world into account, and doing so would raise the US figures to 13 wars and 37.3 years. If, therefore, the German people as a whole is no more trigger happy than the American one, does the individual German make a better fighting man? One way to answer this interesting question is to use the "what makes a Nazi" studies which appeared in profusion soon after World War II.⁴ It was found, for example, that German social patterns were distinguished from others in the Western World by the "strongly authoritarian character of the father-son relationship... also a much more rigidly formalistic and

4. A useful summary is P Loewenberg, "Psychohistorical Perspectives on Modern German History", Journal of Modern History, 47, 1975, pp-229-79.

hierarchical occupational system".⁵ German children feared authority, developed obsessive traits of orderliness and, if they were boys, acquired a "manliness" by which is meant the suppression of impulses of tenderness, pity or regret.⁶ "Partial constants of the German national character" were discovered by one work to be thoroughness, love of order, lack of good form or manners, self-will, ecstasy and fanaticism.⁷

All this, no doubt, is the result of toilet-training at too early an age.⁸ Using the ideas of that crackpot, Wilhelm Reich, some psychologists have concluded that the German people possess a compulsive anal erotic character. This causes them to become rigid, disciplined and unable to let go. Their attitude towards women is "often marked by conscious and unconscious fear, aggression and contempt".⁹ (American men, who it is claimed are brought up by women to a greater extent by anywhere else, are alleged by one study to develop exactly the same traits).¹⁰

The "Reich German" typically has a harsh and aloof German father who dominates the household and resents the little boy's gratifying tender ties with his indulging mother who in turn acts as a mediator between the child and his father and is ambivalently hated and loved by both. This results in acute romantic rebellion in adolescence, plus the lonely genius syndrome. The final outcome is a "peculiar combination of rebellion and obedient submission", a person who is "harsh with himself and with others".¹¹

Direct comparisons between Germans and Americans have also been made. The former were found to be distinctly in favour of obedience to autho-

5. T Parsons, Essays in Sociological Theory (Glencoe, Ill, 1954) pp. 321-2.

6. B Schaffner, Father Land; a Study of Authoritarianism in the German Family (New York, 1948) p. 55.

7. W Hellpach, Der deutsche Charakter (Bonn, 1954)

8. D Rodnick, Postwar Germany (New Haven, 1948) p. 18.

9. P Kecskemeti & N Leites, "Some Psychological Hypotheses on Nazi German", Journal of Social Psychology, 27, 1948, pp. 96, 246.

10. H Elkin, "Aggressive and Erotic Tendencies in Army Life", American Journal of Sociology, 51, 1946, pp. 408-13.

11. E Erikson, Childhood and Society (London, 1965 ed) chp. 9.

rity whereas the latter tended towards independent decisions and action. For the German the worst crimes are said to be disobedience and loss of face; to Americans, violent offences against other persons.¹² These interpretations, incidentally, are not supported by the homicide rates for the two countries -- though it must be remembered that, in Germany at this time, many murderers had donned uniform and were exercising their profession under official auspices behind barbed wire.¹³

Unlike American youths, German ones were said to regard hard work as an end in itself "because it demonstrates that the person has control over his selfish impulses to be lazy, etc".¹⁴ Summing up, one psychiatrist simply concluded that German culture is psychotically inclined.¹⁵

Whether psychotics make good soldiers may safely be left for the psychiatrists to decide. For our part we shall turn to a recent American study¹⁶ which attempts to differentiate between two clearly defined groups, namely a. volunteers for war (Green Berets) and b. conscientious objectors. The differences between the two groups, as well as comparisons between them and the American population at large, may prove illuminating.

As compared to the control group of conscientious objectors, the Green Berets -- excellent soldiers by most people's standards -- typically were raised in families that were less harmonious. Either one of the parents tended to dominate the other. Much greater emphasis was put on respect for material possessions, social status, work and industry, order and

12. D V Granahan, "A Comparison of Social Attitudes among American and German Youth", Journal of Abnormal and Social Psychology, 41, 1946, pp. 244-47, 255.

13. Germany with a population of 68,000,000 had 516 cases of murder and homicide in 1937; 1,098 American cities, combined population 37,500,000, had 2,189 cases of murder and manslaughter in 1938. See Statistisches Reichsamt ed, Statistisches Jahrbuch für das deutsche Reich, 57 (Berlin, 1938) p. 610, and FBI ed, Uniform Crime Reports for the US and Its Possessions (Washington DC, 1939) p. 19.

14. D C McClelland, "The United States and Germany; a Comparative Study of National Character", in The Roots of Consciousness (New York, 1964) p. 81.

15. R M Brickner, "The German Cultural Paranoid Trend", American Journal of Orthopsychiatry, 12, 1942, pp. 611-32.

16. D M Mantell, True Americanism; Green Berets and War Resisters, a Study of Commitment (New York, 1974) pp. 206, 215.

cleanliness, discipline, conformity, obedience and physical prowess, as contrasted with goodness, joy in life, and individual achievement. Stealing, lying, vandalism and disobedience were regarded as the cardinal sins among parents of Green Berets, whereas those of conscientious objectors put much greater emphasis on inconsiderateness. In the families of green berets punishments and threats were far more prevalent.

Conscientious objectors tended to regard women as equal partners, sex as a shared experience. Though capable of superficial relationships they neither laughed at their girls nor despised them. Green Berets, by contrast, tended to be "remarkably unscrupulous and unfeeling" in their relationships to women. They were also male chauvinists in the sense of wanting to restrict sexual freedom to men only. This in turn meant that any woman who slept with them was ipso facto turned into an object of contempt.

To find out which of the two groups were more representative of American life, they were compared with a third group consisting of conscripts. Five tests were carried out, of which two are reproduced here:

Figure I

Group Mean values on the Edwards Personal Preference Schedule arranged in hierarchical order according to the war volunteer results

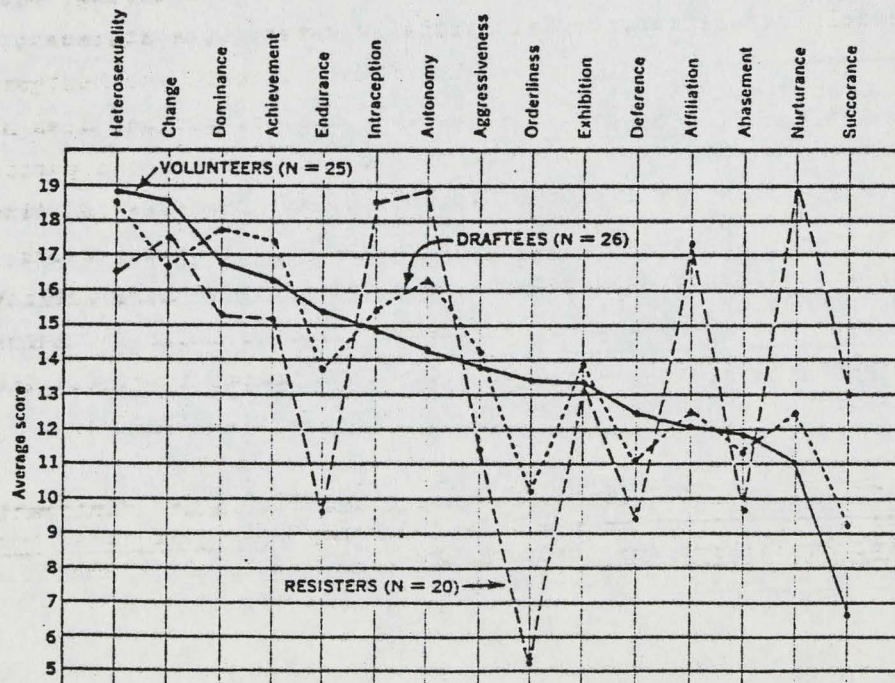
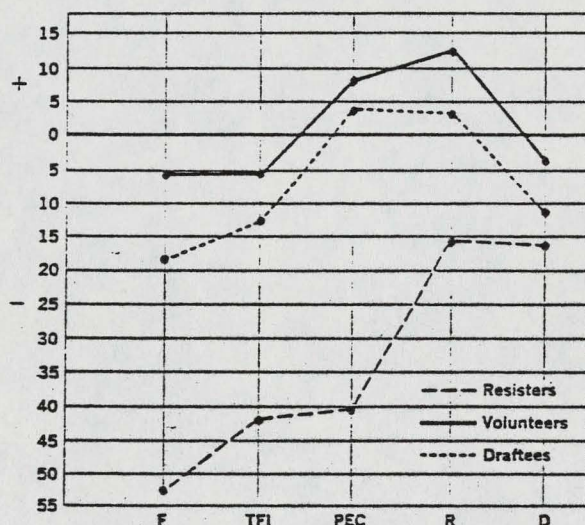


Figure II

Mean scores of the resisters, volunteers and draftees on the Fascism, Traditional Family Ideology, Political-economic conservatism, Rigidity and Dogmatism scales



While the numbers involved are admittedly small, these results clearly show that the American population at large has far more in common with the Green Berets than with the conscientious objectors. It may be worth adding that the results of the remaining three tests (measuring a person's evaluation of historical personalities, his moral attitudes, and his mental defects) lead to the same conclusion.

Our inference from all this is that Americans, by upbringing, education and personality make first class soldierly material, a statement that can be supported by quotations ranging from Churchill and Montgomery to McGeorge Bundy and William Westmoreland. This, of course, does not mean that there are no differences between them and Germans. In particular, it is entirely possible that the latter are more amenable to blind obedience -- though even this has been denied by one study which, surprisingly enough, found (postwar) German youths to be more inclined than American ones to ask for the reason behind an order.¹⁷ Baron von Steuben, the Prussian drillmaster of the Continental Army, did indeed write:

17. D C McClelland, J F Sturr, R N Knopp and H W Wendt, "Obligations to Self and Society in the US and Germany", Journal of Abnormal and Social Psychology, 56, 1958, p. 253.

The genius of this nation is not in the least to be compared with that of the Prussians, Austrians or French. You say to your soldier, "do this" and he doeth it; but I am obliged to say: "this is the reason you ought to do that", and he doeth it.

The Continental Army, after all, did win the War of the American Revolution.

3. Armed Forces and Society

a. The Army's Social Status

A high social status for the armed forces within society is important for several reasons. It probably contributes to an army's morale. It may help in attracting and keeping high-quality manpower. It may be useful in helping the military to a larger share of the national cake.

German Army

In Germany since the Wars of Unification the Army was highly regarded by most of the people and was considered the pride of the nation.¹ Esteem was extended more or less automatically to any member of the army and endowed him with a certain prestige that was graduated according to rank, position, arm of service and regiment. In general, being a soldier or an exsoldier was regarded as an important social advantage and working girls gladly paid for the privilege of a uniformed date.²

Army service was officially defined as a duty-of-honour.³ It presupposed the right to bear arms. A prison-sentence involving the loss of civil rights also carried the loss of the right to bear arms, followed by an assignment to a labour battalion. To be dishonorably discharged from Army or Navy was regarded as a heavy punishment and implied considerable social stigma. The consequences to a person's career in civilian life could also be unpleasant.

Before 1914, since universal conscription was not in fact put into practice, the opportunity existed for -- normally well to do, well educated youth -- to volunteer for one year's service. In 1912 alone 64,000 made use of this opportunity.

Things military, weapons and uniforms, were surrounded by a kind of

1. The following remarks are based on Militärgeschichtliches Forschungsamt ed, Handbuch zur deutschen Militärgeschichte (Frankfurt an Main, 1968) vol. 5, pp. 83-4.
2. M Kitchen, The German Officer Corps 1890-1914 (Oxford, 1968) p. 140.
3. Wehrgesetz (Law of National Defence) of 21 May 1935.

halo which was spread by press and literature. For parades and tattoos there were always crowds of enthusiastic spectators to be had. As the proverb had it, the soldier both was considered and regarded himself as "the first man in the state".

Organized in military societies, adoring civilians -- mostly of middle class origins -- surrounded the Army. The Kyffhäuser Bund had 1,220,615 members in 1898, 2,097,527 in 1903, and 2,528,667 in 1909.⁴ Founded in 1912 to pressure the Reichstag into making available larger funds for the military, the Wehrverein (Defence-Union) could count 300,000 members after a single year. Even more phenomenal was the success of General Colmar von der Goltz's Jungdeutschland, a paramilitary youth movement whose membership reached 750,000 within three years of its establishment in 1912. All together, therefore, the number of people associated with one pro-army organization or another exceeded 3,500,000 in a population of 65,000,000.

The officer was the idol of society, a fact which in itself made him a target of Social-Democratic criticism. Bismarck had said that humanity starts with the rank of lieutenant. Society modelled itself on its darlings, a practice that could be carried to extremes as ridiculous as they were significant. Appearing in front of the Reichstag for the first time in 1909, Chancellor Bethmann-Hollweg wore a major's uniform. Five years later it was apparently thought he could not properly carry out his duties without being promoted a honorary lieutenant general.

To carry the rank of a reserve officer -- normally that of a lieutenant or captain, that of major being a rare exception -- was an important status symbol. It was also not without value in professional life. Among higher officials the rank of reserve-officer was regarded virtually as a patriotic duty. A widely circulated story had it that an old and famous professor, granted an audience with the Kaiser and asked to make a request, raised his glaucomous eyes and, with a shaking voice, begged to be made a second lieutenant of the reserve.

An officer's pay was low. Until 1909 he lived, as the title of a popu-

4. Figures from Kitchen, op. cit., pp. 129, 132, 136.

lar book put it, in "Splendid Poverty". Even afterwards a junior officer earned only 125-200 marks per month and was thus dependent on aid from parents and relatives.⁵

A good measure for the officer's exalted social status is provided by the sums which cadets had to dish up from their own resources in order to be taken into a regiment.⁶ This varied from as little as 50 marks per month in some infantry regiments to 200 marks in the 5. Cavalry Regiment. For commissioned lieutenants the sums varied between 20 and 200 marks, the average being 64. To this the cost of initial equipment, anything between 250 and 600 marks, had to be added. This at a time when the average clerk could expect to earn about 70 marks.

To be an officer was to live in the best of all possible worlds. Friedrich Sachsse, himself an officer who was killed in July 1941 at the age of 29, remembered what it was like during the Weimar period:⁷

Often there were officers among the guests. They were big and loud men. Talking to them gave one a fright, when they bent down and shook [a boy's] shoulder with their hard hands. "Well my boy, what do you want to be when you're grown up! Officer, right! Ha ha ha!" They laughed loudly and carelessly. To them it was a matter of course that every boy wanted to become an officer, that he was burning to become one!

US Army

The status of the armed forces in American society has always been problematic. Summing up the interwar experience, N F Parish wrote:⁸

Ground and air officers alike stubbornly carried out their

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5. H Meier-Welcker, Untersuchungen zur Geschichte des Offizier-Korps (Stuttgart, 1962) p. 20.
 6. H Rumschüttel, "Bildung und Herkunft der bayerischen Offiziere 1866 bis 1914", Militär-geschichtliche Mitteilungen, 2, 1970, pp. 125-6.
 7. F Sachsse, Roter Mohn (Frankfurt am Main, 1972) p. 142.
 8. "New Responsibilities of Air Force Officers", Air University Review, 3 (March-April 1972) pp. 15-6. This essay was originally published in 1947.

duties among a people hoping and trying to believe that all officers were as useless as their sabre chains. It was a weird, almost furtive existence, like that of a fireman trying to guard a wooden city whose occupants pretend it was fireproof. In such an atmosphere of unreality officers sometimes felt a little ghostly or bewildered, or turned to the affectation of imported uniforms and mannerisms, the imitation of the well-to-do and the horse culture. These psychic manifestations of a sense of social uselessness appeared in surprisingly few officers. Most plodded grimly along, stubbornly reminding themselves and each other that they were real, after all, and that the things they were doing were necessary.

Historically in the American democracy, military values were felt to be so alien that the Army was considered, and felt itself, a neglected stepchild.⁹ The idea that large military forces form a threat to liberty; that they endanger democracy; that they imperil economic prosperity; and that their very existence undermines peace -- all these are said to have been "fairly constantly characteristic" of American attitudes to the Army.¹⁰

During the interwar period in particular, the dominant business culture rejected militarism as a vestigial leftover from a barbarous past. Reform minded Liberals, by contrast, were prepared to retain the Army, but only in so far as it shed its military character and became an instrument of social reform. The military officer, a New Republic writer declared, "is a man cherishing an attitude towards life that belongs to the dark ages".¹¹ His standards of honour, obedience and loyalty were looked upon as either hypocritical or positively dangerous.

Besides being the butt of criticism the US Army had to fight its histo-

9. R F Weigley, "A Historian Looks at the Army", Military Review, 52, Feb. 1972, p. 26.

10. S P Huntington, The Soldier and the State (Cambridge, Mass, 1957) p. 155.

11. Quoted in ibid, pp. 155-6.

rical isolation. A big step forward was taken in 1911 when Congress passed a law imposing a \$ 500 fine on commercial establishments showing a "No soldiers Admitted" notice. Even in 1951, after half a century of public relations, the Social Register for New York, Boston and Chicago listed fewer than one percent officers -- and those lucky few owed their places not to military rank but to social pedigree, connections and money.¹²

The Army's low prestige was reflected in spoken language. "To soldier" meant to loaf; the expression was replaced by "goldbricking" during World War II, but resumed its original meaning thereafter.¹³

Considering all this, it is remarkable how well the officer -- but not the enlisted man -- did in opinion polls regarding the comparative social prestige of various trades and professions. In a series of surveys dating from 1925 on officers consistently appeared among the upper 25% of all professions, i.e 9th among 45 in 1925, 8th among 40 in 1935, 6th among 27 in 1947, 9th among 26 in 1949, and 6th among 25 in 1951.¹⁴ In the same surveys enlisted men figured 30th, 28th, 19th, 20th and 25th respectively.

In 1955 a nationwide survey found officers ranking 7th on a scale of 17, below physicians, scientists, college professors, lawyers, ministers and public school teachers but above farm owners, carpenters, mail carriers, bookkeepers, plumbers, radio and TV announcers, owners of small stores, mechanics, enlisted men in the armed forces (No. 16 on the list) and truck drivers.¹⁵

Possibly because the results could easily be predicted, no systematic attempt was made to study the social status of the German Army during

12. M Janowitz, The Professional Soldier, a Social and Political Portrait (New York, 1960) p. 204 ff.

13. The word is used in this sense by W Menninger, Psychiatry in a Troubled World (New York, 1948) p. 177; Menninger was the Army's chief psychiatrist during World War II. See also B von Haller Gilmer, Industrial and Organizational Psychology (New York, 1972) p. 441.

14. See C H Coates and R J Pellegrin, Military Sociology; a Study of American Military Institutions and Military Life (Washington DC, 1965) pp. 45-6.

15. Janowitz, op. cit., p. 227.

the interwar period.¹⁶ However, a survey was carried out in 1955. At that time the prestige of things military in the Federal Republic had touched rock bottom; 40% of all West Germans were for, but 45% against, the reconstitution of a German armed force, and only 17% thought the army represented any positive values whatsoever.¹⁷ Nevertheless, even at this time the esteem in which German officers were held by their public was greater -- though only slightly so -- than that accorded to their American counterparts in a comparable study.¹⁸

b. The Army's Social Structure

The social structure of an army is, of course, another indication of its social status. In addition, an examination of the origins of the officer corps will show whether the military were able to attract those segments of the population who do have a choice.

German Army

Owing to the fact that German militarism at one time stood at the center of historical interest the social origins of the Prussian/German officer corps have been investigated with comparative thoroughness. In Germany as in other European states, a caste that had originally been the almost exclusive preserve of the nobility was gradually penetrated by scions of middle class families during the nineteenth century. In Germany at any rate this development was by no means the result of the nobility's reluctance to serve; rather, the rise of mass conscript armies after about 1870 brought in its wake such an increased demand for officers that it became necessary to turn, in the words of Kaiser

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16. The nearest thing available is a 1930 Munich PhD dissertation which traces social mobility among ex-officers during the Weimar years. It was found that those (normally senior) officers who could live on their pensions managed to stay in society's higher classes, as did those, e.g physicians and chemists, whose skills were readily transferrable to the civilian market. The rest, however, had to take up new trades and thereby went down the social ladder. See J Nothaas, "Social Ascent and Descent among Former Officers in the German Army and Navy after the World War" (New York, 1937) pp. 10-11.
 17. Weltz, op. cit., pp. 5-8. Even in September 1956 43% of all West Germans wanted to abolish the Bundeswehr and only 38% to retain it.
 18. J J Wiatr, "Social Prestige of the Military; a Comparative Approach", in J van Doorn ed, Military Profession and Military Regimes (The Hague, 1969) p. 77.

William II, from the "nobility of the blood" to the "nobility of the mind". Consequently in 1913, only 30% of all officers were of the nobility.¹⁹

World War I brought a further huge increase in the demand for officers. Numerous sons of middle and even lower middle class families who did not stand a chance of being accepted into a regiment in time of peace were thereby given an opportunity to obtain a commission. The Army did not turn democratic, however. With certain rare exceptions even deserving soldiers and NCO's were refused promotion into the officer corps, a bad error which was to come in for much criticism after the War. Keeping an eye on the future political reliability of the Army,²⁰ the War Ministry strove to maintain social standards as best it could.

Immediately after 1918 the nobility was reluctant to serve the Army of the Weimar Republic. This soon changed, however, and as early as 1921 an article appeared in the German Nobility's Journal calling on blue-bloods to resume the tradition of "the best for officers".²¹ So successful was the campaign to recruit noblemen that their percentage among newly commissioned officers in 1931-32 actually exceeded the 1913 figure.²² Nor was this fact due simply to favouritism: a scrutiny of the lists of officers discharged as unsuitable each year shows that the share of noblemen never fell below 20% and stood at 23.2% for the period 1924-32. The high number of noblemen was due rather to the fact that many patents, especially among senior officers, were of recent origin.²³

Put into tabular form, these facts can be summed up as follows:

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19. K Demeter, Das deutsche Offizierkorps (Berlin, 1965) p. 27.
 20. Ein Stabsoffizier, Das alte Heer (Charlottenburg, 1920) pp. 34-5.
 21. Captain von Kortzfleisch, "Der Offizierberuf im Reichsheer", Deutschen Adelsblatt, 39, No. 22, p. 338 ff.
 22. Demeter, op. cit., p. 55.
 23. D N Spires, "The Career of the Reichswehr Officer", University of Washington Diss, 1979, pp. 260, 261.

Table III

Social Origins of the German Officer Corps

year	noblemen as a percentage of all officers	year	noblemen as a percentage of generals
1913	30.00	1911	67
1920	21.70		
1926	20.50	1925	38
1932	23.80	1932	33

During the Nazi years another huge increase in the demand for officers caused the nobility to be completely swamped. Once again, however, this was by no means due to any reluctance on its part to enter the service; even during these years, the names of many noble families appeared several times in the Army Lists.²⁴

Although the Nazis did much to democratize the Army, they could not -- possibly owing to the short time at their disposal -- prevent the continued dominance of nobles among the officer corps' top ranks. Even as late as May 1943, 17.6% of 681 fieldmarshals, colonel generals, general and lieutenant generals were of the nobility. Among fieldmarshals alone, there were actually more noblemen in 1944 than there had been in 1932.²⁵ These facts show that Army personnel policy during the Nazi years was hardly revolutionary; they also serve as additional proof that the Army had by no means lost its traditional ability to attract the highest classes of society.

Distributed according to their fathers' professions, officers entering the War Academy presented the following picture:

Table IV

Origins of German Officer Corps by Father's Profession

father's profession (%)	1912	1926	1921-34
officers	24.56	44.34	34.93
professionals or senior civil servants	39.88	41.51	36.50
landowners	7.87	4.73	4.76

24. Demeter, op. cit., p. 54.

25. N von Preradovich, Die militärische und Soziale Herkunft des deutschen Heeres 1 Mai 1944 (Onasbrück, 1978) p. 13.

Table IV (continued)

father's profession (%)	1912	1926	1921-34
agrarian managers	1.69	0.94	1.59
merchants and industrialists	15.41	6.13	9.52
NCO's	4.74	1.41	7.94
others	5.85	0.94	4.76

Throughout this period, therefore, enough officer candidates presented themselves to enable the Army to take its choice without seriously compromising its social standards.

US Army

Turning now from the German to the American Army, we are handicapped by the fact that the only available figures do not refer to the officer corps as a whole but to generals only. The social origins of this group present the following picture:²⁶

Table V

Origins of American Generals by Father's Profession

father's profession (%)	1910-20	1935	1950
business	24	16	29
professional and managerial	46	60	45
farmer	30	16	10
white collar	--	6	11
worker	--	2	5
other	--	--	--

And according to social status:

Table VI

Origins of American Generals by Father's Social Status

class (%)	1910-20	1935	1950
upper	26	8	3
upper middle	66	68	47
lower middle	8	23	45
upper lower	0	1	4
lower lower	0	0	1

26. Tables from Janowitz, op. cit., pp. 67-9.

One might therefore conclude that, for generals at any rate, the view of the US Army as a haven for those who do not have a choice does not hold water.

Finally, a comparison of self - recruitment (the percentage of officers who were officers' sons) in the two armies is especially interesting, since it represents one measure of the officers' satisfaction with their jobs and status:

Table VII

Self Recruitment in German and American Officer Corps

year	self recruitment among US officers (%)	year	self recruitment among German officers (%)
1910	7	1911	27
1920	10	1925	29
1935	23	1933	29
		1939	15
		1941	16
		1944	14
1950	11		

These figures speak for themselves.

c. A Ladder for Social Mobility?

German Army

Comparatively little information is available on the German Army's functioning as a social "ladder", i.e a vehicle through which talented and ambitious men might reach society's highest ranks. It would seem, however, that during the Imperial period the feeling among officers was that even the humblest cadet carried the fieldmarshal's baton in his knapsack;²⁷ the same must have been true during the Weimar period with its heavy emphasis on an equitable administration of the promotion system.²⁸

27. K Hesse, Der Geist von Potsdam (Mainz, 1967) p. 27.

28. Spires, op. cit., pp. 232-3.

While the Army's growth during the Nazi years undoubtedly created opportunities for social advancement of every kind no detailed figures are available. It is merely known that, among 16 fieldmarshals in 1944, seven came from long established families, seven from families that had been steadily advancing in the world for several generations back and could look upon a marshal's baton as the culmination of progress, and two from humble families.²⁹ At this time the German Army also carried on its lists 11 Generals who had risen from the ranks.

In spite of its relatively small size (29,000 before 1914, a mere 4,000 during the Weimar period, still only 10,800 in 1936) the officer corps was an excellent avenue for social mobility, as the following data on the origins, profession and education of cabinet ministers shows:³⁰

Table VIII

Officers' Sons, Officers and Kriegsakademie Graduates among German Cabinet Members, 1890-1933

% cabinet members during:	officers' sons	officers	Kriegsakademie Graduates
monarchy	9.1	16.9	15.8
republic	4.9	7.4	2.5
Hitler	12.1	18.2	12.1
average	8.7	8.5	10.1

The share of officers' sons and officers among cabinet members was therefore far from negligible. The high figures on the left are especially interesting, since they meant that, on the average, the chances of an officer who had passed through the Kriegsakademie of attaining cabinet ranks were some forty times as good as those of university graduates.³¹

US Army

In the US between 1892 and 1949, only 0.5% of all cabinet ministers were exofficers. A breakdown of senior civil servants during the same period fails to show any officers, nor are military academies named among the

29. Preradovich, op. cit., p. 5.

30. M E Knight, The German Executive 1890-1933 (Stanford, 1952) pp. 36, 41, 45.

31. In any average year students would outnumber Kriegsakademie students 250 to 1, yet they were only 6 times as numerous in the various cabinets.

schools from which they graduated.³²

While no studies are available for the interwar years, the following are the results of a 1952 study comparing the social background of generals with that of business leaders:³³

Table IX

Social Origins of American Generals and
Businessmen, by father's profession

father's profession (%)	generals, 1950	business, 1952
business	30	26
professional and managerial	44	29
farmer	10	8
white collar	11	19
worker	5	15
other	--	2

From this one might conclude that, even at a time when a vastly expanded US Army reached the peak of its prestige, it still offered fewer opportunities for social advancement than did American business.

32. R Bendix, Higher Civil Servants in American Society (Boulder, Co, 1949) pp. 56, 92.

33. Janowitz, op. cit., p. 93.

4. Doctrine and the Image of War

German Army

The best way to understand the German Army's views as to what really matters in war is to quote directly from the official manual Truppenführung (roughly translated as "Command of Troops") of 1936.¹ Its two volumes are signed by two successive commanders in chief, Generals Kurt von Hammerstein Equord and Werner von Fritsch.

Introduction

1. War is an art, a free creative activity resting on scientific foundations. It makes the highest demands on a man's entire personality.
 2. The art of war is in a state of constant development. New weapons cause it to assume ever-changing forms. The advent of these weapons must be foreseen in good time, and their effect correctly assessed. Thereupon they must be quickly taken into service.
 3. The situations arising out of war are infinitely varied. They change often and unexpectedly and can rarely be foreseen in advance. Often it is precisely those factors that cannot be measured that are of the greatest importance. One's own will is confronted by the enemy's independent one. Friction and errors are everyday occurrences.
 4. It is impossible to exhaustively lay down the art of war in regulations. The latter merely serve as guiding lines that must be applied in accordance with circumstances.
- Simplicity and consistency in action present the best way of obtaining results.
- ...
10. The advance of technology notwithstanding, the role of the individual remains decisive. His significance has been further enhanced by the dispersion characteristic

1. Heeres Dienstvorschrift 300, Berlin, 1936. This remained in force to the end of the war.

initiation

of modern warfare.

The emptiness of the battlefield demands independently thinking and acting fighters who exploit each situation in a considered, determined and bold way. They must be thoroughly conscious of the fact that only results matter.

Habituation to physical effort, hardness against oneself, willpower, self-confidence and courage enable a man to master the most difficult situations.

11. The quality of commander and men determines the fighting power² of a unit which must be properly backed up by high quality supply and maintenance.

High fighting power can cancel out numerical inferiority. The higher this quality, the stronger and the more mobile the conduct of war.

Superior leadership and superior troops are secure bases for victory.

...

15. From the youngest soldier upwards the independent commitment of all spiritual, intellectual and physical facilities is demanded. Only thus can the full power of the troops be brought to bear in action. Only thus is it possible to develop men who are brave and decisive in times of danger and who are capable of pulling others along in bold exploits.

THUS DECISIVE ACTION REMAINS THE FIRST PREREQUISITE FOR SUCCESS IN WAR. EVERYBODY, FROM THE HIGHEST COMMANDER TO THE YOUNGEST SOLDIERS, MUST BE CONSCIOUS OF THE FACT THAT INACTIVITY AND LOST OPPORTUNITIES WEIGH HEAVIER THAN DO ERRORS IN THE CHOICE OF MEANS.³

*Schwerpunkt
in this*

Having said this, the regulations proceed to enumerate some of the ways in which victory must be sought:

28. One cannot be strong enough at the decisive point. Whoever disperses his forces or employs them on secondary missions sins against this rule.

2. Kampfkraft.

3. Double emphasis in the original.

By making use of speed, mobility, longer marches, night and terrain, surprise and deception the weaker can defeat the stronger at the decisive point.

29. Space and time must be correctly used, favourable situations quickly recognized and exploited with determination. Each advantage over the enemy reinforces one's own freedom of action.

...

32. Surprise is a crucially important means to bring about success. Actions based on surprise, however, can only yield results when the enemy is given no time to take effective countermeasures.

The enemy will also attempt surprise. This is to be taken into account.

To this, little can or should be added. It is worth bearing in mind, however, that geography has placed Germany in the centre of Europe; frequently finding themselves compelled to fight a combination of numerically superior enemies, the Germans responded by developing a very heavy emphasis on operations (defined as "the interplay of attack, defence, retreat, counterattack, etc.") to the detriment, not to say neglect, of other functions which were regarded as merely supportive. In particular, military doctrine put a heavy emphasis on the attack as the sole means of ending wars rapidly and decisively. An analysis of the index to the two volumes of the Truppenfuehrung brings out this order of priorities:

Table X

Analysis of the Index to HDv 300, by Subject

		kind of subject
total No. entries in the index	650	
of those, entire with sub-entries	172	
total No. sub-entries	746	
entries with the largest number of sub-entries, in descending order		
attack	53	a
defence	34	a
delaying resistance	32	a
combat	23	a

Table X (continued)

		kind of subject
retreat	19	a
reconnaissance	18	a
cavalry	18	e
order (Befehl)	17	b
march	16	c
leader	16	b
communications	15	b
supply	14	c
resistance	12	a
signals	12	b
shelter	12	c
pursuit	10	a
shelter-place	10	c
security	10	a
fighting vehicle	10	d
artificial fog	10	d
total	361	

To a) (various forms of combat) belong 211 sub-entries, or 28.3% of the total; to b) (leadership, command, signals) 60, or 8%; to c) (logistics and factors pertaining thereto) belong 52, or 6.9%; to d) (technical means) 20 or 2.6%; and to e) (units or arms of service) 18, or 2.5%. Entries in category a) are 9 in number and average 23.4 sub-entries each. Entries in category b) number 4 and average 15 sub-entries. Those in category c) also number 15 but average 13 sub-entries. Category d) sports 2 entries averaging 10 sub-entries each. Apart from category e), where cavalry with 18 entries forms an anomaly as conspicuous as it is intriguing, the emphasis on operations as well as the entire order of priorities are therefore quite clear.

US Army

The 1941 edition of the US Army's Field Service Regulations (FM 100-5), signed by General Marshall, does not have an introduction on the nature of war. Instead there is prefaced to the volume an untitled page from which we quote.

While the fundamental doctrines of combat operations are neither numerous nor complex, their application is at times difficult. Knowledge of these doctrines and experience in their application provide all commanders a firm basis for action in a particular situation. This knowledge and experience enable the commander to utilize the flexible organization with which he is provided to group his forces into task units most suitable for the accomplishment of his mission.

Set rules and methods must be avoided. They limit imagination and initiative which are so important in the successful prosecution of war. They provide the enemy a fixed pattern of operations which he can more easily counter.

It is a function of command to coordinate the tactics and techniques of various arms and services so as to develop in the forces employed on a given task the teamwork essential to success.

Having said this, the Manual devotes its first two chapters to the organization of the Army and to the functions of each arm and service, then goes on:

98. Man is the fundamental instrument in war; other instruments may change but he remains relatively constant. Unless his behaviour and elemental attributes are understood, gross mistakes will be made in planning operations and in troop leading.

In the training of the individual soldier, the essential considerations are to integrate individuals into a group and to establish for that group a high standard of military conduct and performance without destroying the initiative of the individual.

99. War places a severe test on the physical endurance and moral stamina of the individual soldier. To perform his duties efficiently, he must not only be well equipped and technically trained but he must also be physically qualified to endure the hardships of field service and be constantly

unproductive

fortified by discipline based on high ideas of military conduct...

100. In spite of the advances in technology, the worth of the individual man is still decisive. The open order of combat accentuates his importance. Every individual must be trained to exploit a situation with energy and boldness and must be imbued with the idea that success will depend upon his initiative and action.

...

107. The combat value of a unit is determined in great measure by the soldierly qualities of its leaders and members and its will to fight. Outward marks of this combat value will be found in the set up and appearance of the men, in equipment and in the readiness of the unit for action. Superior combat value will offset numerical inferiority. Superior leadership combined with superior combat value of troops constitutes a reliable basis for success in battle.

...

111. The first demand in war is decisive action. Commanders inspire confidence in their subordinates by their decisive conduct and their ability to gain material advantage over the enemy...

Proceeding now to "Doctrines of Combat" the Manual goes on:

112. The ultimate objective of all military operations is the destruction of the enemy's armed forces in battle...

113. Simple and direct plans and methods with prompt and thorough execution are often decisive in the attainment of success.

...

115. Through offensive action a commander exercises his initiative, preserves his freedom of action, and imposes his will on the enemy. A defensive attitude may, however, be deliberately adopted as a temporary expedient while awaiting an opportunity for counteroffensive action, or

for the purpose of economizing forces on a front where a decision is not sought. The selection by the commander of the right time and place for offensive action is a decisive factor in the success of the operation.

Numerical inferiority does not necessarily commit a command to a defensive attitude. Superior hostile numbers may be overcome through greater mobility, better armament and equipment, more effective fire, higher morale, and better leadership. Superior leadership often enables a numerically inferior force to be stronger at the point of decisive action...

116. Concentration of superior forces, both on the ground and in the air, at the decisive place and time and their employment in a decisive direction, creates the conditions essential to victory. Such concentration requires strict economy in the strength of forces assigned to secondary missions. Detachments during combat are justifiable only when the execution of tasks assigned them contributes directly to success in the main battle.

117. Surprise must be sought throughout the action by every means and by every echelon of command. It may be obtained by fire as well as by movement. Surprise is produced through measures which either deny information to the enemy, or positively deceive him, as to our dispositions, movements and plans. Terrain which appears to impose great difficulties on operations may often be utilized to gain surprise. Surprise is furthered by variation in the means and methods employed in combat and by rapidity of execution...

118. To guard against surprise requires a correct estimate of enemy capabilities, adequate security measures, effective reconnaissance, and readiness for action of all units. Every unit takes the necessary measures for its own local ground and air security. Provision for the security of flanks and rear is of especial importance.

Thus, though entire sentences were clearly lifted straight from the

Verily and rapidly

as well as harmony & independent actions
within superior command ~~has~~ intent.

- 37 -

German Regulations, the overall effect is subtly different and, indeed, indicative of a dissimilar conception of the nature of war. Thus, the German view has it that war is a "free creative activity resting on scientific foundations"; the American one, that is is a question of properly understanding and applying "doctrines" in such a manner as to "utilize the flexible organization with which [a commander] is provided ... for the accomplishment of his mission". The emphasis on scientific management is thus evident.

From Clausewitz, the German Army took over the idea that war is the clash of independent wills, and consequently dominated by friction. In the US Army's manual by contrast the enemy is not mentioned except as a factor that may disrupt one's own pattern of activity, the Clausewitzian influence being instead obvious in the overriding emphasis put on decisive battle.

"Simplicity and consistency" in action constitute, in the German view, the key to success in war; the US Army Manual renders this, characteristically, as "simple and direct plans".

The German manual emphasizes that "it is impossible to exhaustively lay down the art of war in regulations"; the American one, though it does recognize the need to avoid "set rules and methods" as a means of misleading the enemy, expects to provide commanders with "a firm basis for action in a particular situation". Possibly for this reason, it is not nearly as strong in its call for independent action on all levels -- which comprises the real essence of the German Regulations -- and goes into considerably more detail at every point.

While both manuals emphasize the role of the individual vis a vis modern technology, the German one makes "the highest demands" on him; the American one, on the other hand, seems to regard him merely as one "instrument" among many, one whose "elemental attributes" must be understood if "gross mistakes" are to be avoided.

An interesting aspect of the US manual, which has no direct equivalent in the German one, is the heavy emphasis laid on teamwork (with the

These comments show author does not understand the exchange-point philosophy -- and that it is the framework-reference for teamwork since the exchange-point is a unity concept that shapes focus and direction of effort

implied prerequisites of coordination and control) and unit cohesion; the latter point constituting a perfectly sound doctrine which, as we shall see, was not put into practice.

Overall the US Army's view of war was therefore considerably more managerial than the German one, putting far heavier emphasis on doctrine, planning and control. One reason for this was probably the comparative inexperience of the majority of troops and commanders who, civilians until yesterday, required a higher degree of supervision from above. In the main, however, it reflects the experience of an Army which, traditionally assured of overwhelming material superiority, simply did not have to rely on Fighting Power to the same extent as was the German case. Given this difference (compare the means by which both armies sought to overcome numerical inferiority), considerably less emphasis was put on operations in the German sense and more on the organization and logistics required to ensure the most effective deployment of available material resources. This again is borne out by an analysis of the index to the Regulations, carried out in the manner explained above:

Table XI
Analysis of the Index to FM 100-5, by Subject

		kind of subject
total No. entries	287	
of those, entries with sub-entries	104	
total No. sub-entries	1210	
entries with the largest number of sub-entries, in descending order		
defence	63	a
attack	57	a
marches	57	c
river lines	42	c
cavalry	38	e
combat aviation	34	e
reconnaissance	32	a
armoured division	30	e
signal communications	30	b
field artillery	28	e

Table XI (continued)

		kind of subject
security	26	a
mountain operations	25	a
tanks	24	d
troops transported by air	24	c
orders	22	b
snow and extreme cold	22	c
infantry	22	e
total	576	

To a) (various forms of combat) belong 203, or 16.7% of all sub-entries; to e) (units or arms of service) belong 152, or 12.5% to c) (logistics and factors pertaining thereto) 145 or 11.9%; to b) (leadership, command, signals) 52, or 4.2%; and to d) (technical means) only 24 or 1.9%. It can thus be shown, quantitatively, that American doctrine was much less single minded than the German one with its emphasis on operations, choosing instead to stress a balanced development of operations, organization and logistics..

5. Command Technique.

The importance of a proper system of command, leading to a correct distribution of authority and responsibility among the various ranks of the military hierarchy, does not require elaboration. Without striking a correct balance between centralization and decentralization, discipline and initiative, authority and individual responsibility, it is impossible for any human organization -- let alone a military one, operating as it does in an environment where disorder and confusion are endemic -- to function or, indeed, exist.

German Army

Contrary to the usual cliches about "blind obedience"¹ and "Prussian discipline" the German Army had, from the time of the elder Moltke at the latest, always emphasized the crucial importance of individual initiative and responsibility, even at the lowest levels. It was, in this respect, well ahead of German industry where the authoritarian view of command from above -- obedience from below continued to prevail until deep into the middle of the twentieth century.²

As early as 1906, the Regulations read: "in particular, combat demands thinking, independent leaders and troops capable of independent action." The idea was taken a step further in the Regulations of 1908: "from the youngest soldier upwards, the total independent commitment of all physical and mental forces is to be demanded. Only thus can the full power of the troops be brought into action".

Passing now to the Regulations of 1936, already quoted, we read:

36. The basis of command is formed by mission³ and situation.

The mission consists of the objective to be attained.

The person responsible for it should never leave it from

1. German: Kadavergehorsam, literally "corps-like obedience".
2. W Schall, "Führungsgrundsätze in Armee und Industrie", Wehrkunde, 14, 1964, p. 15.
3. Auftrag.

*Schwerpunkt
setzen gegen*

his sight. A mission consisting of many parts easily diverts attention away from the main purpose.

Confusion concerning the situation is the normal state of affairs. Only rarely will exact details about the enemy be known. While the attempt to find about him is a matter of course waiting for news in a difficult situation is a bad error.

37. On the basis of mission and situation a decision is formed. When the mission is overtaken by events the decision must take changed circumstances into account. Whoever alters a mission or fails to carry it out must report on so doing and assume responsibility for the consequences. He is ever to act within the framework of the whole.

The decision must state a clear purpose, to be pursued with all available forces. It must be carried by the commander's strong will. Often the stronger will wins.

Once a decision had been made it is not to be altered unless for really important reasons. Given the fluctuating circumstances of war, however, inflexible adherence to a decision once made may lead to errors. The art of leadership consists of a timely recognition of the circumstances and moment demanding a new decision.

To the extent that his purpose is not endangered thereby a commander must leave freedom of action to his subordinate commanders. He is not, however, to delegate to them decisions for which he himself is responsible.

...

73. An order should contain everything a subordinate must know to carry out his assignment independently, and only that. Accordingly, an order must be brief and clear, definite and complete, tailored to the understanding of the recipient and, under certain circumstances, to his nature. The person issuing it should never neglect to put himself in the shoes of the recipient.

74. The language of command must be simple and understandable. Clarity which excludes any doubt is more important than correct form. Clarity is not to suffer owing to brevity.

75. Orders should be binding only in so far as circumstances can be foreseen. Nevertheless, the situation will often make it necessary for a commander to issue orders in the dark.⁴

76. Above all, orders are to avoid going into detail when changes in the situation cannot be excluded by the time they are carried out. In case of larger operational situations involving orders for several days in advance this problem is to be taken into account. In such cases the overall objective gains overriding importance; an order should accordingly lay special emphasis on the purpose at hand. Guiding lines for the imminent warlike actions are to be laid down, the method of execution is to be left out. In this way an order turns into a directive.⁵

US Army

While lifting entire sentences straight out of HDv 300, the articles in FM 100-5 dealing with command technique differ from their model in that they go into considerably more detail. We quote:

127. In any tactical operation the commander must quickly evaluate all the available information bearing on his task, estimate the situation and reach a decision.

128. The commander's estimate of the situation is based on mission of his unit, the means available to him and to the enemy, the conditions in his area of operations including terrain and weather, and the probable effects of various lines of action on future operations... On the basis of these factors he considers the lines of action open to him which, if successful, will accomplish his mission, and the lines of action of which the enemy is physically capable and which can interfere with such accomplishment. He analyzes the opposing lines of action, one against the other, to arrive at conclusions as to the probability of success

4. German: ins Ungewisse zu befehlen, literally "to order into the unknown".

5. Weisung.

for each of his own lines of action. On the basis of this analysis he then considers the relative advantages and disadvantages of his own lines of action, and selects that line of action which most promises success regardless of what the enemy may do. If two or more lines of action appear equally promising he chooses that one which will most favour future action.

129. The estimate often requires rapid thinking with consideration limited to essential factors. In campaign exact conclusions concerning the enemy can seldom be drawn. To delay action in an emergency because of insufficient information shows a lack of energetic leadership and may result in lost opportunities. The commander must take calculated risks.

...

132. The estimate of the situation culminates in the decision. A decision once made is not changed without some compelling reason. In combat the will and energy of the commander must persist until the mission is accomplished. Estimation of the situation is, however, a continuous process, and changed conditions may, at any time, call for a new decision. Too stubborn an adherence to a previous decision may result in costly delay, loss of opportunity for decisive action, or downright failure.

...

150. Orders may be either complete or fragmentary.

The order is complete when it covers all essential aspects and phases of the operation. Complete orders include missions to all subordinate units charged with the execution of tactical operations in carrying out the commander's plan.

Fragmentary orders are used when speed in delivery and execution is imperative. Fragmentary orders are issued successively as the situation develops and decisions are made, and consist of separate instructions to one or more subordinate units prescribing the part each is to play in the operation or in the separate phases thereof....

151. Orders should be originated sufficiently early and transmitted in such form as to permit subordinate commanders the maximum periods to reconnoiter, to estimate their own situation, to issue their orders, and to prepare their troops for the contemplated operation...

152. In many situations it may be necessary or desirable to issue an order to warn of impending operations (warning orders). A warning order contains information which enables subordinate commanders to make preparations for a contemplated operation. Its principal purpose is to gain time for preparatory measures and to conserve the energy of the troops.

153. An order should not trespass on the province of a subordinate. It should contain everything that the subordinate must know to carry out his mission but nothing more.

154. Orders must be clear and explicit and as brief as is consistent with clarity; short sentences are clearly understood. CLARITY IS MORE IMPORTANT THAN TECHNIQUE.⁶ The more urgent the situation, the greater the need for conciseness in the order. Any statement of reasons for measures adopted should be limited to what is necessary to obtain intelligent cooperation from subordinates. Detailed instructions for a variety of contingencies, or prescriptions that are a matter of training, do not inspire confidence and have no place in an order. Trivial and meaningless expressions divide responsibility and lead to the adoption of half measures by subordinates. Exaggerated and bombastic phrases invite ridicule and weaken the force of an order. Expressions such as "attack vigorously", if used in orders, are not only verbose and meaningless but tend to weaken the force of subsequent orders in which such expressions do not appear.

In so far as the following sections are concerned with pure technical detail we shall cut short our quotation at this point. There does, however, exist another document which brings out the differences between the German and American concepts of command in a unique way. In 1953

6. Emphasis in the original.

a group of former Wehrmacht officers, led by ex chief of the General Staff Franz Halder who had planned the French and early phases of the Russian campaign, was asked by the US Army to comment on a new edition of FM 100-5 then being drafted to incorporate the lessons of the war. We quote:⁷

The task of Regulations -- besides transmitting basic information and points of view concerning command and battle -- is to educate.

We deliberately put the educational aspect of the matter first of all.

The German High Command has indicated the following as the main goals for any education:

1. A high degree of independence at all grades of command;
2. The need for a mission-oriented discipline, i.e the inner duty always to handle in accordance with the mission given;
3. Free creativity;
4. Making "whole", i.e clear and unambiguous decisions and carrying them out by concentrating all forces;
5. Continuous care for the troops and maintenance of their battle-worthiness.

Having said this, Halder and Co. proceed to criticize the American Regulations in detail. The following represents a summary of the main points raised:

a. As compared to the German conception of war, the American Regulations display a repeated tendency to try and foresee situations and lay down modes of behaviour in great detail. This procedure limits a commander's freedom of action and by rendering him incapable of handling in accordance with the actual situation robs him of a very important prerequisite for victory.

b. The Regulations do not do justice to the importance in modern war of the individual warrior.

7. F Halder, "Gutachten zu Field Service Regulations", US Army Historical Division Study No. P 133, Bonn 1953, pp. 1-2.

c. Given their historical material superiority the American Regulations display a marked tendency to underestimate the importance of surprise, manoeuvre and improvisation.⁸

d. Owing to the attempt to foresee each situation in advance the Regulations tend to be stereotyped.⁹

e. The Regulations tend to underestimate the psychological and bodily-physical aspects of war.

f. Putting his finger on the crux of the different images that the German and US Armies held of war, Halder suggested that the following words be added to the Manual: "in war, the qualities of the character are more important than those of the intellect".

To conclude this section, we shall quote a key Bundeswehr General (who notes, interestingly, that "mission type" tactics were first brought to Germany by Hessian troops home from the American Revolutionary War) on the main ingredients of the system:¹⁰

1. The mission must express the will of the commander in an unmistakable way.
2. The objective, course of action and mission constraints, such as time, must be clear and definite without restricting freedom of action more than necessary in order to make use of the initiative of individuals charged with the tasks to be accomplished.
3. Limits as to the method of execution within the framework of the higher commander's will are imposed only where essential for coordination with other commands.

Mission-type tactics, it is true, presuppose uniformity of thinking and reliability of action; more important still, complete confidence of superiors in their subordinates, and vice versa, is absolutely indispensable. Provided these conditions can be met, the advantages of the system are considerable:

8. On the disinterest shown by the US Army in these factors see also R F Weigley, "To the Crossing of the Rhine, American Strategic Thought to World War II", Armed Forces and Society, 5, 1979, pp. 302-20; also my Supplying War, chp. 7
9. German: schablonenhaft.
10. W von Lossow, "Mission-Type Tactics versus Order-Type Tactics", Military Review, 57, June 1977, pp. 87-91. As often happens, attempts to translate key German terms into English lead to awkward solutions since no real equivalents exist.

BS - not known

1. Leaders of all echelons are forced to analyze their own situations as well as that of the next highest¹¹ command.
2. Transmission of orders from one command level to another is expedited.
3. Measures taken at the scene of action are in harmony with actual conditions.

On the other hand, the system does have the drawback of presupposing very thorough training.

11. Here an anecdote may be in place. An American ex-officer and social scientist to whom I showed an early version of this study underlined the word "highest" and wrote: "lowest"?

6. Army Organization

The purpose of military organization is to so deploy available human and material resources as to produce the greatest possible effectiveness in combat. In the following sections, we shall present an overview of the different ways in which the German and American Armies tried to cope with this problem.

a. General Principles

Organization by its very nature involves a series of balances. Among other things, a balance must be struck between the need for control from above, and for initiative from below; between headquarters' desire to employ available resources where most needed and the need to have them locally at hand; and between headquarters' wish to set policy on one hand while avoiding excessive detail on the other. Overlapping responsibilities must be avoided, authority firmly and clearly divided.

Above all, an organization should ever keep in mind the purpose for which it was created; this involves striking a balance between productive ("output-related") and administrative ("function-related") tasks, the latter to be adequate but limited to the minimum possible. Under no circumstances should function-related tasks be allowed to equal, much less exceed, the output-related ones in importance. This should be reflected in the organization's doctrine and structure.

In so far as they make for efficiency, the cardinal virtues of any organization are simplicity, consistency and interchangeability of parts. Human beings, however, resent being handled like so many uniform, interchangeable building blocks; if the organization of which they form part is to be at all cohesive, the differences between individuals as well as their social and psychological needs should be taken into account.¹

1. There exists an enormous literature showing the close connection between a unit's cohesion and its members' common social background. See e.g. M Janowitz and R W Little, Militär und Gesellschaft (Boppard am Rhein, 1965) pp. 263-9; and A Etzioni, A Comparative Analysis of Complex Organizations (New York, 1961) p. 189.

German Army

That Germany's supreme war-conducting organization in World War II presented a chaotic picture cannot be denied and must, indeed, be regarded as a not unimportant factor in her ultimate defeat. The rivalry between the Armed Forces High Command (OKW) and the Army High Command (OKH), each of which were responsible for handling the war on one or more fronts, is too well known to require elaboration. So is the confusion created by Hitler's assumption of the role of Army Commander in Chief and his distrust of the General Staff which he regarded as too intellectual, too prudent, and altogether antiquated and lacking in National Socialist fanaticism.

Yet the German Army's wartime structure -- with which we are concerned here -- also comprised a number of interesting features which, possibly because they existed on a level below the highest one and were not directly connected to the spectacular business of operations and conquest, have largely escaped the attention of historians. There was, to begin with, the fundamental distinction between the Field Army (Feldheer) and the Replacement Army (Ersatzheer). The Field Army came under the direct control of the Commander in Chief (first Walter von Brauchitsch, then from December 1941 the Fuehrer in person) and his staff at Field Headquarters who were thus able to devote their attention primarily to military operations. All other army business -- induction of new recruits, training, replacements, procurement, administration etc. -- were entrusted to the Home Command in Berlin. All units and men stationed in the Zone of the Interior (Heimat) came under the Replacement Army. It and the Home Command were united under General Friedrich Fromm, a superbly able officer whose fundamental importance in running Germany's war effort has to date gone largely unnoticed.²

German troops were divided into combat units (fechtende Truppen) and supply units (Versorgungstruppen). Since German commanders seldom hesitated to use special troops in roles for which they had not been intended, however, this distinction was less fundamental than that

2. Fromm, whose chief of staff Stauffenberg tried to blow Hitler up on 20 July 1944 subsequently had the main conspirators arrested and shot. This, however, did not save him from subsequent arrest and execution on the charge that he had been involved himself.

Very interesting -- another variation on Schwerpunkt notion.

between the Field and Replacement Armies, a system which enabled the former to concentrate on military operations secure in the knowledge that everything else was being taken care of in the rear.

Very great emphasis was laid on maintaining close connections between the Field and Replacement Armies. Not only was each corps tied to one of seven (later, thirteen) Wehrkreise, or Defence Districts, but personnel -- mainly instructors -- were constantly being rotated between the two. Since each division received its replacements from a given unit of the Replacement Army the commanders on both sides were expected to maintain close personal ties by means of correspondence, mutual visits, etc.

Units and headquarters of all types were regarded as part of a vast pool from which they could be withdrawn at will to form task forces tailored to specific missions. Since missions and circumstances vary almost infinitely few such forces were ever alike, and units above the division level were properly nothing but frameworks for command. The organization was thus both rigid and flexible; rigid in that the basic "building blocks" or units were as similar to each other as possible, flexible in that all were available to construct any type of combat organization needed to accomplish a given mission. Task forces were tactically and administratively independent and were never made to depend on other units to carry out their missions.

Fundamentally and in principle, units of all sizes consisted of five component parts as follows:

1. The commander and his staff.
2. Headquarters troops, including (in the case of a division) the divisional maps department, a troop of dispatch riders, military police, and divisional signals troops.
3. The unit proper, always consisting of three sub-units.
4. Special troops of various kinds, such as a heavy battalion (engineers and anti-tank troops) for the infantry regiment, an artillery regiment for the division, various corps troops (e.g heavy artillery, bridging companies) for the corps.

5. Support troops (Trosse) including, in the case of a division, troop trains, supply columns, administrative units, sanitary and veterinary services, and the like.

In principle at any rate, all these units were organic. However, the higher the level of command and the longer the war went on the more pronounced the tendency to commandeer units and bits of units (not, however, individuals) and put them together into improvised battle groups. Thanks to the excellent common training, these usually functioned admirably.

Divisions were known by their Arabic number, corps by their Roman one. Most divisions also carried names. There existed a tendency, even in official documents, to call units after their commanders, e.g. Armee-gruppe Rundstedt, Panzergruppe Kleist, Panzergruppe Guderian, etc. Troops belonging to the second of these formations had a song composed for them containing rhymes on their commander's name ("carried by the Fuehrer's Geist/We are Panzergruppe Kleist"). Those forming part of the third habitually painted their vehicles with a white G.³

Improvised units, mentioned above, could be counted by the hundred during the final stage of the war. Invariably known after their commanders as "Battle Group X", these units often showed a resilience and flexibility that remain among the more outstanding aspects of the German Army's performance.

Partly for historical reasons, but partly also as a lesson consciously drawn from World War I,⁴ German units from divisions down were normally formed on a "national" basis, i.e. made up of Prussians, Bavarians, Saxonians, Wurtembergians, etc. It was recognized, for example, that a Prussian among Bavarians, or vice versa, might face social difficulties to the point of being driven to suicide.⁵ Hence the Army's determination to maintain its units' national character in spite of the adminis-

3. See picture in K Macksey, Guderian, Panzer General (London, 1975) p. 133.

4. Denkert, "Einsatz der 3. Panzer Grenadier Division in der Ardennen-Offensive", US Army Historical Division Study No. B 086, 1946, p. 7. Also K Hesse, Soldatendienst im neuen Reich (Berlin, n.d) pp. 15-6.

5. Bundesarchiv/Militärarchiv (BAMA), Freiburg i B, file H 20/477.

trative difficulties that this entailed.

Between the alternatives of either keeping existing divisions up to strength by means of replacements or using the latter in order to set up new divisions the German Army, prodded by Hitler, opted for the second. This arrangement has been much ridiculed by subsequent critics who saw in it merely an unbusinesslike obsession with numbers; and it is undeniable that, since combat troops are used up faster than staffs and services, some waste was involved in not keeping divisions up to establishment strength. On the other hand, German commanders unhesitatingly used troops in functions for which they had not been intended, thus eliminating at least part of this waste. Furthermore, the large number of divisions made possible the rotation of units in and out of the line right down to the end of the war. Above all, this policy meant that German divisions, especially at the lowest levels, were and remained tight bunches of men who suffered, fought and died together.

Thus the divisions' social homogeneity, as well as the fact that they were NOT continually brought up to strength, goes far to explain their remarkable cohesion as measured by the number of desertions and surrenders. Always fairly rare, these appear to have been most common in units hastily thrown together towards the end of the war in which Austrians, Czechs and Poles were often randomly intermixed or which had been formed out of stragglers originating in different outfits. Formations in which this was not the case, however, suffered little from either phenomenon.⁶

US Army

Unlike Germany, whose rickety OKW-OKH command system has been described above, the US in World War II possessed a uniform organization for commanding all land and air (but not sea) operations in the form of the War Department General Staff. As the name implies, however, this body was both a War Department and a General Staff; nor was it divided into a Field and Home Headquarters (the fact that the US waged war overseas

6. E A Shils and M Janowitz, "Cohesion and Disintegration in the Wehrmacht in World War II", Public Opinion Quarterly, 12, 1948, pp. 285, 288.

would have made such a division meaningless in any case) so that administrative matters occupied a more important place by far. Likewise, the land forces' two basic components, the Army Ground Forces and the Army Service Forces, were not geographically separated since both maintained installations and units in the Zone of the Interior and overseas. Training was in the hands of AGF; the Replacement System, however, came under ASF -- with very bad results, as will be shown below.

Apart from the fact that a larger proportion of US troops were contained in nondivisional units American organization resembled the German system in that units were regarded as parts of a pool to be assigned by General Headquarters in accordance with circumstances; attempts to create type corps and type armies were made early in the war but abandoned later on. Unit structure also resembled the German model except that it was less simple and less consistent. At various times during World War II divisions had more or less than three regiments, and intermediary headquarters were formed only to be abolished again.⁷ As the war went on, these anomalies tended to disappear.

Operating in a system that put heavy emphasis on the "industrial" production of firepower, American commanders seldom took apart organic units to form improvised task forces. Nor did they care to use specialized troops in roles other than the ones for which they had been trained, e.g. to employ paratroopers in ordinary ground combat or to use engineers as infantry. The result, of course, was that while the integrity of units was preserved much manpower was allowed to stand idle.⁸

Like their German counterparts, American units were known by either Roman or Arabic numbers. Most also had nicknames, though the enormous variety of whimsical designs -- belligerent dogs, ducks, centipedes, spiders, bees, bulls, birds, monkeys, wolves, bears, horses, pigs, and cats among others -- that accompanied American units into combat suggests that these meant little to the troops. Except for Merrill's Marauders, an outfit operating against the Japanese, I know of no case in which an

7. K Greenfield, The Organization of Ground Combat Troops (Washington DC, 1947) p. 271 ff.

8. An extreme instance took place in the summer of 1944 when an entire paratroop army sat on its hands in England because no role suitable for its special training could be found.

American formation was known after its commander.

During World War I American divisions had frequently been built up on the basis of a single small region. As happened to the British "pall divisions" also, some of these units took heavy casualties and the resulting losses to entire communities led to the system being changed.⁹ World War II American divisions were accordingly made up of men called up from any part of the nation's 3,615,000 square miles without regard to geographical origin.

The US Army in World War II activated 91 divisions of which 89 saw combat. The comparatively small number meant that units could seldom be rotated; worse still, the policy of constantly replacing casualties in order to keep up T/O strengths undermined cohesion and prevented the consolidation of primary groups. German divisions, as already noted, sacrificed some strength but remained bunches of men who suffered, fought and died together. American divisions, on the other hand, preserved the teeth to tail ratio by acting like some huge meat-grinding machines which processed men on their way from the Replacement System in the rear to becoming casualties at the front.

b. The Structure of Staffs and Headquarters

From the basic principles governing the organization of the German and US Armies we now pass to the structure of their tactical headquarters. Not only is this structure capable of yielding important clues as to the underlying philosophy and modus operandi; it also provides a rough and ready method for gauging the efficiency of the two Armies by comparing the size of the directing brains with that of the respective bodies. There can be no doubt that there exists a point beyond which the expansion of Headquarters no longer contributes to efficiency and may indeed reduce it; the problem, of course, is to identify that point.

German Army

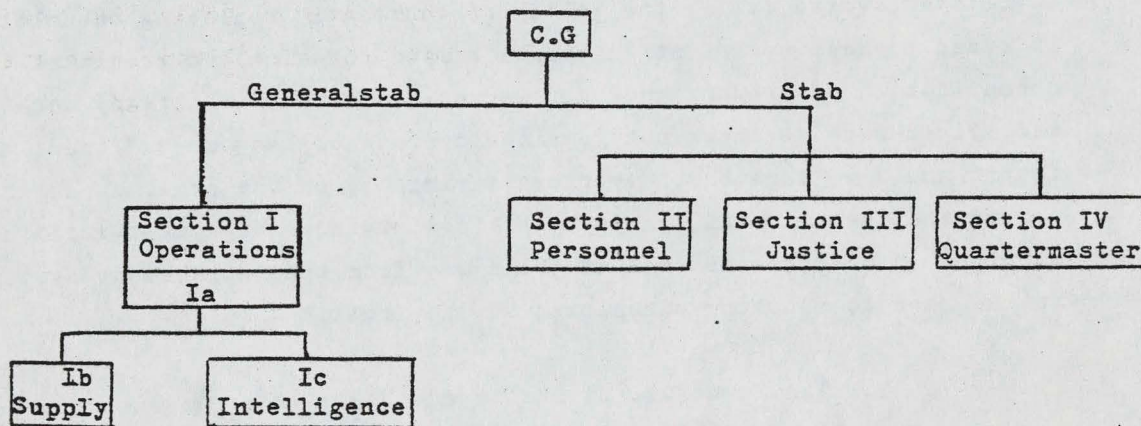
German staffs at all levels were operational and tactical organs above

9. Janowitz & Little, Militär und Gesellschaft, p. 113 ff.

all, i.e their primary function was to provide leadership in combat while devoting only the minimum effort possible to all other tasks. At each level of the hierarchy, therefore, it was the Operations Officer (Ia) who was known as the First General Staff Officer (erster Generalstabsoffizier); a primus inter pares where he was not actually superior in rank and position, his activity was controlling (massgebend) for all other departments.

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7
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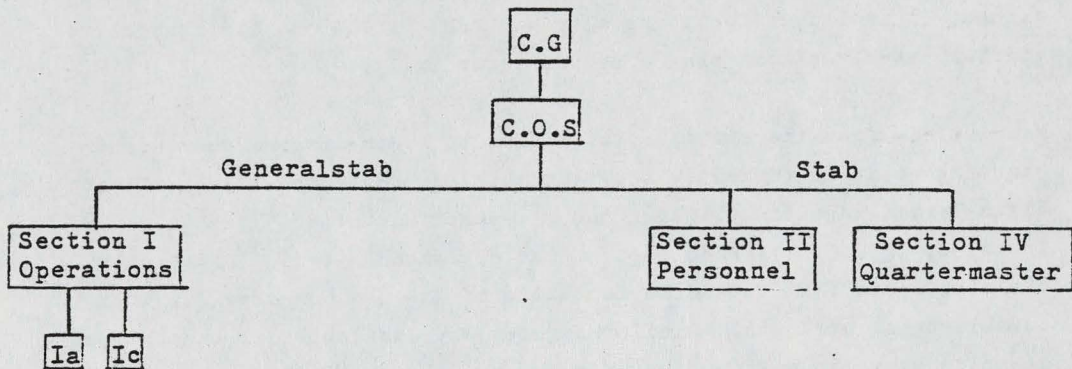
Figure III



The operations officer doubled as chief of staff. The emphasis on operations is brought out more strongly still by the same of section I; by the fact that all of the division's three general staff officers were concentrated in it; and by the subordination of the Ib and Ic to the Ia in his capacity as chief of staff. Under Section IV, nevertheless, the division had all those experts (on administration, motor vehicles, and fuel among others) essential for its functioning as an independent unit. Also included in this Section were medical and veterinary officers and the chaplain.

A corps staff was constructed as follows:

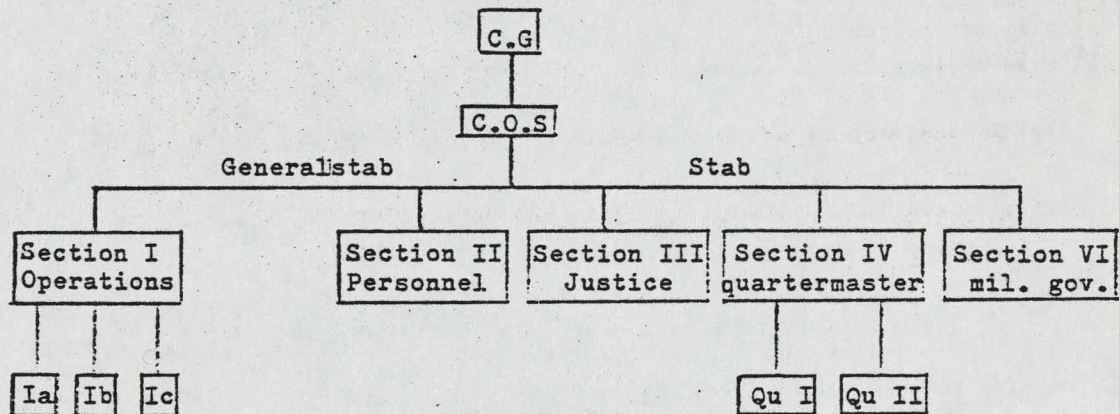
Figure IV



The corps commander not possessing juridical powers Section III was not needed. Corps headquarters, moreover, was even more strongly specialized for operations than was the division, and its Section IV only had two officers instead of five.

The next highest headquarters, that of an Army, looked as follows:

Figure V



The division of the quartermaster department into two was made necessary by the fact that the Army was the main logistic and administrative unit dealing directly with the OKH and thus bypassing the next highest headquarters, that of an Army Group which resembled the corps in that it was a tactical and operational headquarters exclusively. In the event, the very heavy emphasis put on operations turned out to be excessive. As the war went on the impossibility of commanding a corps or an army group

without control over logistics also was recognized, and the respective quartermaster sections were expanded accordingly.

Passing now from the structure of staffs to their size, a convenient starting point is formed by the fact that, in September 1939, a First Class German infantry division had an establishment of 17,885 men. Of these 96, or 0.53%, formed part of the divisional staff.¹⁰ A Panzer division's staff at this time consisted of 114 men, or some 0.65% of establishment strength. Similar figures are available for other types of units at various times during the war.¹¹

In 1944-45 a German infantry division's headquarters, including besides the staff also the remaining organs needed to direct and control the unit, were made up as follows:

Table XII
The Structure of a German Divisional Headquarters

	officers	Beamter ¹²	NCO's	men	total
staff	25	5	35	74	139
div. map dept.	-	-	1	7	8
military police	1	-	25	7	33
headquarters troops (quartermaster, signals)	12	1	64	227	304
total headquarters	38=7.8%	6	125	315	484

An armoured division's headquarters was somewhat larger:¹³

Table XIII
The Structure of a German Armoured Division's Headquarters

staff	21	9	37	94	161
div. map dept.	-	-	1	7	8
military police	3	-	41	18	62
div. escort company	3	-	32	152	187
headquarters troops	13	3	99	348	463
total headquarters	40=4.5%	12	210	619	881

10. B Mueller-Hillebrand, "Statistisches System", US Army Historical Division Study No. PC-O11, Koenigstein Ts, 1949, p. 88.

11. H Reinhardt, "Grosse und Zusammenstellung der Komandobehörden des deutschen Feldheers im II. Weltkrieg", US Army Historical Division Study No. P-139, appendix B, p. 137.

12. "Officials" or "Clerks". 13. Ibid, p. 176.

For a corps, normally responsible for three divisions plus an unfixed number of corps troops, the figures were as follows:

Table XIV

The Structure of a German Corps Headquarters

	officers	Beamter	NCO's	men	total
staff	27	11	44	113	195
corps map dept.	-	-	3	13	16
military police	2	-	21	10	33
artillery officer's staff	6	-	4	12	22
headquarters troops	31	3	120	584	738
total headquarters	66=6.5%	14	192	732	1004

The next highest headquarters, that of an Army, presents the following picture:

Table XV

The Structure of a German Army Headquarters

	officers	Beamter	NCO's	men	total
staff	80	44	104	270	498
army map dept.	1	-	12	45	58
secret military police	2	14	10	78	104
intelligence/air force	2	-	4	6	12
liaison/air force	2	1	25	20	48
staff higher artillery officer	6	2	7	20	35
commander rear area	14	4	18	36	72
army signals regiment	48	10	317	1471	1846

All these are extremely lean organizations. A division with an establishment strength of some 12,500 men was commanded by a headquarters consisting of 484 men, or 3.87% of the total (for an armoured division the corresponding figures were 881 and 7.09%). A corps with approximately 65,000 men was controlled by a headquarters with a strength of 1,004, or 1.52% of the total. An Army numbering 200-300,000 men was directed by a headquarters numbering 2,682, or between 1.34 and 0.89% of the total. Particularly interesting is the fact that an armoured division only had two officers (but 383 NCO's and enlisted men) in its headquarters than did

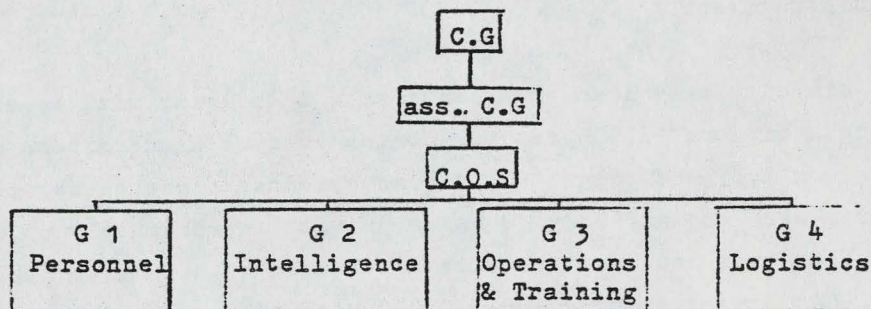
an infantry division, thus showing that even complete mechanization need not necessarily lead to an increase in "middle management". Yet I am not aware of any historian blaming the German defeat on improper functioning of tactical headquarters.

US Army

Historically, the US Army's General Staff system was taken over by Elihu Root from the German model by way of Spencer Wilkinson's The Brain of an Army and Bronsart von Schellendorff's Generalstabsdienst. Yet the American system was different from the very beginning in that it put far less emphasis on operations which were, indeed, not even mentioned in the original authorizing bill of 1903. Instead, the Staff was supposed to correct the deficiencies brought up during the Cuban War and accordingly dealt above all with planning, mobilization, intelligence and administration. It was not until 1918 that Pershing, under French influence, created a quintuple division of functions to command his AEF: the G 1 (Personnel), G 2 (Intelligence), G 3 (Operations), G 4 (supply) and G 5 (instruction and training). When the functions of G 5 were divided among the G 1 and G 3 in 1921 the present-day structure was substantially complete.¹⁴

In World War II the structure of a division (duplicated, in essence, at all higher levels) was as follows:

Figure VI



As even a cursory glance at this table shows, American divisional staffs

14. J D Hittle, The General Staff, its History and Development (Harris-Pa, 1961) p. 201 ff.

were far less specialized for operations than were their German equivalents. The divisional chief of staff in particular, rather than being an operations officer first and foremost, was a manager whose function was to coordinate and supervise the functioning of the assistant chiefs of staff. These were co-equals and thus able to make their plans "independently and objectively" -- that is, without the overriding dependence on operational considerations that was the essence of the German system.

Whereas a German unit in combat would be commanded by its 1st Section only, an American staff's Forward Echelon would include all four assistant chiefs of staff. Not only the staff as a whole, but its forward echelon too was therefore less specialized.

According to the Tables of Organization of June 1941, an American infantry division 15,514 men strong was controlled by a staff numbering 169, or 1.08% of the total. The corresponding figures for January 1945 were 14,037, 166 and 1.63% respectively.¹⁵

In March 1942 an American armoured division had 14,620 men of whom 185 or 1.26% belonged to the staff. The corresponding figures for January 1945 were 10,670, 174 and 1.63%.

Since systems of organization differ, it is not easy to compare the size of American headquarters to German ones. The following table, however, will give an idea of the number of men needed to control an American division in January 1945:

Table XVI

The Structure of American Divisional Headquarters

	infantry div.	armoured div.
staff	166	174
military police platoon	239	293
div. headquarters company	104	115
division trains headquarters and headquarters company	-	99
total	615	768

15. Greenfield, op. cit., pp. 174-5, 320-1.

This gives corresponding percentages of 4.3% and 7.19%. Contrary to the impression given by many historians, therefore, American headquarters were only slightly larger than German ones; however, an infantry's division's headquarters contained 79 officers (94, if the divisional artillery commander's staff is included) which is double that of a German infantry division. Officers formed 12.8% of headquarters strength in an American infantry division, as against 7.8% in a German one. Possibly because of the greater prominence given to logistics and administration over operations, 11.2% of the officers of an American infantry division served at divisional headquarters, as against only 7.0% in a German one.

An American corps staff was made up as follows:¹⁶

Table XVII
The Structure of an American Corps Staff

officers	69
warrant officers	7
enlisted men	109
total	185

Thus an American corps staff contained 55% more officers, but 44% fewer other ranks, than did a German one; clearly American officers were employed on numerous tasks which, in the German Army, were carried out by officials, NCO's and men. This is an important point to which we shall have occasion to return.

c. The Structure of Divisions

If an army is like a machine, its divisions are like cogwheels. They should be just strong enough to enable the real working parts, the cogs, to function effectively; anything in excess of this is wasted.

German Army

Though the German Army, like all others, did not escape the gradual

16. Ibid, p. 361.

growth in the number of trains and services that had been going on since early in the 19th century, its divisions nevertheless remained remarkably lean fighting organizations. The following will give an idea of combat versus service troops inside the division in 1939:¹⁷

Table XVIII

Distribution of Troops Inside German Divisions, 1939

unit	infantry division	armoured division
staffs ¹⁸	1.08%	1.3%
infantry, including replacement battalion	56.2%	27.0%
reconnaissance	3.4%	6.4%
artillery	19.0%	10.2%
armour	0.0%	24.7%
antitank artillery	4.0%	6.0%
engineers	4.4%	7.0%
signals	2.7%	3.6%
total combat	90.7%	86.2%
supply	3.8%	7.5%
administration	1.1%	1.8%
sanitary services	2.8%	3.8%
veterinary services	1.3%	0.0%
military police	0.3%	0.7%
total services	9.3%	13.8%

The difference between an infantry and an armoured division (which at this time had two armoured regiments with approximately 350 tanks between them) was therefore rather small. The favourable teeth to tail ratio was preserved to the end of the war, as the establishment of a Panzer Grenadier Division in 1944-45 shows:¹⁹

17. Mueller-Hillebrand, "Statistisches System", p. 89.

18. The figure differs slightly from that on p. 57 owing to the different system of classification employed.

19. Reinhard, "Grosse und Zusammenstellung", supplement, p. 12.

Table XIX

The Structure of a German Panzer Grenadier Division, 1944-45

unit	officers	Beamter	NCO's	e.m	total
divisional staff	26	10	99	120	255
infantry	150	18	1056	4822	6046
armoured section	21	4	224	308	557
reconnaissance section	23	3	185	769	980
anti-tank section	17	3	145	289	454
artillery regiment	58	11	770	1065	1504
anti-aircraft section	18	3	131	453	605
engineer battalion	15	5	114	655	791
signal section	13	3	87	311	414
depot battalion	17	1	91	850	959
total combat	358	61	2902	9642	12565
supply troops	19	2	101	439	561
motor repair shops	5	6	40	184	235
administrative troops	1	7	33	166	207
sanitary troops	17	4	83	358	462
field post	-	3	7	8	18
total service	42	22	264	1155	1483
grand total	400	83	3166	10797	14048

According to this system of classification, 89.4% of all troops were still in combat units. The figure for officers was 89.5%; for Beamter, 73.5%; for NCO's, 91.6%; and for enlisted men, 89.2%. Apart from the Beamter, an obvious and necessary exception, the various ranks were therefore distributed almost equally between combat and service units.

US Army

The following represents the structure of an American division in January 1945:²⁰

Table XX

Distribution of Troops Inside American Divisions, 1945

unit	infantry division	armoured division
staff	166 = 1.18%	360 = 3.37%
infantry	9204 65.56%	2985 27.97%

20. Based on Greenfield, op. cit., and adapted to correspond to the German system of classification.

Table XX (continued)

unit	infantry division		armoured division	
reconnaissance	149	= 1.06%	894	= 8.37%
artillery	2111	15.03%	1625	15.22%
armour	-	0.00%	2100	19.68%
anti-tank artillery ²¹	-	0.00%	-	0.00%
engineers	620	0.41%	660	6.18%
signals	239	1.70%	293	2.74%
total combat	12489	88.97%	8917	83.57%
service units ²²	1548	11.03%	1753	16.43%
total	14037		10670	

As in the German case, officers (4.9% of the total in the infantry division) were almost equally distributed between combat and service units. Though this table probably tends to slightly exaggerate the fighting power of American divisions (the US Army, we saw, was less prepared to use specialized troops in roles for which they were not intended, and accordingly classified engineers e.g not as "combat" but as "auxiliary ") the differences between them and German ones are hardly sufficient to explain anything much. The next step, therefore, will be to turn our attention to the proportion of combat to service troops in the two armies as a whole.

d. Divisional Slices

The following represent the sizes of German divisional slices during various periods in the war:²³

Table XXI

German Divisional Slices, 1939-1945

date	9.39	7.41	6.42	12.43	6.44	11.44	4.45
No. divisions	106	203	239	278	255	260	260
average establishment	16626	13900	13500	13000	12500	12500	11500
average actual strength	16626	13800	11836	10453	12155	8761	9985
field army units							
staff, corps and army troops	4130	3800	3800	3900	4100	4100	4200

21. Distributed among other arms.

22. Including headquarters and service companies, band, trains, military police platoon, maintenance and medical battalions.

23. B Mueller-Hillebrand, "Division Slice", US Army Historical Division Study No. P 072, Koenigstein TS, 1951, p. 9.

Table XXI (continued)

date	9.39	7.41	6.42	12.43	6.44	11.44	4.45
frontier guard	1075	-	-	-	-	-	-
construction troops	4028	1100	1100	1000	1000	1000	500
total field army	9233	4900	4900	4900	5100	5100	4700
replacement army units							
training units	7027	4630	4749	4495	4104	4003	2292
sanitary personnel and wounded	-	246	1611	1979	3529	2642	3248
total replacement army	9034	6107	7531	8272	9801	8983	5695
total, actual	34873	24807	24267	23625	27056	22844	20308
total, establishment	34873	24907	25971	26172	27401	26583	21895

These figures conceal several surprises. First, it would appear that the German Army entered World War II as a comparatively flabby force but tended to lose its surplus fat later on. Second, divisional slices (establishment) reached their lowest point in June 1941, at the very time when the army, according to its chief of staff Halder, reached its "high water mark" in terms of morale, leadership and combat worthiness.²⁴ The slowly rising figures after this date reflect a small shift towards an increased number of nondivisional units and, above all, the rapidly increasing number of wounded.

The German Army's divisions comprised 47.6% of its strength in September 1939, 55.6% in July 1941, 48.7% in June 1942, 44.2% in December 1943, 44.9% in June 1944, 38.3% in November 1944 and 49.1% in April 1945. The high figure for July 1941 (just after the beginning of the invasion of Russia) and the low one for November 1944 (following a series of heavy defeats in both east and west) are particularly noteworthy.

Turning now to the share of service troops in the Army as a whole, we are handicapped by the fact that German headquarters did not normally break down their forces not as between combat and service but as between field and replacement units. The following figures, valid for June 1944, are therefore rough approximations only:²⁵

24. F Halder, Kriegstagebuch (Stuttgart, 1962) ii, p. 214.

25. Adapted from Mueller-Hillebrand, "Division Slice", pp. 7-8.

Table XXII

Combat to Service Troops in the German Army

combat troops	
div. average actual strength	12155
staffs, corps and army troops ²⁶	2550
total combat	14705
service troops	
staffs, corps and army troops	2550
construction troops	1000
administrative units at home	600
sanitary personnel in hospitals	392
guard troops	176
training units	2535
trained replacements in pools	1569
recovering personnel	784
wounded in hospitals	2745
total service	12351
grand total	27056

At this date, therefore, combat troops comprised 54.35% of overall strength as against 53.5% at the beginning of the war.²⁷ In spite of growing motorization and the vast number of wounded caused by five years of war, the share of combat troops in the Army was maintained and even slightly increased.

To round off this survey of the structure of the German Army, there follows a table representing a divisional slice in a single theater of war:

Table XXIII

Combat to Service Troops in a German Theater of War

combat troops	
div. average establishment	16626
50% staffs and corps troops	1875
total combat	18501
service troops	
50% staffs and corps troops	1875
construction troops	1500

26. Assuming that half of all these troops represented combat units (heavy artillery, etc.) and half service troops (supply, maintenance, military government).

27. Based on Mueller-Hillebrand, "Division Slice", p. 3 and calculated in a similar way.

Table XXIII (continued)

total service	3375
grand total	21876

Inside a theater, therefore, combat troops represented 84.5% of total strength.

US Army

Remarkably little information about divisional slices is available in the US Army's official history of World War II. All we are told is that there were 89 divisions at the end of 1944. Since the Army's overall strength at this time (excluding the Air Force) stood at approximately 5,700,000 the divisional slice must have stood at 64,044.²⁸

Unlike their German equivalents, American units were normally kept up to, or near, establishment by means of a continual stream of replacements. Actual divisional strength at this time was accordingly high, averaging 13,400; this means that some 20.8% of the Army's strength were concentrated in its divisions.

This figure does not stand comparison with the equivalent German one, however. American organization being more centralized, a considerably higher percentage of combat units were kept under the direct control of higher headquarters -- army and corps -- than were organic to the division. Consequently, in January 1945, a theater divisional slice would appear to have looked somewhat as follows:²⁹

Table XXIV

American Divisional Slices

div. average actual establishment	13400
combat troops in nondivisional units	11300
total combat troops	24700
service troops in nondivisional units	18700
total	43400

28. "Over 60,000 men", according to Greenfield, op. cit., p. 213.

29. Worked out on the basis of ibid, p. 351.

Of the theater total, 56.9% were therefore combat troops, though again this figure does not stand an exact comparison with the German one because the US Army operated overseas, i.e as an expeditionary force. Nevertheless, if 21,049 "replacements in training or personnel designated as overheads in the Troop Basis" are added in order to obtain the divisional slice for the Army as a whole, then combat troops are found to have formed 38% of overall strength. This figure does not, apparently, include wounded.

We shall now trace the evolution of combat versus service units over time. The following figures refer to enlisted men only, i.e they do not include officers:

Table XXV

Combat to Service Troops in the US Army, 1942-1945

	31.12.1942	31.3.1945
Army Ground Forces combat units	1917000	2041000
Army Ground Forces service units	243000	461000
Army Service Forces service units	518000	1097000
overheads, replacements, unavailables	1022000	1422000
total	3700000	5021000

The share of combat units therefore fell from 51.8% to 40.6% during the period in question. This was due partly to the fact that combat units were set up first, partly to ever-lengthening lines of communications, but partly also to simple inefficiency. The official history has this to say:³⁰

On 30 June 1944, during the most critical days of the Normandy... operation, the number of enlisted men in the US qualified for overseas duty but assigned to Zone of Interior jobs exceeded the number of enlisted infantrymen in the European and Mediterranean Theaters. It exceeded the number of Air Corps personnel, enlisted and commissioned, in the two Theaters. It was 92 percent of the number of enlisted men in the infantry, armoured tank destroyer forces, cavalry, field artillery, coast artillery, and

30. Ibid, pp. 241-2.

antiaircraft artillery in Europe. Many combat soldiers in the Theaters were physically inferior to men scheduled to remain at home. This situation was not one of which the AGF approved but it was difficult for the War Department to correct in 1944. Since the early days of mobilization many prime physical specimens had been trained as technicians in Zone of the Interior assignments. They now occupied prime positions.

No wonder, therefore, that General Joseph Stilwell in May 1945 wrote of the "disappearing ground combat army".

7. Army Personnel Administration

a. General Principles

German Army

Owing partly to the lingering influence of feudal traditions, but partly also to deliberate choice, the German Army did not employ mechanical methods to administer a force whose size, at its peak, reached 6,550,000 men.¹ This, to modern eyes astonishing, feat was made possible by an extremely decentralized organization; such matters as the distribution of recruits among the various MOS, the regulation of leave, the administration of disciplinary measures and the exchange of personnel between units -- in short, everything concerning the vital questions of the individual soldier and his personality -- were left in the hands of unit (mostly regimental) commanders.

Such a system both postulated mutual trust and helped generate it. The wide powers over the troops' lives put in the hands of relatively junior officers greatly strengthened the latter's position, but at the same time was supposed to help "keep awake their sense of responsibility for the men in their charge and thereby to reinforce the bonds of mutual confidence between the soldier and his immediate superiors".² This confidence, in turn, was regarded as an indispensable prerequisite for the creation and maintenance of high fighting power.

As one consequence of the decentralized nature of the system, no detailed manpower statistics were kept at the Army's Central Personnel Office (Heeres-Personnel Amt, or HPA). The absence of such information did not greatly matter during the early years of the war, but began to make itself felt towards the end of 1941 when mounting casualties on the Russian front made it imperative to put available manpower to the best possible use.

However, a changeover to a mechanized, centralized system was not easy

1. Mueller-Hillebrand, Das Heer, iii, 254.

2. Idem, "Statistisches System", p. 68. In the original the passage quoted is underlined twice.

to carry out in wartime. The move also met with considerable opposition by officers who recalled pre-1918 traditions and insisted, not unreasonably, that some means be found to counter the threat to the commander's position and to the principle of unity of command inherent in any centralized system. Finally, the General Staff was reluctant to increase the burden of paperwork resting on the troops and to turn them into collecting agencies for data that would benefit the Army as a whole, but not them directly. These considerations prevented any important changes from being introduced, and things remained much as they were.

The lengths to which the General Staff was prepared to go in order to avoid "an increase in the burden resting on the troops"³ (this is a frequently recurring sentence in the literature concerned) were, in fact, quite remarkable. Thus, the Organization Department did not demand daily reports on actual strength, casualties and need for replacements; instead, it used establishment strength and losses, reported every ten days, in order to make its own calculations. In so doing it took into account the relative importance of the unit in question, that is the tactical situation.

Contrary to what movie-goers might be led to expect from a Prussian-German Army, therefore, the system consciously attempted to minimize the amount of paperwork and was quite prepared to take the resulting inaccuracies in stride. Since the Army was in any case hopelessly unable to replace its casualties from the winter of 1941-42 on, neither the inaccuracies nor the paucity of the information available mattered very much; in other words, necessity was turned into a virtue.

All this, however, does not mean that the German Army was unable or unwilling to employ sophisticated statistical models where these were called for. This was true above all for the wounded whose numbers in the later stages of the war were very large. To coordinate the wounded with other replacements, it was necessary to develop accurate models so as to forecast the numbers that would recover, the duration of their recovery, and the resulting degree of physical fitness. This was done.⁴

3. "Um die Truppe nicht mit weiteren Meldungen zu belästigen."

4. Mueller-Hillebrand, "Statistisches System", p. 68.

US Army

From the US Army's official history of World War II it is possible to glean comparatively little detailed information concerning methods of personnel administration. It is clear, however, that the system was based on -- frequently sophisticated -- mathematical models, almost completely mechanized, and very centralized.

There existed, it is clear, a strong belief in the virtues of quantification. To make possible a mechanized system of administration, any- and everything was given a number. The official history is clogged with statistics, graphs and tables one of which at any rate is so complicated as to require ten pages of explanations.⁵ Whenever a problem arose a solution was sought in terms of "engineering", i.e. additional organization and paperwork; thus, for example, a crisis in morale in 1940 led to the establishment of a Morale Branch. In March 1944 a crisis in leadership caused the War Department G 3, General H L Twaddle, to institute a procedure under which all unit-commanders were required to submit monthly reports on the number of officers regarded as unsuitable, or else to state explicitly that there were no such officers under their command.⁶

The use of mathematical methods in order to determine requirements could not preclude errors in the utilization of manpower. Thus, for example, there had been an acute shortage of officers during the first year of the war; in 1943, however, there already existed such a surplus that 1,000 officers per month had to be transferred away from the anti-aircraft artillery units alone.⁷

As an example of the way things were done, the Army's Officer Evaluation Report (WD AG PRT 462) will serve. This 16 page document was divided into five sections -- not counting the one for entering identifying information, itself divided into seven more -- and contained over 80 separate questions to be answered according to five different systems while using an electrographic pencil. Performance, a host of personal

5. Greenfield, op. cit., p. 158 ff.

6. R R Palmer, The Procurement and Training of Ground Combat Troops (Washington DC, 1948) p. 126.

7. Ibid, p. 105 ff.

qualities, judgement, common sense, cooperation, initiative, force, ability to get results, desirability (whether or not the evaluator would like to have the evaluatee under his command) all had to be recorded by means of a point system. Finally an officer could be put into one of four brackets: lowest quarter, below average, above average, and highest quarter, each divided into five grades thus making a scale of twenty.

Filled in twice yearly, the form had to be reviewed by the evaluator's superior -- thus doubling the paperwork if properly done. The results were tabulated in digital form for mechanical procession, and laid down in the form of a five digit number.

Things were different in the German Army. The form known as Beurteilung (assessment, estimate) had to be filled in every two years, consisted of five pages and, as part of the effort to reduce the administrative burden carried by the troops, was simplified still further in November 1942. The Army personnel bureau did not go so far as to require answers to yes/no questions, however. Instead, evaluating officers were asked to estimate their subordinates' character, personality, behaviour under fire, professional competence and achievement, physical condition and fitness for other positions in that order. Neither point systems nor forced comparisons were employed, thus foregoing "objective" standards and putting great faith in commanders' ability (and willingness) to differentiate between the unfit and the fit. The purpose of the Beurteilung was to provide "a plastic description of the whole man". The Army Personnel Office, it appears, was especially appreciative of officers who contrived to do this by means of appropriate metaphors, often taken from the equestrian world.⁸

b. Classification and Assignment of Manpower

To fit round pegs into round holes -- that is a fundamental function of any personnel policy. The following pages will show the different ways in which this problem was handled in Germany and the US.

8. See R R Hofmann, "Beurteilungen und Beurteilungnotizien im deutschen Heer", US Army Historical Division Study No. P- 134, Koenigstein Ts, 1952, pp. 3, 51-2.

German Army

Unless they had already volunteered to serve in one or another of the Services (during the war this also included the Waffen SS) German youths were called up upon reaching the age of nineteen. The duration of conscript service after 1935 was two years; during the war periods of service went on almost indefinitely, though men over 35 or so were constantly being replaced by younger troops in front line units.

Just what percentage of each age group was actually called up is uncertain. It was put at 75% for planning purposes,⁹ but must have gone higher as the war went on and standards deteriorated. From September 1939 to April 1945 17,893,200 men passed through the Wehrmacht and Waffen SS;¹⁰ taking 90,000,000 (including the Sudetenland, Alsace, and parts of Poland) as the population basis, some 3.6 percent of the entire population must have passed through the armed forces each year. At their peak strength in 1943 the armed forces constituted well over ten percent of this basis; a figure which in all probability has been exceeded only in Israel, and then during a war lasting days or weeks, not five and a half years.

If the armed forces as a whole thus comprised a fairly representative cross-section of the German population, the share of manpower allocated to the ground forces (Heer) tended to decrease over time, as the following table shows:

Table XXVI
Evolution of Manpower in the German Armed Services, 1939-45
(strength in thousands)

year	Field Army	Replacement Army	total Army	Air Force	Navy	Waffen SS	total
1939	1400	11200	2600	400	50	35	3085
1940	3650	900	4550	1200	250	50	6050
1941	3800	1200	5000	1680	404	150	7234
1942	4000	1800	5800	1700	580	230	8130
1943	4250	2300	6550	1700	780	450	9480
1944	4000	2510	6510	1500	810	600	9420
1945	3800	1500	5300	1000	700	830	7830

9. Unsigned Notiz, 8.10.1939, BAMA H20/482.

10. Mueller-Hillebrand, Das Heer, iii, 253.

The Army's share thus went down from 85% in 1939 to 67% in 1945, whereas Air Force and Navy together increased theirs from 14% to 24%. The Waffen SS, which even in 1942 hardly constituted a serious rival to the Army, had turned into a formidable one by the time the war ended. The overall share of the land forces (Army plus Waffen SS) also went down steadily; it stood at 86% at the beginning of the war, but at 74% only when it ended.

The effect of these secular trends on the manpower available to the Army cannot be expressed in mere figures, however. As the war went on the Army's status vis à vis the other services tended to deteriorate; after December 1941 it no longer even had its own commander in chief. Its ability to attract the cream of German youth accordingly declined. Pressed by their Hitler Jugend leaders, more and more youngsters opted for the Air Force, Navy or Waffen SS rather than enter the "reactionary" Army. Another factor working in the same direction was the fact that casualties in the Army were, by the nature of things, proportionally much higher.¹¹

The German Army's methods for classifying and assigning enlisted men (but not officers, on whom more below) were, by modern standards, extremely crude. The great majority of all recruits were not made to take any kind of written or mechanical test; instead, a physical examination distributed them into six classes, ranking from "fit for war" (Kriegsverwendungsfähig, or Kv) through "fit for garrison-type duty" (Garnisonverwendungsfähig, or Gv) all the way down to "unfit for defence" (Wehrunfähig, or Wu). Examinations were carried out, for the most part, by a chief physician with the aid of an assistant physician whose job it was to supervise the paramilitary personnel that carried out the preliminary tests. Specialists were called on only as the occasion demanded. The organization of examinations on a conveyor belt principle, with a separate physician examining each organ, was explicitly forbidden. The number each physician could see each day was limited to 80.¹²

11. Up to the end of 1944, 80.7% of all officers killed, missing and discharged were Army men; this was considerably more than the Army's relative share in the Wehrmacht (exclusive of Waffen SS) at any time after 1939, when there had been hardly any losses at all. See Mueller-Hillebrand, "Statistisches System", p. 114.
12. See H Dv 81/15, Wehrmachersatzbestimmungen bei besonderen Einsatz (Berlin, 1942) pp. 34-6; and H Dv 252/1, Vorschrift über militärärztliche Untersuchungen der Wehrmacht, part I (Berlin, 1937) p. 6.

Even as the physical examination was taking place the physician, together with the Musterung (preliminary review) commander who had to be present, carried on a conversation with the recruit. Thus men suffering from obvious mental defects could be weeded out; a general picture of the subject's mental condition formed; and his wishes, if any, taken into account.¹³ While the decision regarding fitness, i.e. whether or not a man was to be called up, had to be taken on the spot by the commander and imparted to the subject, his assignment to the various arms and services did not take place until the subsequent stage of enrollment (Aushebung). Enrollment involved a shortened physical examination to determine any recent changes followed by a man's assignment on the basis of physical condition, educational qualifications, professional occupation, paramilitary training (in the Naval Hitler Jugend e.g) as well as their expressed wishes. Regulations explicitly provided for each Service to be allocated an equal share of qualified (vollwertige) recruits.

The final distribution of the recruits among the various Military Occupation Specialities in e.g. a tank company would take place in the units themselves and was the responsibility of the regimental commander. Thus tests and personal acquaintance during the four weeks of a twenty-one week training course would determine whether a man was to become a driver, a loader or a machinegun operator.¹⁴

The system as a whole was thus simple, decentralized and, above all, personal; it consistently relied on the judgement of physicians and officers rather than on the results of "objective" tests. In the final stage, as so often in the German Army, the decision lay not with some remote personnel officer but in the hands of the commanders who would subsequently have to train a recruit and, quite possibly, lead him in combat.

All this did not mean that the German Army was uninterested in military psychology; on the contrary, a bibliography of the subject published in 1939 shows German-language works heading the list with 28.4% of all

13. Schmirigk, "Die psychologische Beurteilungen Dienspflichtiger bei Musterung und Aushebung", Soldatentum, 6, 1939, pp. 24-7.

14. See H Dv 299/1b, Ausbildungsvorschrift für die Panzertruppen (Berlin, 1943) p. 8.

titles.¹⁵ An Army psychological laboratory was established by the defence minister, General Wilhelm Groener, soon after the resignation of the conservative commander in chief General Hans von Seeckt in 1926. It was led first by prof. J B Riefert and later by Dr Max Simoneit, a well known child and school specialist. By 1939 the laboratory employed some 200 psychologists divided between the centre in Berlin and the outposts in the various Wehrkreise. Military psychologists were carefully selected from among PhD's in psychology and given three years additional training culminating in the submission of a thesis, an oral examination and a test-examination of officer candidates.¹⁶

The level of effort that went into training military psychologists was thus enormous; nevertheless, Simoneit's establishment throughout the sixteen years of its existence¹⁷ remained a comparatively small scale affair, not to be compared with its sprawling US Army equivalent through which passed millions and millions of men. In 1933-39 the laboratory processed a total of only 478,870 men of whom but a fraction were officer candidates; the largest number examined in a single year before the war was 150,000.¹⁸ Here as elsewhere the German Army concentrated on quality rather than quantity, subjecting specialists (including pilots, drivers of special vehicles, operators of optical and acoustical apparatus, and radio operators) to the most rigorous of tests while leaving everything else in the hands of field commanders.

Since it was believed that the first requirements in war were certain

15. See T W Harrel and R D Churchill, "The Classification of Military Personnel", Psychological Bulletin, 38, 1941, pp. 337-9.
16. H L Ansbacher, "German Military Psychology", Psychological Bulletin, 38, 1941, pp. 371-2. Simoneit's assistants often became professors in postwar Germany and, in 1954-55, several among them helped organize the Bundeswehr's psychological service.
17. The laboratory was suddenly closed in the summer of 1942 though some of its parts continued to operate in the service of the Navy and Air Force. In his preface to M Simoneit, "Die Anwendung psychologischer Prüfungen in der deutschen Wehrmacht" (US Army Historical Division Study No. P 007, Koenigstein Ts, 1948) Halder says that the laboratory was closed because it could not cope with the enormously increased numbers involved. Simoneit, however, suspected that the move had been initiated by the chief of the Armed Forces High Command, fieldmarshal Keitel, whose son had failed to qualify for officer training. Keitel himself confirmed as much to the Nuremberg psychiatrist, Dr Felix Gilbert.
18. Jahresbericht des psychologischen Laboratorium des Reichskriegsministerium und der psychologischen Prüfstellen der der Wehrmacht (BAMA file RH/19/494) p. 25.

moral attitudes (courage, obedience, loyalty, independence among others) the tests administered by Simoneit were designed not so much to establish the presence of certain mechanical talents as to bring out a man's entire personality.¹⁹ Thus it was possible for a paper on the selection of tank-commanders read in a 1938 symposium of Wehrmacht psychologists to concentrate almost exclusively on the character-traits needed, whereas the problem of testing for mechanical aptitude, e.g spatial and motor coordination, was dismissed in a few sentences. The paper concluded with an appropriate quotation from Mein Kampf to the effect that the best, the strongest and the most determined should step forward to be counted.²⁰

Tests for other specialists were designed on similar principles. The one administered to would-be truck drivers e.g was designed to examine the power of sustained attention in the presence of occasionally introduced distractions, uniformity of reaction, choice behaviour, rate of learning and fatigability. The apparatus used consisted of five lights of differing shape and colour; in addition two rattles could be sounded, one from the right and another from the left. The examinee sitting in front of a screen had three levers and two foot pedals to operate. The lights were flashed on, and the observer told the examinee which of the three levers was to be pulled with each of the five lights. One of the pedals had to be pressed with the sound of one of the rattles. The subject was given time to work himself in, but was not told of the moment at which the test actually started. During a 20 minute test 600 stimuli were presented in predetermined random order and the examinee's responses and reaction times automatically recorded. Not merely his actual performance, however, but his entire behaviour was carefully noted by a hidden observer. Security of conduct, efficiency of movements and facial expressions were all noticed. The final result depended not so much on mechanical performance as on the examinee's overall attitude and his ability to cope.

Thus it was not the measurement of separate qualities, which was regarded as entirely useless, but the assessment of a man's entire personality

19. M Simoneit, Wehrpsychologie (Berlin, 1943) p. 55.

20. G Nass, "Persönlichkeit des Kampfwagenführers", Beihefte zu angewandte Psychologie, 79, 1938.

in which Simoneit was interested. The results obtained in this way were necessarily imprecise but this was a problem that was deliberately taken in stride and, to some extent, corrected by always having more than one examiner present. As one Army psychologist wrote, the assessment had to be "a work of art".²¹ Contemporary (non-German) psychologists regarded the procedure as sound, the more so since little but lip service was paid to racial-biological ideas of the Nazi type.²²

US Army

The situation of the US land forces in regard to manpower allocation was both more difficult and easier than that facing the German one. It was more difficult in that the land forces never quite reached 50% of the entire armed forces (their share at the end of 1944 was 5,575,000 or 48.5% out of 11,484,000) and therefore faced stiffer competition by the other Services; it was easier in that the pool of available manpower was considerably larger since the armed forces never grew beyond 11,857,000 men or 8.7% of a population basis conservatively estimated at 135,000,000.

The total number of men between 18 and 37 examined for military service in 1940-1945 is said to have been 18,000,000. Of those no fewer than 5,250,000, or 29.1%, were rejected.²³ Though no detailed statistics are available, it seems that a very large proportion of these rejections took place in the first year of the war when the Army, in addition to being short of training personnel, seems to have laboured under the delusion that the pool of available manpower was virtually bottomless. After up to fifty percent of all those screened had been rejected during this period standards had to be drastically lowered in 1943, with the result that men previously regarded as unfit for service were now called up in large numbers whereas others who were perhaps better qualified remained exempt.

Having made its choice, the Army proceeded on the assumption that

21. N Roth, "Zur Formulierung psychologischer Gutachten bei Wehrpsychologischen Eignungsuntersuchungen", Soldatentum, 5, 1938, p. 175.

22. Ansbacher, loc cit., pp. 373, 381-2, 385.

23. Figures from E Ginzberg, The Ineffective Soldier (New York, 1950) ii, pp. 26-7, 34-5.

"ground combat in World War II required complex skills, which were in large part technical".²⁴ Its classification system was accordingly designed to grade men by three criteria, namely a. physical fitness; b. occupational skill, and c. intellectual capacity.

The system of physical classification was rather simpler than the German one. Instead of six there were only four categories, ranging from A ("fit for duty in combat zones and for any strenuous work") through B ("fit for close combat support duty") and c ("fit for duty in lines of communications, or bases overseas, or in the continental US") to 4 (unfit).²⁵ Complaints about the system were occasionally voiced but little was done to correct the matter. Consequently, in the words of the official history, "the question whether... a man would engage in hand to hand fighting, march long distances on foot, carry a heavy pack or go without sleep and food counted for very little in his original assignment".

Whereas German physical examinations were carried out by a team of physicians and an officer who, even as the examination was in progress, conversed with the subject pressure of time dictated that an assembly line type operation be adopted by the US Army. One physician examined a man's eyes and ears; another his chest and lungs; another his abdomen; another his genital organs; another his legs, feet, and so on. Coming to the end of the line the man would be confronted by a psychiatrist who, forced to examine hundreds of men per day, would fire rapid questions of the "do you like girls?" type at him.²⁶

Much more sophisticated than the physical examination was the system of classification according to occupational skill. A list of 800 numbered Military Occupation Specialities was instituted and was divided into two halves in accordance with whether or not any given speciality had a civilian equivalent. Personnel possessing a skill or trade were assigned, as nearly as possible, to a similar military job;

24. Palmer, op. cit., p. 3 ff.

25. R S Anderson, Physical Standards in World War II (Washington DC, 1967) p. 71.

26. Owing to pressure of time American military psychologists were not nearly as well trained as German ones. "A man with psychological training" spent eight weeks at an Army Training Center, then did 8-12 weeks of "practical work of Army classification". See S T Henderson, "Psychology and the War" Psychological Bulletin, 40, 1942, p. 309, and M A Seidenfeld, "The Adjutant's General's School and the Training of Psychological Personnel for the Army", ibid, p. 382.

those who did not -- normally the young, the stupid or the socially disadvantaged -- became fighting men. The system assumed that, the lesser the difference between a man's civilian occupation and his military trade; the better for his morale; this, if true, would have meant that combat units had low morale virtually built-in.²⁷

The tests administered to specialists differed considerably from the German ones. Tank drivers, e.g., were selected on the basis of a road test in an ordinary motor truck; this lasted ten minutes and involved a checklist with 47 separate items such as correct use of clutch, gears and brakes. Results were registered by means of a point system and mechanically processed. A follow up study found, not surprisingly, that the test was fairly reliable as a predictor for performance under optimal conditions; under less than optimal ones, however -- and when in war are conditions optimal? -- its reliability was poor.²⁸

Finally, the name of the third examination (Army General Classification Test, or AGCT) is itself a sufficient indication of its importance. Designed to measure "general learning ability", the Test consisted of arithmetic, box counting and vocabulary items. It separated examinees into five classes, i.e I (over 130 points), II (110-29), III (90-109), IV (60-89) and V (59 and down). Of these, the first two were expected to cope with any training program, the third with most except those requiring mathematical ability, the fourth with basic and some advanced training, and the fifth -- consisting of definitely handicapped men -- with basic training only.²⁹ Results were shown to be fairly reliable and closely related with education. More important still, they were found to be related to combat performance ratings.

The following figures, valid for March 1942 (but many similar ones for

27. Evidence that this was the case comes in the forms of desertions which were most numerous in combat outfits (infantry, coastal artillery, cavalry, field artillery) and least so in such places as finance, chemical warfare, ordnance and signal corps which presumably included a very high percentage of specialists mobilized straight from civilian life.
28. Personnel Research Section, the Adjutant General's Office, "Personnel Research in the Army: vi. the Selection of Tank Drivers", Psychological Bulletin, 41, 1943, pp. 499, 508.
29. Ginzberg, op. cit., ii, p. 45; A J Duncan, "Some Comments on the Army General Classification Test", Journal of Applied Psychology, 31, 1947, pp. 143-9; S A Stouffer, The American Soldier (Princeton, 1949) ii, p. 37.

different periods are available in the documents) give some indication of the results of the system:³⁰

Table XXVII

Distribution of American Manpower among the Arms and Services

	class I&II men	class III	classes IV&V
finance	89.4%	10.5%	0.5%
chemical warfare	51.2%	27.6%	21.2%
army air force	44.4%	35.3%	20.3%
ordnance	41.6%	33.0%	25.4%
military police	35.3%	33.0%	31.7%
medical	30.6%	29.1%	40.3%
quartermaster	28.5%	29.4%	42.1%
armoured force	28.5%	29.4%	42.1%
branch immaterial	28.5%	28.2%	43.3%
infantry	27.4%	29.0%	43.6%
coastal artillery ³¹	26.1%	31.7%	42.2%
cavalry	25.8%	31.3%	42.9%
field artillery	24.1%	29.4%	46.5%
engineers	23.4%	26.2%	50.5%

Thus, ALL the ground combat arms without exception were in the bottom half of the list. The reason for this sad state of affairs is not far to seek: the operation of the Replacement System was in the hands of Army Service Forces, itself one of the three main contenders for the available manpower.³² The following table, showing the distribution of the various classes between AGF and ASF, bears out this interpretation:

Table XXVIII

Distribution of American Manpower among AGF and ASF

	class I&II men	class III	classes IV&V
Arms	29.7%	33.3%	37.0%
Services	36.5%	28.5%	35.0%

30. Palmer, op. cit., p. 17.

31. Responsible for all fixed artillery, railway artillery, harbour defence and, until 1943, anti-aircraft artillery also.

32. See Report of Replacement Board, Department of the Army, "Replacement System World Wide, World War II (Washington DC, 1947) book i, part 11. The Board recommended the establishment of a "Personnel Command in the Zone of the Interior responsible solely to the Chief of Staff and charged with the administration and training of all army personnel in the ZI in a casual status", i.e the adoption of the German system.

Against this background, the numerous complaints about the low quality of replacements for the various arms which flood the postwar Replacement Board's Report become comprehensible.

c. Training

Apart from impressionistic accounts by individuals, little detailed information is available on actual German and American training methods. The following remarks will therefore be confined to generalities.

German Army

The organization of training in the German Army had a threefold purpose, namely a. to relieve the Field Army of this task; b. to simulate, as closely as possible, the actual conditions of the battlefield; and c. to constantly introduce the most recent combat experiences into training practice.

To achieve the latter two of these aims, very great emphasis was laid on maintaining close connections between the Army's two parts: not only were officers constantly being rotated between frontline duty and training units, but each of the latter was in addition "tied" to one or more divisions. Officers of the training unit and its "parent" division were expected to know each other personally and to exchange frequent visits and correspondence. Often it was recently wounded personnel, recovering from their wounds, who trained the replacements of their own division.

Fundamentally and in principle, recruits, officer-candidates, NCO's and specialists received their training at the hands of the Replacement Army. However, the Field Army was responsible for merging replacements with their units (for which purpose each division was provided with a Feldersatzbattalion, or Field Replacement Battalion), carrying out additional training during periods of rest, and for supplying advanced training to officers and NCO's. Training aspiring General Staff Officers

33. The following remarks are largely based on B Mueller-Hillebrand, "Personnel and Administration", US Army Historical Division Study No. P 005, Koenigstein Ts, 1948, p. 77 ff.

was in the hands of the General Staff.

The longer the war, however, the more difficult it became to maintain the strict separation of functions between the Army's two parts. Replacement Army units were moved into the occupied countries, assumed the burden of security operations, were occasionally called on to lend a hand in times of crisis, and were consequently unable to properly carry out their training functions. More and more of the latter were transferred to the field replacement battalions, whose importance thus became more pronounced. The separation between the Army's two parts thus broke down; however, the administrative difficulties implicit in this may have been more than offset by the fact that the troops were now increasingly trained by their own officers, and under conditions closely resembling actual combat.

In the autumn of 1942 an attempt was made to institutionalize these arrangements by setting up the so-called Field Training Divisions.³⁴ These were assigned the double mission of completing the recruits' basic training and of carrying out current security operations in the occupied countries. In practice, however, they tended to be sucked into the fighting, paid heavily in casualties for their inexperience, and were hastily disbanded.

From early in 1943 down to the end of the war training was organized as follows:

divisions	completing the training of recruits, NCO's and specialists
armies	training company and battery commanders, as well as giving advanced training to NCO's and specialists
Replacement Army	basic training for recruits, NCO's and specialists; also officer schools
General Staff	courses for General Staff officers, divisional and regimental commanders

Training programs were the responsibility of the Replacement Army's Chief of Training who in turn worked closely with the General Staff's Training Department. The latter received a constant stream of current

³⁴. Feldausbildungsdivisionen.

information on combat experience, transformed it into Notices for the Troops, and from time to time consolidated the latter into new editions of the Regulations.

Training aimed at a. giving a man a thorough mastery of his weapons, and b. teach him the fundamentals of tactics by making him participate in numerous unit-exercises. The bent of training was almost exclusively practical, very little theory being added. Though basic training was carried out separately for each arm of the service the first parts of all the training manuals were identical -- thus ensuring uniformity throughout the Army.

The duration of basic training varied. Infantrymen received 16 weeks in 1938, 8 in 1940, 16 again in 1943, and 12-14 in 1944.³⁵ Armoured personnel received 21 weeks' basic training throughout the war though there did appear a tendency, from 1944 on, to organize things in such a way as to make them able to participate in combat, at a pinch, after a mere 16 weeks.³⁶

In addition, recruits could expect to undergo a further brief period of training in their divisions' field replacement battalions before entering the line, thus learning to know their commanders and benefiting from the most recent local experiences. Whether there were any fixed rules governing the duration of this training phase is not clear; as the war went on and losses mounted, there must have been a tendency to hasten the recruits' integration into their units and standards probably deteriorated.

US Army³⁷

Training in the US Army was the responsibility of Army Ground Forces. Its cardinal principles were a. graduation, from individual to unit training; b. a strong emphasis on elementary training; c. maintaining the integrity of tactical units; and d. realism, achieved by the near

35. Ausbildungsvorschrift für die Infanterie, vol. 1, 1.10.1938, vol. 1E, 21.6.1940; vol. 1E, 16.3.1943; and vol. 1E, 11.12.1943.

36. Ausbildungsvorschrift für die Panzertruppen, vol. 1a, 18.10.1943. This one is signed by Guderian as inspector of the "fast" troops.

37. The following remarks are based mainly on Greenfield, op. cit., p. 30 ff.

as possible simulation of actual combat conditions.

Enlisted men, NCO's and specialists received their basic training in Army Training Centers (ATC's) and Replacement Training Centers (RTC's) located in the Zone of the Interior. For officers Officer Candidate Schools (OCS's) were set up in 1941. Divisional staff officers were trained at the Command and General Staff School opened at Fort Leavenworth in December 1940.

Unlike their German equivalents, the US Army's training units were not tied to specific parent units. Nor did their training personnel possess combat experience during the early years of the war. The War Department, which was responsible for publishing training manuals, followed tactical developments at the front; it was only in the second half of 1944, however, that combat-tried officers began returning home in any numbers to take up jobs as instructors. Even so, ties between training and combat outfits remained, partly owing to sheer geographical distance, tenuous and impersonal and could in no way be compared with the German system.

Training was constructed on the principles of engineering. Tasks were systematically broken down into small components which were first rehearsed and then put into sequence. The goal was to produce men who could serve their weapons automatically, without thought.

The duration of basic training varied. Until 1943 recruits were given 13 weeks only. This was subsequently increased to 17, though special circumstances -- e.g the pressure of preparations for "Overlord" -- could cause men possessing only 13 weeks of training to be sent out of the Training Centers. Armoured personnel, trained in separate Centers, likewise received 17 weeks' training which were further cut down to 15 in January 1945. On the whole, therefore, American soldiers received a shorter basic training than did their German counterparts, though the picture might of course be modified later by unit training on which no comprehensive figures for either Army are available.

Unlike their German equivalents, American divisions did not have a special organization to absorb and retrain newly arrived recruits and re-

placements were expected to pick up experience from veterans. On the other hand, replacements newly arriving in the various Theaters were often given a few weeks' refresher training before being sent to join their units.

d. Replacements

Four brave men who do not know each other, wrote Ardant du Picq in his Etudes de Combat,³⁸ will hesitate to attack a lion; four less brave men, but knowing and trusting each other, will do so resolutely. The point of the tale is this: of all the organizational problems an army has to solve, that of how best to merge replacements into existing units so as to ensure the cohesion of the whole is one of the most crucial, since on it depends the units' fighting power.³⁹ The sheer size of the problem may be gauged from the fact that, on the average, three months of intensive combat in World War II cost an American infantry regiment a hundred percent of its personnel in casualties.⁴⁰

German Army⁴¹

We saw that the German Army was built up on a regional basis, i.e. that units the size of divisions downwards were normally composed exclusively of men originating in the same part of the country and, consequently, speaking the same dialect and sharing something of a common outlook to begin with. Naturally this arrangement was not without its disadvantages; in particular, it complicated the problem of bringing up replacements. Since it was believed that unit-cohesion depended on the men sharing a common background, however, these complications -- both administrative and transport-technical -- were deliberately and consciously taken in stride.

The Replacement Army, which gave replacements their initial training,

38. Combat Studies (Harrisburg, 1947) p. 110.

39. See K Lang, Military Institutions and the Sociology of War (London, and the extensive bibliography there adduced.

40. R F Weigley, History of the United States Army (New York, 1967) p. 438.

41. Based on Mueller-Hillebrand, "Personnel and Administration", p. 16 ff.

was built up in such a way that each field division had "its" replacement battalion in one of the Wehrkreise. This arrangement not only made possible close and personal cooperation between instructors and field commanders but also meant that replacements, upon completing their training, were sent to join "their" units.

Replacements never travelled to their units as individuals, but were put together in 1,000-strong "marching battalions" (Marschbattalione) armed and equipped to cover long distances on foot and capable, if necessary, of looking after themselves in combat. They were commanded by officers sent by the "parent" division to pick them up or, alternatively, by personnel that had recovered from wounds and was on its way back to the front. Experience had provided rules for the composition of the marching battalions and for the distribution of the various arms inside them; in any case, since the replacements had only completed their basic training and were supposed to receive further training in the field (and since the Army was hopelessly unable to replace its casualties from early 1942 on) the exact composition of the Marschbattalione by MOS did not matter much.

When earmarked for divisions holding quiet sectors of the front replacements might travel in "marching companies" numbering 250 or so men. Specialists alone were allowed to travel individually, and then only in exceptional cases.

Upon arrival at "their" divisions the marching battalions were dissolved. The divisional commander or his representative welcomed the new recruits and decided on their distribution. They were then sent to the divisional field replacement battalion each of whose three companies was closely tied up with one of the division's three regiments. This arrangement gave the regiments a strong incentive to look after their own replacements' training; made it possible to employ as instructors the very officers and NCO's who would later command the men in battle; and created opportunities for experienced personnel to be temporarily taken out of the line. After a period of training in the field replacement battalion the replacements would reach the front already knowing both each other and their commanders, and forming

Very interesting - Build-up bonds of trust and shared values and responsibilities. Their bonds in turn provide basis for support, confidence and courage - rather than fear, anxiety and alienation when one gets isolated and helpless in the face of war.

unimpaired understanding

part of a well-integrated team.

The longer the war went on, the more frequently did difficult circumstances make it impossible to fully carry out these elaborate procedures. The results were strongly negative. Thus, for example, improvised units consisting of men picked out of leave-trains and hurriedly thrown together in a crisis proved to be almost without fighting power.⁴² In at least one case -- the panic that gripped elements of the 340th division in February 1944, when 18 year old replacements broke in front of a Russian attack, threw away their weapons, and ran -- it was possible to trace back these results to the fact that the division, fighting almost continuously, had not found the time to put the new arrivals through its field replacement battalion.⁴³

US Army⁴⁴

In the American Army, replacements were first processed through Reception Centers where they were classified in accordance with the procedures outlined above. They were then sent to a Replacement Training Center to receive their basic training. Mathematical models, purporting to forecast the number of casualties, governed the proportion of all men trained for each trade, speciality and arm.

Their basic training completed, the replacements would be granted 10-12 days' leave (an arrangement which in itself made it impossible to group them into units on the German model, even if this had been the intention) and then proceeded to the Replacement Depots (popularly known as "repple depples") at the embarkation ports. Travelling individually all the way, they were shipped overseas to a Theater Depot (in France e.g this was normally Le Havre). After a night's stay there they were put aboard trains each of whose wagons was commanded by a Replacement Officer; these, however, are said by the official report to have "exercised little control over the transient soldiers placed under

42. Shils and Janowitz, loc. cit., p. 288.

43. Beratender Psychiater beim Pz. AOK 4, "Erfahrungsbericht, 1.4-30.6.1944", 14.7.1944, BAMA H20/122.

44. The following is based mainly on Palmer, op. cit., p. 170 ff; and on Department of the Army ed, The Personnel Replacement System in the US Army (Pamphlet No. 20-211, Washington DC, 1954) p. 359 ff.

their command".

Sometimes the trains would head for a Theater Depot, where the replacements were given up to five weeks' refreshment training, including squad and platoon training; often, however, they proceeded straight to Forward Depots, and from there on to the divisions. A special divisional organization charged with receiving and absorbing them did not exist, and the new arrivals were simply distributed among the units. Owing no doubt partly to the enormous distances the time spent in the Replacement System normally amounted to 4-5 months, though 9 and even 10 months were not uncommon.⁴⁵

Officers went through the Replacement System like everybody else, i.e. were assigned to units from pools after graduating from OCS in accordance with T/O vacancies. Whereas German units often asked for specific officer-replacements (that is, men who had previously served in the same units as NCO's) by name, this practice was explicitly discouraged in the US Army.⁴⁶

The effect of such a system on morale, unit cohesion, and fighting power does not have to be imagined since direct evidence about it is readily available. According to one official account, "some men" complained that they had been "herded like sheep" or "handled like so many sticks of wood". Arriving in the Theater after weeks of travel by land and sea, the men "wanted most of all to be identified with a unit",⁴⁷ instead of which they might well spend a few more weeks in various depots. In the words of one unit commander⁴⁸

Replacements arrived in divisional and regimental areas tired, bewildered and disheartened, after having been shunted from one replacement depot to another, led by officers temporarily appointed for convoy or escort purposes who

45. Replacement Board, Dept. of the Army, "Replacement System World Wide", bk. 5, part 20.

46. HQ Services of Supply, ETO, directive APO 887, 13.9.1943, NA file RG/332/52/265.

47. The Personnel Replacement System, pp. 379, 464; see also Stouffer, op. cit., ii, pp. 272-4.

48. The Personnel Replacement System, p. 467. The officer in question was Colonel T J Cross, ACoFS, G 3, 2nd Army.

themselves were more or less bewildered. Field train bivouacs usually were within the sound of guns and the replacements were acutely and nervously aware their entry into combat was imminent. They frequently did not know how to take care of themselves.

In fact, such were the effects of the System upon the replacements that medical officers among themselves spoke of a "repple depple syndrome" as a new kind of mental disease.⁴⁹

Replacements were expected to pick up practical know-how from their veteran comrades who might or might not possess the time and the inclination to assume teaching duties. Consequently units made up of freshly arrived replacements not infrequently suffered disproportionally heavy casualties.⁵⁰

Another disadvantage of the system of constantly filling in T/O vacancies (rather than having a large number of vacancies always at hand which was, willy-nilly, the case in the German Army) was a pronounced tendency to produce the wrong type of replacements. The mathematical models purporting to predict the number of casualties by MOS were based on the wrong kind of experience and out of date, and never came up to expectations.⁵¹ Already in the spring of 1942 there appeared a large deficit in riflemen, counterbalanced by an even larger surplus of other personnel, including in particular service troops.⁵² The MOS produced tended to be more intelligent than the average infantryman; for them to serve in a capacity other than that for which they had been trained, and with the despised infantry at that, constituted a double blow to morale.⁵³ It was not until early in 1944 that a reorganization of the Replacement Training Centers got underway, but even so infantry replacements remained in

49. Replacement Board, Dept of the Army, "Replacement System World Wide", bk. 5 part 19.

50. Palmer, op. cit., p. 230. Data from divisions in Italy suggests that one half of all replacements had been with their units for fewer than three days before entering combat; Stouffer, op. cit., ii, p. 127.

51. "Replacement System World Wide", bk. 2 part 45.

52. Ibid, part 60; also Palmer, op. cit., p. 395. In March 1942 e.g. the 45th infantry division requested 3,217 riflemen but received only 1,082; on the other hand, it did receive 671 servicemen as against 50 asked for.

53. "Replacement System World Wide", bk. 5 passim.

short supply right down to the end of the war.⁵⁴

Voices demanding a change in the system were heard from time to time. In January 1942 General T J Christian⁵⁵ complained that "unit spirit was lacking in the Replacement Training Centers", and proposed that they be made to turn out complete units, not individual replacements; however, the War Department turned down the proposal on administrative grounds. A system of tying the Training Centers to specific divisions and making the latter share in the task of training was also proposed. This, however, was rejected on the ground that "training under the Replacement Training Centers was far superior to the system under which the divisions trained their new recruits"⁵⁶ -- which may indeed have been true from a purely technical point of view, but failed to take into account the soldier's social and psychological needs as well as the opportunity for raising standards by giving commanders a stake in their own men's training. Some officers wanted to set up an American equivalent of the German field replacement battalions, but nothing came of this proposal either.

Dissatisfied with the system, a few enterprising commanders went ahead and created their own arrangements. In particular, the 79th infantry division under General Ira T Wyche set up a well-considered organization for receiving and digesting replacements. The latter would first enter a divisional pool and be given a general orientation talk. Next there were three regimental pools, operated by officers and NCO's detached from their regiments, and another pool for the special troop section. The system was designed to enable new arrivals "to learn many lessons from old timers" and in addition made it possible for NCO's and officers who needed a break to be temporarily taken out of the line, as was the case in the German Army.⁵⁷ In fact, the only important difference between the system and the German one was the use, typical for American

54. According to S L A Marshall, Soldaten im Feuer (Frauenfeld, 1951) p. 14 there was on 6 August 1944 exactly ONE rifleman replacement available in the entire European Theater.

55. CO Camp Roberts, Col, Field Artillery Training Center; see The Personnel Replacement System, p. 359.

56. Ibid, p. 360.

57. Ibid, p. 456. For General Wyche's own postwar testimony see "Replacement System World Wide", bk. 5, part 26.

in other words, no cohesive bond. Result: Fragmented activity with no focus (i.e. no administrative) that left individual at but not a piece of organism isolated and helpless against a hostile and overwhelming environment

lingo, of the word "pool" rather than of some less anonymous, more military sounding term to describe the institution.

The arrangements instituted by the 79th division were considered successful enough to be copied, more or less accurately, by several others; even more interesting, the 79th is one of the very few combat outfits explicitly commended in the US Army's official history of World War II. "A good combat units", was Eisenhower's comment in a letter to Marshall.⁵⁸

The conclusions from these facts are inescapable. Beyond a shadow of doubt, the German Army, profiting from the lessons of World War I, possessed an excellent replacement system which only failed, as sometimes happened, when circumstances made it impossible to apply. The US Army by contrast put technical and administrative efficiency at the head of its list of priorities, disregarded other considerations, and produced a system that possessed a strong inherent tendency to turn men into nervous wrecks. Perhaps more than any other single factor, it was this System which was responsible for the weaknesses displayed by the US Army during World War II.

In the American system (from staff organization in division to higher organization as AGF and ASST with "operations" coequal with other components) there was no focus or no Schwerpunkt. Without a Schwerpunkt philosophy all we have are nebenpunkte or many non-cooperative centers of gravity each trying to magnify his place in the scheme of things. Result: green troops fed into combat not as cohesive whales but as individual with fragmented notions about the environment they must confront.

58. H M Cole, The Lorraine Campaign (Washington DC, 1950) p. 188; and M Blumenson, Breakout and Pursuit (Washington DC, 1961) p. 72.

8. The Maintenance of Combat Efficiency

a. Troop Indoctrination

In general, the importance of propaganda in wartime tends to be exaggerated. By the propagandists because their jobs depend on it; by their employers in the hope of deflecting potentially embarrassing questions concerning the nature of the cause;¹ and by their enemies out of a desire to postulate the effectiveness of e.g. Nazi propaganda in order to demonstrate the fundamental wickedness of any and every German soldier.

These interested parties notwithstanding, considerable empirical evidence exists that indoctrination affects troops in much the same way as rain affects a duck: it glances off their backs. A survey among American enlisted men during World War II revealed that only five percent fought for what could be called "idealistic" reasons.² A much smaller survey made in 1969 put the figure at five out of thirty four³ -- which, if true, would lead to the somewhat surprising conclusion that the American soldier who served in Vietnam was actually more "idealistic" than his World War II counterpart.

On the strength of this evidence, the soldier who fights out of an idealistic commitment to his country's national goals appears to be an exception; the young Hitler, it is said, was such a one.⁴ It is not difficult to see why, in the terror that is battle, such thoughts should occupy little place in the soldier's mind. What is hard to see is how educators and propagandists could ever believe otherwise.

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1. The following verse, attributed to Sir Thomas More, might be appropriate here:

for soldiers have been known to think
nay colonels to reason.
And troops who think are (nine cases out of ten)
on the brink of treason.

2. Stouffer, op. cit., ii, pp. 108, 110.
3. C C Moskos, "Eigeninteresse, Primärgruppen und Ideologie", in R König ed, Beiträge zur Militärsoziologie (Cologne, 1968) p. 212.
4. See A Bullock, Hitler, a Study in Tyranny (London, 1962 ed.) p. 53. His comrades regarded Hitler as a "white crow".

To reach the troops' souls, to influence them, to make them move in the desired direction -- that is the supreme challenge facing every commander. For an outsider to achieve the same result is an almost impossible task, something vouchsafed -- if at all -- only to a very few truly outstanding men. Except where the propagandists are men of very high calibre and conviction, the dish ladled out by them will be regarded by the recipients as anything between mere entertainment and another load of bullshit.⁵ It may even be counterproductive.

To put it in a different way, it is the present author's belief that the contents of propaganda are less important than its organization -- that it does not matter much what is said, but by whom. The following pages, accordingly, will concentrate on the different ways in which these things were organized in the armies under consideration.

German Army

In the German Army before World War I, the concept of "Troop Indoctrination" was unknown. Instead there was geistige Betreuung, which might be roughly translated as "spiritual strengthening".

Since, according to the Regulations, "the officer was the leader and educator of his men in every field", a special organization charged with geistige Betreuung did not exist. While attempts at indoctrination -- in a conservative-monarchical direction, needless to say, and sometimes assuming ridiculous forms such as organized competitions in plowing and cow-milking -- were certainly not lacking either before or during the war their execution was mostly left to officers and NCO's. It was only in November 1918 that the High Command instituted Education Officers (Bildungsoffiziere) in a belated attempt to counter the Army's progressive disintegration;⁶ to no avail.

While conservative right-wing ideas continued to permeate the Army during the Weimar period no special organization was set up to supervise their propagation. Instead, the "Fundamentals of Education" issued by

5. These remarks are based on my own experience, and that of my comrades, in the service of the Israeli Army's "Information Department".

6. See R L Quinett, "Hitler's Political Officers; the National Socialist Leadership Officers", Oklahoma University Diss, 1973, p. 4 ff.

General von Seeckt in 1920 simply stated that "everybody, officers and men alike, are to regard themselves as representatives of the Army at all times", and left it at that.⁷

From 1929 to 1932 the Army of the Weimar Republic, confronted with the growing number of Nazi sympathizers in its ranks, tried to combat this menace by sending so called "desk-generals" on the lecture circuit; to no avail.⁸

After the Nazi seizure of power a conflict rapidly emerged between the Army and Goebbels' Propaganda Ministry concerning responsibility for Army Propaganda. Commanded by the pro-Nazi minister of war, General von Blomberg, the Army was not at all unwilling to allow its men to wear Nazi symbols and insignia, nor to indoctrinate them with Nazi principles.⁹ It drew the line, however, at handing over responsibility for the conduct of propaganda, which remained its own exclusive business.

Until 1939, though the Ministry of War might from time to time issue directives for the education of the troops in a Nazi spirit, the situation remained fundamentally unchanged. Shortly before the outbreak of World War II, however, the Wehrmacht decided to meet the growing Nazi pressure by taking the offensive; it established its own Propaganda Department and its own Propaganda Troops.¹⁰

Geistige Betreuung, however, was not the new organization's task. Instead, it was responsible -- besides censorship -- for representing the Wehrmacht to the German public and for conducting enemy propaganda, or psychwar. These two functions together were known as "active propaganda".¹¹

In July 1939 the following agreement was signed between the Wehrmacht and

7. G Karltrack, "Offizier und Politische Bildung" (Diss, Munich 1970) p. 15.

8. Ibid, p. 21.

9. See R J O'Neill, The German Army and the Nazi Party (London, 1966) especially chapter 5.

10. Messerschmidt, op. cit., pp. 240-1.

11. See O Buchbender and H Schuch, Heil Beil, Flugblatterpropaganda im Zweiten Weltkrieg (Stuttgart, 1974) pp. 14-5.

the Ministry of Propaganda:¹²

Geistige Betreuung of our own troops is the business of the Wehrmacht alone. The Ministry of Propaganda is limited to supplying suitable material upon request.

...

It is a fundamental principle that the commander, and he alone, should be responsible for geistige Betreuung. His tasks are as follows:

- preparing the troops before the outbreak of war
- transmitting military and political news during the first days of the war
- delivering daily newspapers, later also military newspapers, to the troops
- supervising radio-listening
- supervising films, field libraries, front theater.

In practice, of course, the "fundamental principle" of unity of command was violated to the extent that officers (though many tried hard) could not, and did not, produce most of their own newspapers and broadcasting. Nevertheless, responsibility for maintaining morale continued to rest on the shoulders of the commander, and on his alone.

In the autumn of 1940, again in response to the Propaganda Ministry's pressure, the General Staff thoroughly examined the entire problem of troop indoctrination. The Chief of Staff, General Halder, insisted that responsibility for morale remain in the hands of commanders alone and carried his point against considerable opposition. The Commander in Chief, Fieldmarshal von Brauchitsch, thereupon issued a list of themes to be propagated. These included a. the German people; b. the German Reich; c. German living space; d. National Socialism as the foundation of various aspects of German national life; and e. Germany before the peace of Westphalia.¹³

Not even the Party, it is true, could demand more; and Brauchitsch

12. Quoted in H von Wiet, Die Propagandatruppen der deutschen Wehrmacht (Neckargemünd, 1962) pp. 28-33; see also O Buchbender, Das tonende Erz, Deutsche Propaganda gegen die Rote Armee im Zweite Weltkrieg (Stuttgart, 1978) p. 87.

13. 1648. The reference to this period was meant to justify far-reaching territorial demands on France.

proceeded to dot the i's and cross the t's by announcing that "it is absolutely necessary for a UNIFIED (emphasis in the original) conception of National Socialist principles to exist in the Army and become the common possession of all soldiers."¹⁴ The even more cardinal principle of unity of command, however, was safeguarded and remained intact.

Meanwhile other Nazi agencies besides Goebbels' Propaganda Ministry were trying to get a foot in the door. In September 1940 Fieldmarshal Keitel, Chief of the Armed Forces High Command, signed an agreement with Nazi ideologue Alfred Rosenberg under which the latter's office was to supply the Wehrmacht with literature, speakers and National Socialist training courses for officers. Despite pressure from Keitel, however, the Army High Command refused to ratify the agreement and in January 1941 flatly stated that it would only turn to Rosenberg to furnish literature and schooling materials as needed.¹⁵

As the Wehrmacht faced defeat for the first time in the winter of 1941-42 Keitel took the next step by ordering all units down to battalion level to appoint Betreuungsoffiziere, or BO's. Working from the office of the Intelligence Officer these officers were supposed to carry out propaganda in addition to their normal duties. Not surprisingly, the order caused considerable resistance and even ridicule; commanders appointed their least competent men for the job, and Keitel even had to forbid chaplains from being entrusted with the task of spreading National Socialist propaganda. In any case, the principle that "there can be no division between military and spiritual leadership" was reaffirmed by that model Nazi general, Shoerner, and disseminated throughout the Army.¹⁶

It was only at the end of 1943 that pressure for the establishment of a regular propaganda service within the armed forces started in earnest. The men behind it were Martin Bormann, head of the Party Chancellery, and an Army colonel by the name of Huebner who had been impressed by the fighting spirit of the Waffen SS but, significantly, had to hide his SS

14. Quoted in Messerschmidt, op. cit., p. 252.

15. Quinnett, op. cit., pp. 43-4.

16. Ibid, pp. 45-7.

contacts lest they damage his career. Bormann's pressure proved effective, and in December 1943 Hitler signed a directive for the institution of National Socialist Leadership Officers (Nazionalsozialistische Führungsoffiziere, or NSFO's) in the Wehrmacht.

Things moved quickly from this point on. In February 1944 the "Provisional Regulations for National Socialist Guidance in the Armed Forces" were published; in them the NSFO was envisaged as an ordinary staff officer who, "just like the Intelligence Officer" was to assist the commander in everything pertaining to geistige Betreuung. He was, however, to work through the officers; only in special cases, and then in the presence of the unit commander, was he to address the troops directly. He was not to interfere in the affairs of subordinate commanders, nor to turn into a "wayside preacher"; this, however, was later modified to the extent that the NSFO was permitted to address the troops directly. NSFO's were expected to carry on propaganda in addition to their normal duties, and it was only towards the end of 1944 that special slots for them were provided in the Tables of Organization.

Two week courses for NSFO's were held from March 1944 on at Krössinsee, Pomerania, and were attended by officers detailed by the three Services. The program consisted of lectures, discussion groups and, in the evenings, films, concerts and singing. To organize all this took time; it was not until the second half of 1944 that most units actually got their NSFO.

Even in the eyes of the persons responsible, the NSFO courses were hardly satisfactory since the students, mostly highly qualified and decorated officers (the possession of a decoration for bravery was made mandatory in order to secure the NSFO a respectful audience) naturally resented Party hacks telling THEM about patriotism.¹⁷ As was to happen in the US also, the program's name gave rise to derisive puns and had to be altered several times. Postwar investigators without exception have described the mass of the German troops as indifferent, not to say apathetic, vis à vis the great moral, political and strategic issues arising from the war, and one has even claimed that the NSFO

17. Ibid, p. 190 ff.

program exercised a negative effect on morale.¹⁸ One survey among prisoners of war showed that only 5% were concerned with any but their personal problems,¹⁹ while another showed that "fanatical Nazis", apoliticals and anti-Nazis were distributed in an almost regular bell shape with the former constituting only 11% of the total.²⁰ Highly motivated Nazis, however, were considerably more numerous among NCO's and much more so among junior officers -- a point that is well worth bearing in mind.

Had Germany won the war, many people who now discount the role played by Nazi propaganda would certainly have changed their tune; on the other hand, a victorious Wehrmacht would hardly have allowed the NSF Organization to be set up in the first place. Certainly this Organization and the propaganda disseminated by it were a response to defeat rather than a contributor to victory. As an example of the way the Party attempted to reassert its slipping hold on the troops in the face of defeat, there were the loyalty oaths and catechisms ("I belong to... I am determined ... Never will I... I believe...") that they were made to repeat from 1943 on.²¹ The effect of such formulae on the morale of the German soldier, though impossible to measure, was probably no greater than that of similar nonsense in other armies.

US Army

In the US Army during World War I, efforts at so called "Troop Indoctrination" were left largely to individual commanders. However, Army information in the form of the newspaper Stars and Stripes was plentiful and readily available.²²

18. D Lerner, Psychological Warfare against Nazi Germany; the Skywar Campaign, D Day to VE Day (Cambridge, Mass, 1971) p. 297.
19. Shils and Janowitz, loc. cit., p. 303. According to H L Ansbacher, "Attitudes of German Prisoners of War; a Study of the Dynamics of National Socialist Fellowship" (Psychological Monographs, No. 62, Washington DC, 1948, p. 21) faith in Hitler stood out like "granite" in a "turgid sea of doubt" about everything else.
20. R V Dicks, Licensed Mass Murder, a Socio-Psychological Study of Some SS Killers (London, 1972) p. 64.
21. Messerschmidt, op. cit., pp. 331-2.
22. See A A Jordan, "Troop Information and Indoctrination", in R Little ed, Handbook of Military Institutions (London, 1971) p. 356 ff.

In 1940, faced with low morale among conscripts, the Army set up a Morale Branch to deal with the problem. Headed by a civilian, Frederick Osborn, the Division became the butt of so much derision on the part of the rank and file that the morale of its own officers suffered and its title had to be changed, first to "Special Services Branch" and then to "Information and Education Division".²³

Subordinated to the Army Service Forces rather than directly to the General Staff, the Division's mission was defined as "assisting officers in all matters pertaining to morale, recreation and welfare". It accordingly prepared lectures, graphic materials, and at least one film entitled "Why We Fight"²⁴ (significantly, the only German equivalent I could find was a 1944 HPA booklet entitled "What Are We Fighting For"). It also employed its officers to disseminate these materials throughout the Army.

The Program's effect on the Army's fighting power is difficult to assess since it formed only one factor among many. In April 1945 a study concluded that in regard to factual information about the war, attitudes toward the Army, treatment of allies and personal adjustment to civilian life there were no "significant and consistent differences" between men who had participated in the program and others who had not.²⁵ Even where some gains in information could be shown, this was not correlated to any increase in personal commitment to the war. In all, "the orientation program served the useful purpose of reassuring men and reducing somewhat their feeling that the Army was not concerned for the welfare of the individual... But there is little positive evidence that the Army succeeded in altering basic orientation toward the war such as to increase personal commitment to the task of winning it". One fact does stand out, however: whereas convinced Nazis were proportionally more numerous among German officers than among enlisted men, only half as many American officers as men reported themselves as fighting for "idealistic" reasons.²⁶

23. Office of the Chief Military Historian, "Study of Information and Education Activities, World War II" (Washington DC, 1946) pp. 27, 31.

24. For a history and criticism of the film see R W Steele, "The Greatest Gangster Movie Ever Filmed": Prelude to War, Prologue, 11, 1979, pp. 221-35. From this it appears that the film's effectiveness was inversely related to its viewers' intelligence.

25. Stouffer, op. cit., i, p. 473.

26. Ibid., ii, p. 110.

Interestingly, the various Information Programs were more popular among the higher headquarters -- who had ordered them into existence, and to whom they represented a way of sharing the burden of maintaining troop morale -- than among the rank and file.²⁷ There exists a simple explanation for this fact; if my own experience is any guide, commanders seldom if ever bothered to attend the Information Sessions in person, and indeed for them to have done so would have constituted an intolerable admission that they did not know what they were sending their men to die for.

As the following table²⁸ shows, the Orientation Courses were better liked (and therefore, presumably, more effective) when they were directed by personnel who were liked, respected or admired:

Table XXIX

Evaluation of Orientation Sessions by American Troops	
evaluation of course leader	percentage of men saying they got a lot out of the course
Group's discussion leader is the first choice of the group	39%
Group leader is among top choices of the group, but not first	23%
Group leader is not among top choices of the group	14%

At this point the fundamental dilemma confronting any centralized organization for troop indoctrination becomes clear: to be effective Education Officers must be liked, respected and admired, but men who possess the prerequisites thereto seldom become Education Officers.²⁹ There is, indeed, no reason why they should: such men ought to command others, not to meet them in fleeting orientation sessions. The better at his job an Education Officer, moreover -- the more successful he is in raising and maintaining morale -- the more likely he is to undermine the position of the commander whose assistant he is supposed to be. No wonder, there-

27. According to Jordan, loc. cit., p. 362, there existed an "inverse correlation between rank and enthusiasm for information activities".

28. Adapted from Stouffer, op. cit., i, p. 471.

29. See A Haggis, "An Appraisal of the Administration, Scope, Concept and Function of the US Army Troop Information Program", Diss, Wayne State University, 1961, passim.

fore, that the morale of morale officers paradoxically became an issue in both the German and the American Armies, and that for the former as well as the latter³⁰ there actually exists evidence showing a negative correlation between troop indoctrination and morale.

We might perhaps conclude that a program of troop indoctrination is unnecessary in victory and is not likely to have much effect in defeat; and that for it to have any effect at all it should not be put into the hands of a separate or centralized organization.

b. Rotation

German Army

The German Army had no fixed rules concerning the rotation of units in and out of the line. The problem, indeed, hardly arose during the early years of World War II; Blitzkrieg campaigns were by definition brief affairs which did not require rotation. After each campaign, however, the divisions that took part underwent Refreshment (Auffrischung) -- an operation that required some three weeks, involved considerable logistic and administrative preparations, and was carried out, as far as possible, in one of the occupied countries.³¹ Organized by corps headquarters, such an operation involved reorganization and refreshment training for existing units, the merging into them of replacements, and the issuing of new equipment to replace that lost or worn out in battle.

As conditions worsened during the second half of the war, such thorough refreshment of entire divisions became progressively more difficult to carry out. Instead, refreshment more and more often was carried out inside the divisions, which meant that individual regiments, or even battalions, were taken out of the line for periods varying from days to weeks. The troops thus released were sent to so-called Recovery Homes (Erholungsheime) behind the front in which they were rested and well looked after, free from every care including even the sudden raids which the General Staff, in times of crisis, carried out among men going

30. Stouffer, op. cit., i p. 467.

31. Mueller-Hillebrand, "Personnel and Administration", pp. 44-5.

on leave.³² The security thus offered was supremely important; the longer the war, the stronger the tendency to use the Recovery Homes as a substitute for leave.

US Army

The purpose of the US Army's system of rotation in World War II was not, as in the German case, to restore and preserve fighting power but rather to "equalize the burden" among the troops by having those who had served overseas for longer than a certain specified period go home. The length of this period was fixed by the Theater Commander and varied between 6 and 24 months. Since the availability of shipping space was the determining factor, it is perhaps not surprising that the lowest figure originates in the North American Theater where no fighting took place at all.³³

Owing to persistent shipping and replacement shortages, in any case, the number of individuals actually sent home in this manner was very small. The policy may even have been harmful, since it gave rise to hopes which, in the vast majority of cases, proved incapable of fulfillment.

On the other hand, the small number of divisions -- 89 in all -- and the policy of keeping them continually up to strength by a steady stream of replacements made unit rotation both impossible and unnecessary. For units operating in the Pacific the effect of this was mitigated by the pauses between the island-hopping campaigns; in the Mediterranean, France and, above all, Italy it meant that the same men had to face combat for day after day, week after week, until, in the words of the Army's chief psychiatrist, they either became casualties, deserted or went berserk.³⁴

In November 1944 ETO established a recuperation leave plan, which qualified troops who had been wounded at least twice, decorated twice for bravery, or had spent at least six months at the front for return to the

32. *Ibid*, p. 69. For details about the way things were done see Merkblatt 18b/31, "Frontsnähe Auffrischung eines Grenadier Regiment", January 1945, BAMA RHD 6/18b/31.

33. "Replacement System World Wide", bk. 4, part 5.

34. Menninger, *op. cit.*, pp. 74-5.

Continental US. The quota was 2,200 a month, later increased to 5,500. In spite of these very small numbers, the effect on morale is said to have been favourable. Time from France to the US and back was about four months, however, so that only the November contingent returned to Europe in time to take a further part in the war.³⁵

c. Psychiatric Casualties

German Army³⁶

In the German Army during World War I, the concepts of "combat fatigue" and "nonbattle casualty" -- both implying that war as such might have a destructive effect on men -- were unknown. Men displaying nervous symptoms were divided into a. mentally ill (Geistkranken) and b. nervously ill (Nervenkranken). The former averaged 26,070 per twelve month period, which meant that in any given year of war 0.2% of all those who passed through the Army from 1914 to 1918 (13,300,000 in all) became mentally ill or were recognized as such; whereas the latter averaged 613,047 or 4.7% of the same figure.

Among the nervously ill, that is nonbattle casualties properly speaking, half were diagnosed as hysterics; 30-40% as neurasthenics; and the rest as suffering from shock, bedwetters, and the like.³⁷ The problem grew into a serious one towards the end of the war, and interwar authors never tired of repeating how, at the stroke of the armistice, "tens of thousands" of "psychopaths" were cured as if by magic and became "active and noisy revolutionary agitators".³⁸

On the treatment of these cases, and its success in restoring them to duty, no detailed information is available. It appears, however, that one cardinal lesson was learnt: under no circumstances should men displaying nervous symptoms be allowed to go home, nor should their

35. Historical Division, US Forces, ETO, "Basic Needs of the ETO Soldier" (n.p., 1946) chp. viii, pp. 80-2.

36. Since no systematic account of this question is available in either published or unpublished form our remarks are based on archival material and somewhat fragmentary in character.

37. BAMA H20/480. This Notiz is unsigned and undated; it appears to have been part of a study intended to serve as a basis for prediction in world War II.

38. Zimmer, "Psychologische Lehren des Weltkrieges", Soldatentum, 2, 1935, pp. 181, 5.

treatment take place in the Zone of the Interior. The presence of men displaying such symptoms was considered ruinous to civilian morale; on the other hand, the interest and sympathy of the local population might encourage the casualties to retain their symptoms.³⁹

During the early years of World War II, in the period of the Blitzkrieg campaigns with their inherently limited duration and intensity, psychiatric casualties appeared hardly at all. Their numbers rose after the beginning of the invasion of Russia, however. Attempting to generalize, the Consulting Psychiatrist attached to (formerly Guderian's) 2. Panzer Army concluded that "periods without obvious "results" or "great events", periods of waiting and small scale war -- also against day to day inconveniences -- constitute a heavy burden on the troops".⁴⁰

It was typical to the German approach that cases of war-induced neurosis (psychoneurosis) were not regarded as a separate category but rather grouped under the label of "psychiatric cases", which meant simply those cases that required the attention of a psychiatrist. Psychiatric cases were divided as follows. First there were the wounded -- men who, in conjunction with physical, visible wounds had received organic damage to the nervous system. Second there were the "neurological" cases -- men who, though outwardly intact, were displaying symptoms thought to result from "commotion" or "contusion" received in battle or through accident. Finally there were the "purely" psychiatric cases; pure in the sense that the symptoms did not appear to be related, directly or indirectly, to organic damage.⁴¹

If the experiences of the Consulting Psychiatrist attached to Army Group South are any guide, about a third of all psychiatric cases belonged to this third category.⁴² They were in turn divided into two

39. BAMA H20/481. This is the record of a conference of Army doctors and Psychiatrists held at the Military Medicinal Academy in Berlin from 30 November to 3 December 1942.

40. Der beratende Psychiater der 2. Panzerarmee, "Seelische Gesundheit der Truppe", 18.4.1942, BAMA H20/480.

41. BAMA H20/500. These are the records of Dr Brandt, Beratender Psychiater to Army Group South.

42. Beratender Psychiater Heeresgruppe Süd, "Vierteljährlicher Erfahrungs Bericht, March-June 1943", 10.7.1943.

subclasses -- of which only the first, known as "psychogenics" and comprising 43% of all purely psychiatric cases, need concern us here.⁴³

Of 121 men who were classified as psychogenics during one three month period, only 11 (9.1 percent) were classified as suffering from "primary fear neurosis following enemy action", and the majority of these were said to be "unstable and neuropathic characters".⁴⁴ To put it in a different way: among approximately half a million soldiers of Army Group South, 844 came to the psychiatrist's attention during these three months, and of those only 14.3% were diagnosed as suffering from what, in American lingo, was known as "psychoneurosis".

The treatment of all kinds of psychiatric casualties not obviously related to organic damage (including cases of paralysis, loss of speech and hearing, blindness, trembling, contractions and inability to walk) normally took place in a field hospital (Feldlazaret) immediately behind the front. It consisted of calming the patient down, either by talking to him "in a firm but comradely way" or by dosing him with sedatives. After no longer than eight days in bed patients were put and made to go through a gradually increasing program of "strict military exercises". There followed a period of rest in a convalescent home, from which most went back to their units "completely recovered".⁴⁵

Patients who did not respond to this treatment were evacuated to a military hospital (Kriegslazaret) in their respective theater of war. Here treatment consisted of "Faradization", i.e the application of electric currents weaker than those employed for electroshock but strong enough to cause real pain. Other forms of treatment used, according to circumstances, were cardiozol (a drug causing violent contractions of the body) and hypnosis. Not these means in themselves,

43. The remaining 57% were schizophrenics, depressives, epileptics, drug addicts and cases of "nervous exhaustion" following illness. In the US Army most of these would be labeled "psychoses".

44. The remaining 90.9% comprised men (often slightly retarded) whose symptoms were a reaction to a feeling of inadequacy in their jobs, and a "numerically strong" group of mostly elder men whose "wormly characters" required disciplinary rather than medical measures to help them adapt to the rigorous of frontline life.

45. H20/481; see also H Dv 209/2, Nr. 126, "Richtlinien für die Beurteilung von Soldaten mit seelisch-nervösen Abartigkeiten (Psychopathen) und seelisch-nervösen Reaktionen sowie für die Überweisung in Sonderabteilungen", 1.8.1942.

however, but rather the suggestion involved -- an electrically induced twitch of a paralyzed leg e.g. would persuade a patient that he could indeed walk, while at the same time causing enough pain to make him want to avoid a repetition -- were considered effective. To facilitate suggestion, patients were not concentrated in separate wards but distributed among the neurological departments of ordinary military hospitals where their number was not normally supposed to exceed 30 per cent.⁴⁶

Whatever the methods used, they were certainly very effective -- with up to 85% of cases returning to duty from one hospitals on which statistics are available.⁴⁷ Only the handful who did not were passed on for treatment in the Zone of the Interior, and then only in hospitals remote from their hometowns where relatives could visit them. In no case, moreover, were soldiers discharged from the Wehrmacht for such reasons; when all else failed, they were simply locked away in mental institutions.⁴⁸

While detailed statistics on the incidence of psychiatric cases in the Wehrmacht as a whole are not available it was recognized, even during the war, that German troops in this respect did better than Allied ones.⁴⁹ The following table shows the frequency and distribution of such cases in Rommel's Africa Corps during one four month period of intensive combat followed by a thousand mile retreat.⁵⁰

46. Zimmer ed, Wehrmedizin, Kriegserfahrungen 1939-43 (Vienna, 1944) iii, pp. 606-14. "Faradisation" apparently involved work with currents 100 miliamper strong applied for 2-3 minutes.
47. Beratender Psychiater beim Heeres-Sanitätsinspekteur, "Sammelbericht No. 8", June 1944, p. 16, BAMA H20/90. This was Prof. Wuth.
48. Beratender Psychiater beim Heeres-Sanitätsinspekteur, "Sammelbericht No. 4", July 1943, pp. 4, 6, BAMA H20/574.
49. Canadian brigadier G.B Chisholm as quoted in Newsweek, 1.11.1943.
50. Der Beratende Psychiater der Panzergruppe Afrika, "1. Erfahrungsbericht, 26.9.1941-17.1.1942", 25.1.1942, BAMA H20/480.

Table XXX

Psychiatric Casualties in the Africa Corps, by Type

type of casualty treated for psychiatric illness	No. casualties
wounded	68
non-neurological psychiatric cases	13
epileptics	10
schizophrenics	5
feeble minded	6
suspected organic damage to the brain	2
neurotics and polyneurotics	85
complaints following damage to the skull	13
real nervous exhaustion (exogenous)	8
psychopaths	73
total	283

Since the Africa Corps at this time numbered around 43,000 men, psychiatric cases of all kinds must have run at about 2% of strength per year. The figure for Army Group South in Russia cannot be precisely calculated, but must have been very much lower;⁵¹ that for Army Group D in France, Belgium and Holland for the period April-June 1944 (during most of which there was no fighting) was, at 2.7% of strength per year, somewhat higher.⁵²

From isolated instances of units in which psychiatric casualties were particularly frequent it is possible to draw conclusions regarding their very low number in the Wehrmacht as a whole. Referring to the first quarter of 1943, a period of heavy defensive fighting which led to a rise in the number of cases, the Consulting Psychiatrist attached to 2. Panzerarmee wrote that they were especially frequent among recently arrived men who had not had the time to form strong comradesly ties (Kampfgemeinschaft) with their buddies, or else among those serving in units where, by the force of circumstances, they were compelled to

51. From October 1943 to the end of March 1944, a period of continuous fighting, 1,188 cases were brought to Dr Brandt's attention; BAMA H20/500.

52. Beratender Psychiater beim Heeresgruppe D, "Vierteljährlicher Erfahrungsbbericht, April-June 1944", BAMA H20/122.

face danger helplessly and in isolation.⁵³ Psychiatric cases, the Consulting Psychiatrist to Army Group D likewise noted, were especially frequent among "Volksdeutsche [ethnic Germans] of List III" who, selected on the basis of "racial" considerations, faced problems of linguistic isolation.⁵⁴

Though comprehensive data are not and probably never will be available, the connection between the Wehrmacht's organization (recruitment by land of origin, replacements on the same basis and in closed groups, the Feldersatzbattalione) and the low number of psychiatric casualties is therefore quite clear. That systems of organization and treatment, and not any native qualities of the German soldier, were behind this fact is also shown by the sharp rise in mental illness following their release from Allied prisoner of war camps.⁵⁵

Summing up the German experience Prof. Panse, Consulting Psychiatrist to Wehrkries VI (Köln) and one of the most successful practitioners in returning men to duty: wrote early in 1945:⁵⁶

In my opinion, the systematic attack on psychogenic disturbances is at least partly responsible for the fact that not even in the sixth year of war do such cases constitute a large scale problem. The very fact that the troops know that physicians are not helpless when faced with such cases probably prevents the appearance of many. The danger of a relapse, too, is very small for those who were correctly treated and concerns only constitutionally abnormal types.

As far as Wehrkries VI is concerned a rise in the number of cases cannot be shown even in the sixth year of the war. A few more cases were brought to the attention in the last few months, it is true, but in my opinion this is simply the result of better diagnosis by the troops.

53. Beratender Psychiater der 2. Panzerarmee, "Erfahrungsbericht 1.1-31.3.1943", 9.4.1943, p. 9, BAMA H20/485.

54. Beratender Psychiater beim Heeresgruppe D, "Tagesbuch-Auszug für die Zeit v. 1.11-30.1.1943", BAMA H20/502.

55. Janowitz, Militär und Gesellschaft, p. 128.

56. Beratender Psychiater beim Wehrkreisarzt VI to Berichtssammelstelle der Militärärztliche Akademie", 1.2.1945, BAMA H20/502.

US Army

In the US Army, "Combat psychiatry" was first developed by Dr Thomas W Salmon, director of the National Committee for Mental Hygiene during World War I. Visiting France on a tour of inspection, he noticed that the French and the British had developed different approaches to the treatment of combat neurosis; whereas the former took a hard line and frequently used punishments, the latter evacuated their casualties to mental hospitals in England. The British method was regarded by Salmon as more humane; on the other hand, it resulted in a "quite low" rate of return to duty.⁵⁷

It was thereupon decided to assign a psychiatrist to each division. His job was to examine all cases, treat light ones, control the evacuation of the rest, and investigate suspected cases of self-mutilation. The objective of combat psychiatry was defined as enabling the casualty "to obtain the concurrence of the group and to commit himself to the group and its task". Working by this approach, Salmon is said to have succeeded in returning two-thirds of all cases to their units.⁵⁸

In World War II a different approach was adopted. Instead of concentrating on treatment, the Army now introduced preliminary screening procedures intended to probe the unconscious minds of men and eliminate those who were "psychologically incapable of withstanding the stresses of combat duty".⁵⁹ Having thus ensured, as it thought, the fitness of the troops the Army went on to fight World War II, in the words of one critic, "as if World War I had never occurred and Dr Salmon had never existed".

The results were not late in coming. By mid 1943 admissions to psychiatric hospitals were running at an average of 6.76% of strength per unit per year, the lowest figure being 3% (which still exceeds that of any German unit I could find) and the highest 120-150%.⁶⁰ For combat divi-

57. On Dr Salmon see B J Wiest and D A Davis, "Psychiatric and Social Work Services", in Little, *op. cit.*, p. 322 ff.

58. P Watson, *War on the Mind* (London, 1978) p. 235.

59. Stouffer, *op. cit.*, ii, p. 207. Procedures used are vividly outlined in the *Saturday Evening Post*, 8.1.1944, p. 19.

60. Wiest and Davis, *loc. cit.*, p. 322; also Palmer, *op. cit.*, pp. 227-8.

sions on the European Continent between June and November 1944 the figure was 26%, or almost ten times that of the opposing German Army Group D.⁶¹ The overall number of soldiers treated for psychiatric disease in World War II was 929,307, or 8.9% of all those who passed through the Army.⁶² 42,748,122 men-days were lost, and 320,000 men had to be discharged as permanently unfit. The number of cases was about equal to that of all battle and nonbattle wounds combined and exceeded the number of those killed by a factor of about three to one. At one time, indeed, more men were being discharged from the Army for psychiatric reasons than were added by induction, prompting General Marshall to set up an investigation.⁶³

In the German Army "psychogenics" constituted some 43% of all purely psychiatric cases; in the American one, 67.7%. These were followed by men with character and behaviour disorders (12.8%), psychotics (7.3%) feeble minded (3.1%) and "others" (6.9%). Over two thirds of all cases, in other words, were normal men who had failed to make a successful adjustment to Army life, including combat -- and this in spite of the fact that preliminary screening had already removed 1,686,000 men suspected of emotional or mental disorders.⁶⁴

That the enormous number of psychiatric casualties in the US Army was not due to the intensity of combat seems clear from the German experience; it has instead been contributed to a variety of causes, beginning with the "child orientedness" of American society and ending with faulty screening procedures which, though they rejected men at a rate exceeding that of World War I by five to one, somehow failed to catch the right personalities. Unknown to most investigators, however, is documentary evidence from ETO to the effect that American psychiatric casualties fell into two basic types.⁶⁵ The first comprised green troops, usually replacements, who went to pieces within five days or so of seeing combat. The other were seasoned troops who cracked after about four months of combat. Everything in our inquiry so far leads

61. Menninger, op. cit., p. 345.

62. The US Army, Medical Department, Medical Statistics in World War II (Washington DC, 1975) p. 43.

63. E D Cooke, All but Me and Thee, Psychiatry at the Foxhole Level (Washington DC, 1946) p. 11.

64. Ginzberg, op. cit., ii, p. 36.

65. "Replacement System World Wide", bk. 5, part 12.

in other words, we are in the first instance troops

us to think that the first kind were the victims of the Replacement System and the faulty cohesion of American units;⁶⁶ whereas the second kind were brought down by the unlimited tours of duty.⁶⁷

Treatment of American psychiatric casualties also differed from that meted out to their German counterparts. Possibly because psychoanalysis was much more influential in the US, the symptoms displayed were regarded as manifestations of mental processes buried deep in the unconscious mind and requiring discharge. Psychotherapy, however, was apt to take up a long time and cases were accordingly evacuated for treatment in the psychiatric (not neurological, as was the German practice) wards of hospitals hundreds of miles to the rear. As a result, only 5% of all psychiatric cases during the North African campaign ever returned to their units.⁶⁸

Things, it is true, improved later on. During the later stages of the Italian campaign Army psychiatrists, by concentrating on immediate treatment in "exhaustion centers" close behind the front, succeeded in making some 60% of all cases return to duty of one kind or another.⁶⁹ The rate fluctuated wildly from one unit and hospital to the next, however, and a return rate of 80% was regarded as "phenomenal". For the war as a whole the figure was probably just under 60 percent, though by no means all of those went back to their original duties. Those men who failed to respond to treatment were sent back to the USA and, discharged from the Army, were put into mental institutions. Here some of them still remained years later receiving such treatments as hydrotherapy, insulin shock and electroshock.

Although a historian should avoid hasty generalizations above all, it is hard to avoid the feeling that something was wrong with an Army that first allowed nonbattle casualties to reach epidemic proportions and then failed to utilize its own experience in treating them. These evils

66. Empirical evidence that group cohesion is positively related to mental health is presented in S E Seashore, Group Cohesiveness in the Industrial Work Group (Ann Arbor, 1954) p. 98.

67. British troops, who were frequently rested, lasted twice as long.

68. Menninger, op. cit., p. 305.

69. US Army Medical Dept, op. cit., p. 43; Ginzberg, op. cit., i, p. 94; R S Anderson, Neuropsychiatry in World War II (Washington DC, 1966) ii, pp. 153-4.

were compounded by an extremely permissive attitude on the part of the Army which, possibly based on the widespread acceptance of Freud's theories, was communicated to the troops by semi-official channels and caused combat fatigue to be regarded as a legitimate, almost normal complaint.⁷⁰ While preventing the Army from applying the somewhat harsh methods of treatment used by German physicians, this attitude also built "golden bridges" for men who wanted to escape combat. There even exists evidence that, for some soldiers at any rate, going AWOL, deserting and requesting evacuation on psychiatric grounds constituted alternative courses of action.⁷¹ In slapping a soldier who did not fight, Patton may not have been so wrong after all.

d. The Medical Services

The role played in the life of an Army by proper medical services does not require elaboration. It is of the greatest importance to the soldier's morale to know that, if and when wounded, he will be quickly and well taken care of. In a prolonged conflict such as World War II, moreover, wounded personnel returning to duty after convalescence may represent a welcome and significant addition to strength.

German Army

No comprehensive study of the German medical services in World War II is available, and given the state of the evidence none is likely to become so in the future. The following remarks will therefore necessarily bear a rather general character.

Starting with organization, the following figures will give some idea of the extent of Germany's military-medical effort:⁷²

70. Lang, op. cit., p. 77; Stouffer, op. cit., ii, pp. 196-200; for the evils of such an approach see also F M Richardson, Fighting Spirit (London, 1978) p. 62 ff.
71. A M Rose, "The Social Psychology of Desertion from Combat", American Sociological Review, 16, 1951, pp. 614-29.
72. F Seidler, Prostitution, Homosexualität, Selbstverstümmelung, Probleme der deutschen Sanitätsführung 1939-1945 (Neckargemund, 1977) p. 33.

Table XXXI

Manpower in the German Military Medical Services, 1939-43

year	Field Army					Replacement Army			total	
	troops		hospitals		DRK ⁷³	hospitals		DRK		
	off.	men	off.	men		off.	men		off.	men
1939/40	7798	92348	1314	9731	1241	7964	24179	17062	16086	126258
1940/41	12127	115264	3528	17951	3899	7034	26153	22580	22419	159368
1941/42	12757	150060	4427	30472	7507	8911	46047	45637	26095	116579
1942/43	17034	164898	4689	18737	8413	9507	53438	55044	31230	247037

The German medical services at their peak therefore comprised 341,760 men and women. From 1939 to 1943 the proportion of medical officers (that is, qualified physicians) serving with the troops rose from 48.4 to 54.5 percent; during the same period, that of men and NCO's employed in the same place fell from 73.1% to 66.7%. Doctors, in other words, were being pushed forward to the front, whereas back in the rear there was a growing tendency to rely on paramedical personnel and, of course, Red Cross auxiliaries, mostly female nurses.

In World War I killed in action had formed 13.8% of all battle casualties; this figure rose to 21.9% during the French campaign of 1940 and to 22.9% during the first year of the Russian campaign. The rise probably reflects both the increased lethality of weapons and the greater difficulty of recovering the wounded during mobile operations.

Between September 1939 and April 1945 approximately 52.4 million wounded and sick were treated in Wehrmacht and SS hospitals.⁷⁴ The following figures⁷⁵ will give some indication of the results:

Table XXXII

Survival Rates of Wounded in the German Army

	W.W I	France 1940	Russia summer 41	Russia winter 41
died of wounds	6.0%	7.9%	10.5%	12.2%
stayed alive	94.0%	92.1%	89.5%	87.8%
total	100.00%	100.0%	100.0%	100.0%

73. Deutsches Rote Kreuz.

74. Seidler, op. cit., p. 53.

75. Mueller-Hillebrand, "Statistisches System", p. 144 ff.

Of every 100 wounded who did stay alive during the French campaign, 85 could expect to return to duty (65 active and 20 garrison). This figure fell to 83 (58, 25) during the summer of 1941 in Russia, and went down further to 77 (51, 26) during the winter of the same year. 58% of all those who returned to duty did so within three months; 86% within six; 93% within nine; and 96% within a year. The average number of noneffective days for battle casualties was 98.⁷⁶

Of every 100 men hospitalized for sickness during the war, 98.5 stayed alive; 85.4% returned to duty; 14.6% became unfit. Of those who returned to duty 48.9% did so within a month, 71.7% within two months, 85.9% within three months, 93.8% within four months, 97.2% within five months, and 98.7% within six. Not all the sick, however, were treated in hospital; many were looked after in their units. Here a man's change of staying alive was 99%, that of returning to duty 86.7%. The average number of noneffective days of these cases was 9.3.

The fact that additional information is not available does not make it possible to add much to these figures. One fact, however, should be noted: it was a cardinal principle, deriving from experience in the field,⁷⁷ that wounded personnel upon their recovery should be sent to the replacement unit affiliated to their last field unit. Placed in replacement companies to be restored to fitness, they would travel back to their original units in the company of new recruits in the same Marschbattalionen and were frequently commanded by officers who were themselves returning to active duty. Despite growing technical difficulties as the war went on, this principle was rigorously observed.

US Army

The overall strength of the US Army's Medical Department in World War II, according to one source,⁷⁸ was 680,438 of whom 48,317 were medical corps, 14,848 dental corps, 2,066 veterinary corps, 19,439 medical ad-

76. Heeres-Sanitätsinspekteur ed, Die Wiedereinsatzfähigkeit nach Verwundungen, Erfrierungen, Erkrankungen (Berlin, 1944) p. 21.

77. See E Weniger, Wehrmachtserziehung und Kriegserfahrung (Berlin, 1938) pp. 131-2.

78. Meninger, op. cit., p. 599.

ministrative corps, 52,128 Army nurse corps, and 541,650 enlisted Medical Department personnel. As compared with all Army personnel Medical Department personnel naturally tended to cluster in the rear: this was particularly true for physicians, i.e. officers.⁷⁹ Out of 2,277 neuro-psychiatrists e.g. who were serving with the Army on VE Day, 762 or 33.4% were stationed overseas whereas the remainder served in the Zone of the Interior.⁸⁰

The total number of hospitalizations of all kinds (but excluding psychiatric cases) in World War II is said to have been 16,744,724 of whom 599,724 (3.5 percent) were wounded in battle, 1,800,000 (10.7 percent) injured from other causes, and 14,345,000 or 85.8% sick. The average number of noneffective days per battle casualty was 117.8, that for all admissions 23.3.⁸¹ Battle casualties, therefore, were kept in hospitals for somewhat longer periods than was the case in the German Army.

In World War I 8% of all American wounded died; in World War II, 4.5% only. Approximately 64% of the wounded returned to some kind of duty, which is considerably below the German figure and may reflect either higher standards or, which amounts to the same thing, the results of the less sophisticated physical classification system employed by the US Army.

Compared with the German medical services, therefore, the American ones -- even excluding the Navy -- were much larger; treated far fewer cases; were, possibly owing in part to Allied air superiority which facilitated rapid evacuation, somewhat more effective in saving lives; and may have been somewhat less effective in returning wounded men to duty, though this is uncertain.

It was, however, not so much in mechanical performance that the difference between the two Armies lay as in the way wounded were treated AFTER

79. As of 30 September 1944 33.7% of all ETO personnel were in the Communications Zone, as against 51.9% of all medical personnel. 37.8% of all ETO officers were in COMZ, as against 64.1% of all medical officers. See US Army Medical Department, Personnel in World War II (Washington DC, 1963) pp. 310-11.

80. Menninger, op. cit., p. 600.

81. US Army, Medical Department, Medical Statistics... p. 13.

recovery. "As a result of experience in North Africa"⁸² wounded personnel requiring hospitalization were dropped from the rolls following evacuation. Emerging from the hospitals, they entered the Replacement System which threatened them like it did everybody else. To prevent "excessive overstrengths" from developing men were seldom allowed to return to their own units; that was possible only if and when "that unit had an appropriate vacancy and had submitted a requisition". As so often in the US Army, the psychological needs of the soldier were sacrificed to the administrative convenience of higher headquarters.

82. Dept of the Army, The Personnel Replacement System, p. 460.

9. Rewards and Punishments

To ensure smooth functioning no social system, however well organized, can do without a system of rewards and punishments. To meet its task, such a system should be powerful, pervasive and fast in action; above all, it should be just.

a. Pay

German Army

Pay in the German armed forces went with rank and seniority; the Air Corps apart, no distinctions were made between the various arms and services. Thus a corporal e.g. received the same basic pay regardless of whether he was serving as a rifleman in Russia or as a waiter in the comfort of General Staff headquarters.

Starting in October 1912, when scales of pay were substantially raised, a common soldier received 9, a corporal 10.50, an NCO candidate 15 marks per month. These, to modern eyes ridiculously low sums, were in fact much higher than those paid to any other European conscripts. The professional armies of Britain and the USA, of course, were a different matter entirely.¹

Before and during World War II basic pay varied from just under 200 mark per year for a raw recruit to 2,064 mark for an NCO with 14 years service, 7,700 for a major and as much as 26,500 for a colonel general.² Not only were differentials large, but a colonel general's pay was approximately 25 times per capita GNP which stood at just over 1,000 marks in 1938.

An entirely different picture obtains, however, when the various allowances (Zulagen) are taken into account. Allowances were paid for a. housing; b. families; and c. service in "particularly difficult" places

1. In Austria Hungary conscripts were paid 4.05 marks per month, in France 2.40, in Russia 1.20. A British private got 30, an American one 63 mark per month. Figures from MGFA ed, Handbuch, v, p. 102.
2. R Absalon, Wehrgesetz und Wehrdienst 1935-1945 (Boppard am Rhein, 1960) p. 302.

or conditions. For men serving in some especially expensive country or region there were also cost of living allowances.

Allowances of type c) are, for obvious reasons, especially interesting. For service in North Africa e.g the men received an allowance of 2.00 mark per day; NCO's 3.00 mark; and officers 4.00 mark. In other words, by joining Rommel a private could increase his basic pay 400%, an NCO (assuming he had 14 years' service) 53%, and a major 19% only.

The scales governing the pay of specialists in the Wehrmacht's employ are also significant. Fundamentally there were three different scales of pay, i.e. one for Beamter, one for various specialists, and one for soldiers. Men on the two former scales could not rise above 12,600 mark basic pay a year, which was the equivalent of a colonel's salary. The only exception to this rule was formed by the highest rank of physicians (Generalstabsarzt) who could earn 19,000 mark a year, i.e. as much as a lieutenant general. The system as a whole, therefore, was so designed as to make soldiers receive the most pay.³

A final noteworthy point: personnel working for the Reich Labour Service (Reichs Arbeits Dienst, or RAD) were on a scale of pay only slightly lower than that of soldiers. Like Generals, the Service's leaders received pay that was far higher than that of either Beamter or specialists.

US Army

In the US Armed Forces, too, pay went by rank and longevity and was (except for the Marine Corps, whose men were on a separate and higher scale) equal for all arms and services. A detailed examination, however, reveals significant differences between the American and German systems.

An US private in World War I received \$ 30 basic pay a month; this was reduced to \$ 21 in 1923, where it remained throughout the interwar years. It was not until June 1942 that pay scales were again revised,

3. M Schreiber, Heeresverwaltungs-Taschenbuch 1941/42 (Grimmen, 1941) p. 61 ff.

this time upwards. A private's basic pay was now \$ 50 a month, that of a staff sergeant with 15 years longevity \$ 120, that of a major \$ 250, that of a general of the army \$ 666.67.⁴ Differences among the ranks were therefore much smaller than in the German Wehrmacht, and were further cut down by the existence of a whole series of allowances to which enlisted men, but not officers, were entitled.⁵ The highest pay, that of a general of the army, exceeded per capita GNP (\$ 500 in 1939) by a factor of sixteen to one.

Like their German opposite numbers, American soldiers could receive family, rental and subsistence allowances. There also existed an allowance for foreign service, constituting 20% of basic pay in the case of enlisted men and NCO's and 10% in the case of officers. American troops in general, but the rank and file above all, were thus given a far smaller inducement for service outside the homeland than were their German counterparts.

Unlike the Wehrmacht, the US Army did not have a separate scale of pay for specialists; instead, these were normally given a commission and paid in accordance with their rank. The strict separation between officers and experts, crucial to the German system, was unknown.

b. Leave

German Army

In principle all German soldiers, regardless of rank or arm, were entitled to the same amount of leave. Its distribution was the responsibility of company commanders in whose hands it could form, when well administered, a powerful weapon for maintaining discipline and morale. The company commander's authority was not unlimited, however: to maintain secrecy on the eve of some major operational movement, or else in times of crisis, higher headquarters could and did block all leave.

4. War Dept ed, Technical Manual TM 14-509, Army Pay Tables (Washington DC, 1945).

5. Report of the Secretary of War's Board on Officer-Enlisted Men Relationships (The Doolittle Report), Washington DC, 1946, pp. 12-3.

Soldiers serving in the Field or Replacement Armies were entitled to 14 days' ordinary leave a year, exclusive of 2 days' travel. Special periods of leave lasting 10-20 days could be granted in case of important family events, special hardship (including a bombing attack on a soldier's house) and following a stay in hospital. Married men, especially those with problems at home, were normally given priority over unmarried, usually younger, personnel. The Regulations had it that the number of troops on leave from the Field Army at any one time was not to exceed 10% of overall actual strength.⁶

The way in which these regulations were implemented is, by the nature of things, difficult if not impossible to investigate. A spot check in the papers of one Army, however -- Model's 9th -- brought to light some interesting information. The Army seems to have spent approximately 10% of its personnel on leave every month. Soldiers during their first year at the front could look forward to one period of leave in twelve months; during the second year, to one in nine months; and during the third, to one in six. Frontline troops -- those serving forward of regimental headquarters -- were given priority over the rest. For the Army as a whole, the distribution of leave went on as usual even during periods of heavy fighting, though exceptions might be made in the case of individual divisions holding some particularly important section of the front.⁷ Here, as in regard to the question of rotation, the large number of divisions thus had a favorable effect.

Though the overall amount of leave granted was sparing indeed (in August 1942 9. Army had 123,760 men who had not been home for a year or more, the figure constituting one third of its strength)⁸ its distribution among the ranks seems to have been equitable. Thus, in May 1942 out of 179,997 men who had not been home for at least a year 32,064 or 17.8% were NCO's and 5,489 or 3% officers.⁹ These figures correspond very well with the share of these ranks in the Army as a whole.

6. Mueller-Hillebrand, "Personnel and Administration", pp. 73-6.

7. AOK9/IIa/b, "Tätigkeitsbericht 18.8-31.12.1943", BAMA 52535/18.

8. AOK 9/IIa/b, "Beilage zum Kriegstagebuch, 1.7-30.9.1942", *ibid*.

9. AOK/9/IIa/b, "Beilage zum Kriegstagebuch, 1.4-30.6.1942", Model order of 6.5.1942, *ibid*, 29234/2.

Side by side with these general arrangements, 9. Army Headquarters systematically used leave as a reward for troops -- both officers and men, but mainly the latter -- who had distinguished themselves in some particularly dangerous job such as sniping, anti-tank warfare, and the like. Printed accounts of the men's deeds, together with the announcement that they were going on immediate leave, were distributed throughout the Army after being signed by Model in person.¹⁰

US Army

According to a Regulation of 1876 that remained in force for seventy years, officers in the US Army were entitled to leave; enlisted men received furlough. The former amounted to thirty days a year and could be accumulated and redeemed for cash; the latter was unspecified in duration, went unrecorded and could not therefore be either accrued or redeemed. All this did not perhaps matter much in times of peace, but it did mean that officers -- not enlisted men -- were able to accumulate considerable sums of money during the war when much leave, by the nature of things, went unused.

In addition to these general arrangements special provisions existed for sending home soldiers in case of an emergency. Distances during the war were so large, however, and bureaucratic arrangements so cumbersome, that such leave was normally approved only six months following request.¹¹

To gain an impression of how things worked in practice I carried out another spot-check in the papers of the European Theater of War which was the largest single container of manpower by far. It turned out that Eisenhower's troops during their stay in England were granted seven days' leave every three months or so, which meant that some 7% of all men were absent from duty at any one time.¹² There is no direct evidence of leave being used as a tool for leadership, the reason apparently being that divisional commanders were not authorized to

10. See e.g. Model order of 5.11.1942, *ibid*, 29234/11; and another of 17.1.1943 in *ibid*, 32878/26.

11. Historical Division, US Forces, ETO, "Basic Needs of the ETO Soldier", chp. viii, p. 45.

12. *Ibid*, p. 5.

grant it to the recipients of decorations, etc.¹³

ETO troops in France did not, it seems, receive any leave during the summer and autumn of 1944. Once the front had been stabilized along the German border, however, 48 hour passes began to be issued for large cities such as Paris and Brussels. Typical groups enjoying this privilege consisted of e.g 12,307 men in January 1945, of whom 2,097 or 17% -- almost twice their proportion in the Army -- were officers.¹⁴ In early March 1945 one group of 560 (!) officers and 56 enlisted men was enjoying a vacation in the Riviera.¹⁵ The problem was sufficiently serious to require the personal intervention of General Marshall in a letter to General Eisenhower.¹⁶

c. Decorations

In any army, but in large and impersonal ones above all, the importance of decorations cannot be overestimated; as Napoleon said, it is with coloured ribbons that men are led. The following section will explain the way in which these things were managed in the two armies under consideration.

German Army

In the German Army during World War I, the entire problem of decorations had been grossly mismanaged. The number of different medals that could be awarded was too small, so that repeated deeds and services could not be properly rewarded. For the same reason the distinction between bravery and other services, front and rear, could not be maintained; Decorations were much easier to obtain in the second half of the war than in the first, leading to widespread dissatisfaction. Confusion was created by the many different decorations awarded by the various States and the privileges often pertaining thereto. Separate awards existed for officers and men, so that the latter could not attain the

13. General Arnold testimony, "The Replacement System World Wide", bk. 5 part 32.

14. "Basic needs of the ETO Soldier", viii, p. 38. Here several more examples of this kind are adduced.

15. Ibid, p. 24.

16. Ibid, p. 22.

highest decoration of all, the Pour le Merite.¹⁷

Though these shortcomings were recognized, little seems to have been done to correct them during the interwar years. When World War II broke out, Germany's most important decoration -- the Iron Cross, founded during the Napoleonic Wars -- was "revived" as it had been in every previous conflict. Its two classes could be awarded only to members of the armed forces, and only for wartime service.

Soon after the Polish campaign the need was felt to institute additional decorations for men already in possession of both classes of the Iron Cross who continued to perform deeds of exceptional valour. Between 1940 and 1944 there accordingly came into being the five classes of the Knight's Cross to the Iron Cross, i.e the Knight's Cross, the Oak Leaves, the Swords, the Diamonds, and the Knight's Cross of the Iron Cross with Golden Oak Leaves, Swords and Diamonds. The last and highest of these was, typically, reserved to individual warriors (Einzelkämpfer) and the number of recipients limited to 12. In the event, only one was ever awarded.¹⁸

These decorations were cumulative, i.e a man could be recommended for each grade only if he already possessed all the previous ones. This meant that equal deeds could not always be equally rewarded, but at the same time created a strong incentive for repeated deeds of bravery. While the number of decorations awarded each year grew steadily from 1941 on, this reflected not so much the relaxation of requirements as the intensity of the fighting as measured in the number of casualties. Requirements were, if anything, tightened up -- the number of aircraft a pilot had to shoot down, for example.

Though all ranks could be recommended for all classes of the Iron Cross, the prerequisites for an award were not the same for all. To be decorated with one of the higher classes (Knight's Cross and up) an enlisted man or NCO either had to perform some outstanding deed of valour (often in anti-tank defence) or else take some independent

17. Weniger, op. cit., pp. 91-3; see also Blecher, "Gedanken zur Erneuerung des Eisernen Kreuz vor 25 Jahren", Soldatentum, 6, p. 245.

18. See Absalon, op. cit., p. 258 ff.

decision.¹⁹ For commanding officers several of the latter constituted an unconditional prerequisite; mere bravery, however exceptional, was not enough. Asked to recommend one Lieutenant Colonel Mokros for the Oak Leaves of the Knight's Cross, Fieldmarshal Schoerner wrote that for a regimental commander to personally lead his men in a successful counterattack with machinegun and hand-grenades constituted "a self evident duty".²⁰

To become the recipient of one of these higher decorations, a regimental commander e.g. had to be recommended by his direct superior. Provided the recommendation received the endorsement of the Corps and Army Commanders the completed forms, including a brief autobiographical sketch (often used by the candidates to emphasize their service in the Hitler Jugend etc.) and a photograph, was submitted for Hitler to decide. The entire procedure normally lasted anything between three and five weeks, though in some cases only a fortnight or even less were required. Once a recommendation was approved the newspapers and broadcasting services would be informed that e.g. Major X had been awarded the Oak Leaves as the nth soldier of the German Wehrmacht.

From September 1939 to May 1945 the following decorations were awarded:

Table XXXIII

Distribution of Iron Crosses in the German Army

decoration	
Iron Cross 2. Class	2,300,000
Iron Cross 1. Class	300,000
Knight's Cross	5,070
Oak Leaves	569
Swords	87
Diamonds	13
Golden Oak Leaves, Swords and Diamonds	

19. Since enlisted men who received this decoration could expect to be taken on as officer candidates on the basis of Bewahrung vor den Feind (sterling service in front of the enemy) almost all of their higher classes went to officers.

20. Shoerner Notiz of 10.3.1945, BAMA Rh7v 299.

The holders of the five higher classes together thus formed a tiny elite, constituting no more than 0.033% of all those who passed through the Wehrmacht in five and a half years of war, and approximately 0.3% of those killed in action. To preserve this exclusiveness, a special series of decorations -- the German Cross in Silver and Gold -- was instituted in September 1941 for personnel already in possession of the Iron Cross 1. Class whose repeated deeds of valour or sterling service (not accompanied by independent action) did not entitle them to the Knight's Cross. The German Cross, however, was neither part of the Order of the Iron Cross nor a prerequisite for the award of its higher classes; the two orders were kept strictly apart.

To gain an impression of how things worked out in practice, I carried out a random spot-check among recommendation and awards in various units at various times in the war. One is immediately struck by the large number of cases in which the higher decorations (upwards of the Iron Cross 1. Class) were awarded for independent action by men and officers of all ranks; these constitute approximately forty percent of the total.²¹ The system continued to function right down to the end of the war, and Hitler himself a mere 24 hours before he put an end to his life still took the trouble to reject a recommendation.²² More remarkably still, the system went on working even after VE Day, when there was no longer either a war, a Fuehrer or a Reich.

US Army

In World War I, according to General Marshall, the US Army had been extremely niggardly in the distribution of decorations. Not only had few awards been made, but time intervals were such that most recipients only got their medals after hostilities were over. This was a state of things which Marshall was determined to correct, even in the face of accusations that the medals would thereby be cheapened.²³

As operated in World War II, the American system of awards and decora-

21. See BAMA 29234/9.

22. BAMA Rh7v 298.

23. Marshall to King, National Archives file No. 204-58 90 (22-819).

tions differed considerably from its German equivalent. Having been established at different times and with differing prerequisites, the various medals were not interconnected and not cumulative. Some could be awarded to soldiers alone, but others to civilians also. Not a single American decoration included the demand for independent action among the provisions for its award; on the other hand, far greater importance was attached to meritorious service in noncombat duties. Whereas in Germany it was more difficult for officers than for other ranks to earn the higher decorations, this was not the case in the USA.²⁴

Good intentions notwithstanding, Marshall did not succeed in greatly cutting down the interval between a man's deed and his being awarded a medal; the average waiting time for the higher classes was probably around 5-6 months,²⁵ though it must have been less than that for the lower ones.

The highest decoration, the Medal of Honour, was awarded for conspicuous gallantry in action above and beyond the call of duty; 289 of these were distributed during and after the war. The next highest award, the Distinguished Service Cross, likewise involved "extraordinary heroism in connection with military operations against an armed enemy", and of this 4,434 were distributed. The third highest medal was the Distinguished Service Medal which went for exceptionally meritorious service in positions of great responsibility; the number of recipients in 1940-1945 was 3,372.²⁶

Below these, the Silver Star (73,651 awarded) went for gallantry in action not warranting one of the two highest decorations, the Legion of Merit for exceptionally meritorious conduct in the performance of extraordinary service (20,273 awarded). The five highest classes together were thus awarded 100,086 times, constituting some 33% of the number killed in action. This exceeds the German equivalent figure by a factor of 100 to 1.

24. That this be changed was one of the main recommendations of the 1946 Doolittle Report on officer-enlisted men relationships.

25. Figures based on a survey of ETO files (Box 322/Admin. File ETO/7/38 and 38/183) at the National Archives.

26. All figures from War Dept ed, Decorations and Awards (Washington DC, 1947) p. 10.

Other medals included the USAF's air medal, awarded more or less indiscriminately to anyone who flew combat missions; its equivalent for the land forces, the Bronze Star, was not awarded nearly as freely and this gave rise to widespread envy. Down at the bottom of the scale was the Purple Heart, awarded freely by the hundreds of thousands for battle and, frequently, nonbattle injuries.

The heavy emphasis placed by the US Army on meritorious service in responsible positions, as against actual leadership in combat, tended to favour officers who receive close to one-half of all medals awarded.²⁷ A breakdown of the recipients of the five highest decorations according to rank presents the following picture:

Table XXXIV

Recipients of American Decorations, by Rank

type of decoration	number awarded	to officers	percent officers
Medal of Honour	289	94	32.5%
DCS	4434	2071	46.7%
Silver Star	73651	23877	32.4%
total combat	78374	26042	33.2%
DSM	1439	1438	99.9%
Legion of Merit	20273	17159	84.6%
total noncombat	21712	18597	85.6%
total	100086	44639	44.6%

Thus, the greater the demand for bravery in the requirements for any one medal, the smaller the percentage of officers who received it.

d. Military Justice

Command, it has been said, consists of a mixture of example and persuasion; where these two fail, coercion may have to be used. Without a proper system of justice, capable of quickly and effectively enforcing the law, no social organization, let alone an army, can function.

German Army

During World War I, possibly as a result of favourable experiences during

27. 804,533 out of 1,800,739, or 44.6%. Exclusive of Purple Heart.

the Wars of Unification,²⁸ gave the lie to its reputation for "militarism" and displayed an extraordinary reluctance to pass capital sentences and carry them out. This is shown by the following figures:²⁹

Table XXXV

Death Sentences in the German Army in World War I			
type of offence for which death sentence was passed	carried out	not carried out	total
refusal to obey orders in face of enemy	4	21	25
treason	10	17	27
desertion in face of enemy	18	31	49
rebellion and calling for rebellion	2	7	9
attack on superiors in the field	3	5	8
murder	11	21	32
total	48	102	150

Thus 78.6% of all death sentences passed, and 77% of those carried out, were for military rather than for civilian offences. The surprisingly low³⁰ figures are open to conflicting interpretations: either discipline in the Imperial Army was so good that no drastic disciplinary measures were called for, or else the Military Justice System -- possibly also with political considerations in mind -- was reluctant both to impose the death sentence and to carry it out. Among those who took the latter view was Adolf Hitler.

In 1935 the code of military law was altered. A new and typically Nazi capital offence, Zersetzung der Wehrkraft (literally: undermining fighting power) was added to the existing ones of treason, mutiny, and incitement thereto, desertion, attack on a superior in the field, and plunder. Among civilian offences murder, unnatural sex and robbery were also punishable by death.

28. E Schwinge, Die Entwicklung der Manneszucht in der deutschen, britischen und französischen Wehrmacht seit 1914 (Berlin, 1941) p. 48.
29. Volkmann, Soziale Heeresmissstände als Mitursache des deutschen Zusammenbruchs (Berlin, 1929) p. 63.
30. From 4.8.1914 to 31.3.1920 British courts-martial passed 3,080 death sentences of which 346 were carried out. See War Office ed, Statistics of the Military Effort of the British Empire during the Great War (London, 1922) p. 648.

Throughout World War II desertion and Zersetzung der Wehrkraft (which included self mutilation) were the principal offences for which capital sentences were passed, as shown by the following figures:³¹

Table XXXVI

Offences Leading to Death Sentences in the German Army, World War II

	period 10-12.1943	period 4-6.1944
total number death sentences	1455	1906
for Zersetzung	309	343
for desertion	728	1033
for all other offences	418	530:

On the strength of this and other evidence,³² Zersetzung and desertion together made up about 70% of all capital sentences passed, followed at a great distance by all the rest. The following table, though inaccurate and incomplete, will give some idea of the absolute figures involved:³³

Table XXXVII

Death Sentences and Executions in the German Army, World War II

year	sentenced to death for desertion	No. executed for all offences
1940	312	559
1941	470*	425
1942	1551	1560(?)
1943	1364*	2880
1944 (Jan-Sept	1605*	3829
1945 (Jan-April)	n.d	2400*
total	5302	11753

Though these figures lay no claim to accuracy they are probably a good

31. BAMA file H20/481.

32. OKH ed, "Krieg-Kriminalitätstatistik für die Wehrmacht", 1.1.40-31.3.42, BAMA WO5/165 and 166.

33. The table is based on a. ibid; and b. F W Seidler, "Die Fahnenfluch in der deutschen Wehrmacht während des Zweiten Weltkrieg", Militär-geschichtliche Mitteilungen, 22, 1977, pp. 27, 36. For another estimate based on different sources but arriving at substantially similar figures see O Hennicke, "Auszüge aus der Wehrmachtkriminalstatistik", Zeitschrift für Militärgeschichte, 5, 1966, p. 444 table 4. Figures marked by a * represent my own guesstimates.

indication of the order of magnitude involved, and show how much more draconian the military justice system had become since World War I.³⁴ That these measures had some effect in preserving the Wehrmacht's cohesion in face of the very heavy odds if confronted is shown by the following estimate of the overall number of deserters and AWOL's.³⁵ This rose from 9,778 in 1941 to 16,550 in 1942, 66,861 in 1943, and 202,422 in 1944. The overall ratio per thousand strength works out at about 7.9 per year, with the highest figure -- that for 1944 -- standing at 21.5.

From January 1940 to June 1941 2,251 officers, 17,107 NCO's and 87,188 enlisted men -- a total of 106,546 -- stood trial. Thus officers, with 2.1% of all offences, were somewhat underrepresented in relation to their numbers, whereas NCO's with 16.% were present in exact proportion to their share in the Army as a whole. The overall number convicted was 95,230, or 89.4% of those accused. The system appears to have been biased in so far as officers stood a 22.6% chance of being acquitted, NCO's 15.5%, but enlisted men 9.3% only.

Nevertheless, in other ways the system was quite as capable of protecting subordinates against their superiors as it was of enforcing the latter's authority. Punishments for both kinds of offences were similar: up to two years in gaol for insulting a superior (article 91 of the military code), the same for insulting a subordinate (article 121). Assaulting a superior (article 97) carried a sentence of not less than three years in prison, but so did mishandling a subordinate (article 122). Article 122a, moreover, defined mishandling as "deliberately or unnecessarily making life difficult for a subordinate, or tormenting him in other ways, or tolerating such actions on the part of other soldiers". That these were not empty words is shown by the following figures:³⁶

34. Under Nazi pressure the penalties for the various kinds of desertion were made more draconian still as the war went on. The military judges countered this, however, by convicting a growing proportion of offenders for going AWOL rather than for desertion.

35. Seidler, loc. cit., p. 30.

36. BAMA W-05/165 and W-05/166.

Table XXXVIII

Cases of Attacks on Superiors versus Mishandling of Subordinates in the German Army

period	1-6.40	6-12.40	1-6.41	6-12.41	1-3.42
cases of attacks on superiors	746	738	1246	920	515
cases of mishandling subordinates	434	603	893	939	431
differential	71.8%	22.3%	39.5%	-2.1%	19.4%

For the period as a whole, the differential is 26.2%.

US Army

Whereas the American code of military justice, like that of any other army, contained numerous articles designed to enforce discipline (AW 63, "disrespect towards superior officer"; AW 64, "assaulting or willfully disobeying superior officer"; AW 65, "insubordinate conduct towards NCO's and others) it differed from the German one in that it contained no explicit provisions for the protection of the troops against their superiors. Instead, "cruelty to soldiers" was mentioned in AW 95, which dealt with "conduct unbecoming an officer and a gentleman" and put this offence on a par with such things as drunkenness, giving a bad cheque, and the like. A proper attitude towards one's subordinates, in other words, was made a question of the officer's honour.

As compared with the German Army, the enforcement of the law in the American one was decidedly lax; of close to four million men who passed through ETO (the only Theater on which detailed statistics are available) between 1942 and 1945 only 22,214, or around 0.5 percent, ever stood trial before a court of military justice. Of these 1,737, or 7.8% were officers who were thus represented in accordance with their numbers. On the other hand, the system resembled the German one in that officers, once brought before a court martial, were twice as likely to be acquitted as were enlisted men.³⁷

37. Historical Brigade, Office of the Judge Advocate-General with the US Forces, ETO, "Statistical Survey -- General Courts Martial in the European Theater of Operation", Ms 8-3.5-AA, vol. 1, NA file 204-58 (87).

Though desertion in the US Army, as in the German one, was punishable by death (AW 58) a study of the capital sentences passed in both armies brings out some very deep differences in their respective philosophies. The following figures (ETO only) tell their own story:

Table XXXXIX
Death Sentences and Executions in ETO, 1942-45

offence	death sentences		after review		carried out	
	No.	as % of total	No.	as % of total	No.	as % of total
total	443	100.00	108	24.3	70	15.8
murder	82	18.7			28	
murder and rape	18	4.1			12	
murder and desertion	2	0.4			--	
rape	151	34.1			29	
total civilian	255	57.5			69	27.4
desertion	73	16.8			--	
desertion to avoid hazardous duty	57	12.9			1	0.5
misbehaviour in front of the enemy	24	5.7			--	
sentinel offences	3	0.7			--	
assault on officer	24	5.4			--	
mutiny	7	1.6			--	
total military	188	42.5			1	0.5

Thus, not only did capital sentences for civilian offences outnumber military ones, but the chances of a man sentenced to death for a civilian offence of actually being executed were 54 (!) times as large as those of a man sentenced for a military one. Possibly as a result, desertion rates reached 45.2 per thousand in 1944 and 63 per thousand in 1945,³⁸ exceeding the German figure several times over in spite of the much lower intensity of combat. In the end, only 2,854 of hundreds of thousands who deserted or went AWOL were ever tried; of these a single one was executed, and his relatives are currently suing the Government for damages.³⁹

38. Gabriel and Savage, op. cit., table 1. Absolute figures on desertion are unavailable.

39. Herald International Tribune, 8-9.9.1979, p. 5. According to his biographer this man had hoped to escape combat by trading it for a prison sentence which would be commuted after the war; thousands of others did so successfully, but in his particular case the arithmetic failed to work. See W B Huie, The Execution of Private Slovik

e. Soldiers' Complaints

Launching a complaint is a risky business in any army. The authority to whom the complaint is addressed is far away; whereas the one against whom it is directed is likely to be near at hand and, what is more, capable of giving a man hell. Unless the plaintiff can be reasonably sure about the ability and willingness of the former to deal with the latter, therefore, he is likely to keep his grievance to himself.

German Army

A unitary procedure for soldiers' complaints was instituted by the German Army in 1895 and modified in 1921 and 1936.⁴⁰ Soldiers, normally with the aid of an older comrade, could complain orally or in writing during the period commencing one day after the supposed injury and ending seven days (for officers, three days) thereafter. Complaints by privates and NCO's were made to their immediate superiors or, in case that the immediate superior was himself the object of the complaint, to the next highest commander who had the decision in his hands. In case a negative reply was given the complaint could be repeated to the next highest commander and so, in theory at any rate, on to the highest instances (first the Kaiser, then the president of the Republic, and later Adolf Hitler). Unfounded complaints were not, again in theory, supposed to lead to penalties provided the plaintiff had acted with good intentions and in accordance with the Regulations.

The system, typical of the decentralized way in which the German Army did things, thus placed remarkable confidence in the willingness of commanding officers to support plaintiffs even against their own sub-commanders; on the other hand, once a complaint was recognized as just the recipient was in a position to deal with it promptly and effectively.

US Army

In the US Army, complaints had to be addressed to the Inspector-General

(New York, 1954) p. 107 ff.

40. H Frahm, Wehrbeschwerdeordnung (Berlin, 1957) p. 13 ff.

of each arm and service. However, the powers of the latter were advisory only; according to AR 20-30 of 1937, the Inspector General's department could "reach conclusions from developed facts and made recommendations believed to be supported thereby, but it has no power to reach findings or to impose punishment".

10. The Non-Commissioned Officers

German Army

a. Selection and Training

In the old Imperial Army there existed a clear social dividing line between officers and men, but the same was not true in regard to NCO's. The latter were mostly drawn from small peasant and lower middle class stock. Few possessed any education beyond elementary school.¹

The selection of future NCO's took place after a year's service. The same company and battery officers who, acting in accordance with Guidelines issued by the General Staff, carried out the selection were later responsible for accepting or rejecting a man for service in their unit. A leftover from feudal times, this extremely decentralized system helped forge strong links between NCO's and their units and was retained right down to 1945.

The training of NCO candidates took place in a special battalion of the regiment; not until 1936 was a Central Army School for NCO's established.² Training lasted two years and was in the hands of regimental officers and senior NCO's. Contacts with the latter, both on and off duty, were extremely close, with the result that there grew up a kind of NCO esprit de corps. The frequent meetings held between NCO's of various units in the regiment, as well as their comparatively high status in society, combined to create that class of tough professionals on which the structure of any army must ultimately rest.

During the Weimar period the long period of service imposed by the Allies (12 years) made it possible to make the training of NCO's even more thorough than before. Three and a half years' training were followed by another 7-8 months' regimental duty during which a strong emphasis was placed on leadership, practical knowledge of weapons, and sport. Acting

1. Based on MGFA ed, Handbuch, v, pp. 91-2, and vii, pp. 375-6.

2. In July 1944 the number of NCO schools had risen to 21. The training personnel, mostly wounded officers and NCO's who had served with great distinction, numbered 5,250. The number of trainees in all schools was 13,400. See W Lahne; Unteroffiziere (Munich, 1975) p. 487.

on the principle that every man should be able to perform the duties pertaining to a post two grades above his own, the Reichswehr built up an NCO corps which, during the early thirties, was able without difficulty both to train the rapidly expanding Army and to supply leaders to the Party's armed formations.

Though the duration of training was cut back to two years in 1933, the exceptionally thorough work done by the Reichswehr enabled the demand for NCO's to be met without a significant drop in quality down to the outbreak of World War II. Indeed, the reverse may well have been true; whereas the intelligent, thinking NCO had been an exception in 1914, he became the rule twenty five years later.³

An aspect of the NCO selection-system that deserves special mention is the way in which the Regulations, which were identical for all arms in peacetime, discriminated in favour of those who had seen frontline service once war broke out. Thus promotion to NCO in the Field Army could take place after six months' service and might take place, in especially deserving cases, even when no suitable T/O vacancy was available. In the Replacement Army, by contrast, a soldier could only be promoted NCO after a year's service (including two months at the front) and then only if a suitable slot was available for him.⁴

b. Conditions of Service

In the German Army until 1919 the NCO career (Laufbahn) was separate from, and parallel to, that of the officer. Men signing on as professional NCO's did not therefore aspire to become officers, nor was such promotion possible in any but the rarest of cases. The reason for this, it appears, was not so much perceived lack of ability as the fact that the NCO's, unlike their commissioned superiors, were not regarded as perfectly reliable politically in the pre-Nazi years.⁵

During World War I this system gave rise to widespread dissatisfaction

3. MGFA ed, Handbuch, vii, 378.

4. Heeres Dienstvorschrift 29/a, Bestimmungen über die Beförderungen und Ernennungen der Unteroffiziere und Mannschaften bei besondere Einsatz (Berlin, 1939) p. 7 ff.

5. MGFA ed, Handbuch, v, p. 93.

and criticism. At the front NCO's, often tried and proved men, saw themselves put under the command of the so-called Einjährige, middle class youths who, after taking the high school diploma, served for a year, received 4-6 weeks' officer training, and were then commissioned as second lieutenants. Consequently milkmaids of 19 or 20 frequently found themselves in command of men far more senior and experienced than themselves.⁶ Besides causing much justified bitterness,⁷ the system also adversely affected the Army's performance in the field.

In 1919, accordingly, the institution of the Einjährige was abolished. Acting through the Minister of Defence, Gustav Noske, and the First Quartermaster, General Groener, the Social Democratic government proceeded to select 1,000 deserving NCO's and promote them to commissioned rank.⁸ Subsequently the hurdle separating noncommissioned from commissioned rank, though still high, was at any rate no longer insuperable. It broke down further during World War II when tens of thousands of NCO's received their commissions, in some exceptional cases even without going through officer school first. By 1945 the land-bound components of the armed forces alone included 11 officers of general rank who had started their careers as NCO's; significantly, three of these -- including the notorious Sepp Dietrich, onetime commander of Hitler's bodyguard and the man responsible for the Malmedy massacre -- were serving in the ranks of the Waffen SS.⁹

In addition, opportunities for NCO's to earn promotion within their own Laufbahn were extended during the Weimar years. After two years' training an NCO-candidate could become a Gefreiter; another four years, and most would be promoted Feldwebel, though exceptionally qualified men could skip this rank. Promotion to Oberfeldwebel depended on taking a special examination and could take place after seven (in exceptional cases, five) years from promotion to Gefreiter. In 1935 another rank,

6. Exceptionally experienced NCO's, usually indispensable specialists such as experts on weapons, fortifications, etc. could on rare occasions be promoted to commissioned rank. Even so they remained a separate body, however, and did not merge with the officer corps.

7. See M Hobohm, Soziale Heeresmisstände als Teilursache des deutschen Zusammenbruchs von 1918 (Berlin, 1929) passim. This is one volume in a great many official sponsored ones designed to ascertain the causes of the defeat.

8. Demeter, op. cit., p. 49.

9. In the ranks of Navy and Airforce the numbers were larger still.

that of Hauptfeldwebel, was added, while for those who elected to stay on beyond the normal period of service for NCO's (12 years) could be promoted to Stabsfeldwebel.

Such men, however, were the exception. The Army's high social standing and its comparatively small size made it fairly easy to attract a sufficient number of suitable candidates during the Imperial and Weimar periods. Still, in 1936 it became necessary to institute side by side with the normal 12 year Laufbahn a truncated one lasting 5 years only. Men approaching the end of their 2 years' conscript service were thus given the opportunity of signing on for another 3 years.

Upon signing on for an extension of service, future NCO's from 1900 on received the sum of 100 marks as well as additional pay during their period of training. To help guarantee the political reliability of the corps, a retirement-grant of 1,000 (later raised to 1,500) marks had been introduced in 1890. A man thus discharged could look forward to a career in officialdom to which they had a priority claim and where their qualities of conscientiousness and utter reliability were much sought after. Some of these men subsequently made it to the medium ranks of the hierarchy.¹⁰ Others, aided by generous loans and grants instituted by a Nazi government that regarded NCO's as among the most valuable of all social types, bought farms and settled on the land.

c. Position and Performance

In the old Imperial Army, the NCO's formed the lowest rung of the military hierarchy. This in itself sufficed to give them a certain esteem as representatives of the State's power and numbers of its cherished instrument of war.

Partly for this reason, but partly also because of the substantial rewards -- both material and nonmaterial-- which NCO's enjoyed over and above those of enlisted men,¹¹ there never arose a shortage of suitable candidates. Indeed, the opposite was the case: even in 1900 there had been 1,200 NCO's in excess of establishment in the Prussian Army alone,

10. MGFA ed, Handbuch, vii, p. 377.

11. These included better pay, improved medical services, night leave, and the right not to carry a pack during exercises and manoeuvres.

and the number of applicants continued growing thereafter.¹² To cope with the demand, the number of NCO T/O positions in the Army had to be increased by 719 in 1904.¹³

During the Weimar period securing NCO's for the 100,000 man Army constituted hardly any problem. The situation began changing during the years of hectic expansion during the years preceeding World War II, however, and this led to the institution of the above-mentioned 5 year Laufbahn side by side with the traditional 12 year one. At the outbreak of World War II in 1939, nevertheless, the Wehrmacht possessed only 75% as many NCO's as had the Imperial Army in 1914, though the two forces were of approximately equal size.¹⁴ During the war itself only one of six of all NCO's was a professional; as late as 1943, however, over one half of all NCO's captured by the Western Allies stemmed from the prewar Army, tough, highly trained men who did their duty out of a deeply-felt commitment to the soldierly profession.¹⁵

The position of NCO's differed from that of their comrades in most Continental Armies. They did not possess disciplinary powers and worked under the close supervision of their officers rather than in the latter's stead. Possibly for the same reason, it was the NCO's who, when in command of troops, tended to make the most frequent use of punishments.¹⁶

In World War I 110,618 NCO's (both active and reserve) were killed whereas another 190,205 went missing, presumed dead. 477,734 NCO's were wounded.¹⁷ Prussian, Bavarian and Saxon. NCO's together earned 2,544 medals of the kind that served as the NCO's equivalent of the officers' Pour le Merite.¹⁸

12. MGFA ed, Handbuch, v, p. 97.

13. Lahne, op. cit., p. 321.

14. MGFA ed, Handbuch, vii, p. 378.

15. Shils and Janowitz, loc. cit., p. 299.

16. G Blumentritt, "Das alte deutsche Heer von 1914 und das neue deutsche Heer von 1939", US Army Historical Division Study B 296, Allendorf, 1947, chp. 1.

17. Figures from Lahne, op. cit., pp. 379-80.

18. MGFA ed, Handbuch, v, p. 94. The medals in question were: the Golden Military Merit Cross (Prussia), the Golden Medal for Bravery (Bavaria) and the St Heinrich Medal (Saxony).

How many NCO's were killed in World War II is unknown. It is known, however, that out of a total of 5,740 Knight's Crosses (of all grades) awarded during the war approximately 1,300 went to NCO's.

US Army

In the US Army, NCO's were enlisted men who had been promoted on the basis of ability or seniority. Since they were denied an officer's privileges, and were in any case the scions of a different social environment, they tended to identify with the enlisted men. An NCO esprit de corps, "the backbone of an army" as the saying goes, is said not to have existed.¹⁹

Given the low pay and scant esteem in which it was held, the interwar Army had some difficulty in attracting high quality manpower to serve as NCO's; with the result that, during the great influx of much better educated men in 1940 and 1941, NCO's tended to be the least educated, least capable men in the unit.²⁰ As selectees won their stripes later on this problem largely solved itself.

Promotion to NCO went mainly by seniority. Schools were provided -- and this is again typical of the entire US Army approach to things -- for men requiring technical skills, such as radio operators or motor technicians, but not for those in leadership positions such as e.g. rifle platoon sergeants, first sergeants or tank commanders. The latter were supposed to develop their leadership abilities simply by service with the troops and to require no special training.²¹ Suggestions for altering this system were voiced from time to time, but all were shot down by Army Ground Forces Command with its persistent fight for a "simple" Army.²²

The number of men who became NCO's is astonishing. During World War II only one in every six German soldiers had worn the stripes, but in the US Army at the time of VE Day approximately fifty percent of all enlis-

19. Stouffer, op. cit., i, pp. 401-3.

20. Ibid, pp. 60-3.

21. Command and General Staff College, Fort Leavenworth, "History of the Army Personnel Replacement System", 1948, p. 280.

22. Palmer, op. cit., pp. 477-8.

ted men were NCO's.²³ In particular, the influx of NCO's from the Zone of the Interior via the Replacement System had an unfortunate effect on the morale of old timers who saw their own prospects for promotion blocked by new arrivals. On the other hand, for the latter to enter the line as rifleman, often under the command of men with fewer stripes, was equally ruinous to morale. The net result, according to the official history, was that NCO's -- theoretically the Army's toughest and best trained men -- were one type of replacement which was not welcomed by the divisions.²⁴

23. Stouffer, op. cit., i, pp. 237-8. That a higher degree of technological sophistication was not alone responsible for this fact is shown by the present day Bundeswehr in which every third soldier is a NCO.

24. Ibid, ii, p. 279; also Palmer, op. cit., p. 249.

11. Leadership and the Officer Corps

The time has now come to examine a constituent of fighting power which, perhaps more than any other, decides the outcome of wars: leadership. An enormous literature exists to show that, in the words of Kurt Lang, "it is what the leader does that counts".¹ Everything connected with him -- from the way he is selected to the system used for his promotion -- is therefore of quite extraordinary, indeed decisive, importance.

a. Image and Position

German Army

In the old Imperial Army, a vast gulf separated between officers and enlisted men. The former's privileges as regards pay, uniform, food, lodging and other comforts were very large, probably contributing to the army's disintegration in the last month of the war and also to the outbreak of mutiny in the Navy.² The subject of a lively debate during the Weimar years, these privileges had been very substantially cut down by the time World War II broke out.

To gain an impression of the qualities which the German Army demanded, and presumably got, from its officers we again quote from the Truppenführung of 1936:

6. Leadership in war³ demands leaders possessed of judgement, a clear understanding, and foresight. They must be independent and firm in making a decision, determined and energetic while carrying it out, insensible to the changing fortunes of war, and possessed of a strong consciousness of the high responsibility resting on them.

7. The officer is leader and educator in every field. Besides a knowledge of men and a sense of justice, he must distinguish himself by superior knowledge and experience, moral excellence,

1. Op. cit., p. 68. On this and the following pages a very extensive bibliography concerning various aspects of leadership and its effect on the men is adduced.

2. D Horn, Mutiny on the High Seas, the Imperial German Naval Mutinies of World War I (London, 1969) chp. 2.

3. German: Heer-wie Truppenführung.

self-control and high courage.

8. The example of officers and men in commanding positions has a crucial effect on the troops. The officer who demonstrates cold-bloodedness, determination and courage in front of the enemy pulls the troops along with himself. He must, however, also find his way to his subordinates' hearts and gain their confidence by understanding their feelings and their thoughts. His care for them must never cease.

Mutual confidence is the secure basis for discipline in times of need and danger.

9. Every commander is to commit his entire personality in any situation without fearing responsibility. A readiness to assume responsibility⁴ is the most important of all qualities of leadership. It must not, however, go so far as to lead to headstrong decisions without regard for the whole, or to the imprecise execution of orders, or to an I-know-better-than-you attitude. Independence should not turn into arbitrariness. But independence which knows its limits is the foundation for great successes.

...

12. Commanders are to live with the troops and to share with them danger and deprivation, happiness and suffering. Only thus can they gain a real insight into their troops' fighting power (Kampfkraft) and requirements.

The individual man is responsible not merely for himself but for his comrades also. Whoever possesses more ability, is stronger, must aid and lead the inexperienced and the weak.

On such foundations does the feeling of real comradeship grow. Its importance in relations between commanders and men is as great as among the men themselves.

13. ... It is every commander's duty to proceed against breaches of discipline, to prevent excesses, plundering, panic and other harmful effects by using every means at his disposal, including even the most drastic ones.

Discipline is the central pillar on which the army is

4. German: Verantwortungsfreudigkeit, or "joy in responsibility".

built. Its strict maintenance is a blessing for all.

14. The troops' forces must be conserved so that the highest demands can be made on them at the decisive moment. Whoever demands unnecessary chores sins against the prospect of success.

The use of force in combat must be proportionate to the purpose at hand. Demands that are incapable of fulfillment are as harmful to the troops' confidence in their leaders as they are to their morale.

The Location of the CO and his Staff

109. Personal influence by the Commanding Officer on his troops is of the greatest importance. He must be near the fighting troops.

110. The selection of a location for a corps headquarters is determined above all by the need to keep in close and constant touch with both the divisions and the rear. A corps commander is not to rely on technical means of communication alone.

In spite of the availability of advanced technological apparatus, staying far away from the front extends the way orders and reports must travel, endangers communications and may cause reports and orders to arrive belatedly or not at all. It also puts difficulties in the way of obtaining a personal view of the country and of the state of combat.

On the other hand, the location of a corps headquarters should be fixed in such a way as to make possible the orderly activity of the various services.

111. A divisional commander's place is with his troops... During encounters with the enemy seeing for oneself is best.

These are pretty authoritative words to which little if anything can be added. Passing now from theory to practice, it is worth mentioning that the road from noncommissioned to commissioned rank was an open one in World War II, traversed by tens of thousands of men. The bond between officers and men was emphasized more strongly still by the use of a comprehensive term, "soldiers", to describe them both, and by the Regulations which required the men to salute not merely their officers but each other too. Having spent much of their training period in the

company of enlisted men, officers were freely permitted to fraternize with them off duty and even encouraged to do so by the tenets of National Socialism. Possibly as a result of all this, in interviews with prisoners of war, "nearly all NCO's and officers of the company grade level were regarded by the German soldier throughout the Western campaign as brave, efficient and considerate".⁵

US Army

The following are the sections of FM 100-5 dealing with "Leadership" and "Command":

102. Leading troops in combat, regardless of the echelon of command, calls for cool and thoughtful leaders with a strong feeling of the great responsibility imposed upon them. They must be resolute and self reliant in their decisions, energetic and insistent in execution, and unperturbed by the fluctuations of combat.

103. Troops are strongly influenced by the example and conduct of their leaders. A leader must have superior knowledge, will power, self-confidence, initiative and disregard of self. Any show of fear or unwillingness to share danger is fatal to leadership. On the other hand, a bold and determined leader will carry his troops with him no matter how difficult the enterprise. Mutual confidence between the leader and his men is the surest basis of discipline. To gain this confidence the leader must find the way to the hearts of his men. This he will do by acquiring an understanding of their thoughts and feelings, and by showing a constant concern for their comfort and welfare.

104. A good commander avoids subjecting his troops to useless hardships; he guards against dissipating their combat strength in inconsequential actions or harassing them through faulty staff management. He keeps in close touch with all his subordinate units by means of personal visits and observation. It is essential that he know from personal contact the

5. Shils and Janowitz, loc. cit., p. 298.

mental, moral and physical state of his troops, the conditions with which they are confronted, their accomplishments, their desires, and their needs.

105. The commander should promptly extend recognition for services well done, lend help wherever help is needed, and give encouragement in adversity. Considerate to those whom he commands, he must be faithful and loyal to those who command him. A commander must live with his troops and share their dangers and privations as well as their joys and sorrows. By personal observation and experience he will then be able to judge their needs and combat value.. When necessary to the execution of the mission, the commander requires and receives from his unit the complete measure of sacrifice.

106. A spirit of unselfish cooperation with their fellows is to be fostered among officers and men. The strong and the capable must encourage and lead the weak and the less experienced. On such a foundation the feeling of true comradeship will become firmly established and the full combat value of the troops will be made available to the higher commander.

...

109. ... A wise and capable commander... will so regulate the interior administration of the unit that all groups perform the same amount of work and enjoy the same amount of leisure. He will see that demonstrated efficiency is promptly recognized and rewarded. He will set before all a high standard of military conduct and apply to all the same rules of discipline.

...

119. ... Command and leadership are inseparable. Whether the force is large or small, whether the functions of command are complex or simple, the commander must be the controlling head; his must be the master mind, and from him must flow the energy and the impulse which are to animate all under him.

...

121. A willingness to accept responsibility is the foremost trait of leadership. Every individual from the highest commander to the lowest private must always remember that inaction and neglect of opportunities will warrant more severe

censure than an error of judgement in the action taken. The criterion by which a commander judges the soundness of his own decision is whether it will further the intentions of the higher commander. Willingness to accept responsibility must not manifest itself in a disregard of orders on the basis of a mere probability of having a better knowledge of the situation than the higher commander. The subordinate unit is part of a tactical team employed by the higher commander to accomplish a certain mission, and any independence on the part of a subordinate commander must conform to the general plan for the unit as a whole.

Conduct in Battle

140. After providing for the issuance of orders, the commander places himself where he can best control the course of action and exert his leadership. His command post affords the advantage of established signal communications. When opportunity offers and when his presence at the command post is not urgently required, he visits his subordinate commander and his troops in order to inspire confidence and to assure himself that his orders are understood and properly executed.

...

142. During the decisive phase of the battle, the place of the commander is near the critical point of action.

Thus, though entire sentences have again been lifted straight out of the German Regulations, the general effect remains slightly different. There is more emphasis on knowledge as the first of the commander's attributes. Loyalty to one's superiors ("the criterion by which a commander judges the soundness of his own decision is whether it will further the intentions of the higher commander") is given a more prominent place, independent action a lesser one. Though the American Paragraph 106 is a literal translation from the German No. 12 the words concerning comradeship between officers and men are, significantly, omitted. Discipline -- "the central pillar on which the army is built" according to the German Regulations -- is hardly mentioned in the American ones, which may explain something about the operation of the military justice system, analyzed above. Instead of being told to keep his

troops well in hand, like the German officer, the American one is exhorted to treat them justly.

Owing to reasons to be explained below, the hurdle separating noncommissioned from commissioned rank in America's World War II Army was considerably higher than in the German one. This is confirmed by the Regulations concerning the salute and also by the absence of a comprehensive term to embrace all service personnel, something which the recommendations of the Doolittle Report failed to change. The gulf between the two groups is illustrated by the fact that, to gain a commission, a man first had to be formally discharged from the Army, then re-enlisted. Off duty fraternization between American officers and enlisted men was forbidden, one curious result being that WAC officers were off limits to the latter. It was with some surprise that an official War Department publication, signed by General Marshall in person, noted that German company commanders were expected to congratulate their men on the occasion of their birthdays.⁶ Possibly as a result of all these factors, 70-80% of all American enlisted men questioned during the war thought that officers put their own welfare above that of their troops.⁷

b. Selection

German Army⁸

In the years before 1914, one could become an officer either by enlisting in one of the ten cadets' schools (first established by Frederick the Great in order to give the sons of officers, and other impoverished nobles, a cheap education⁹) or else by applying to the commander of some regiment. The decision as to whether or not a man should be accepted as an officer candidate lay in the hands of the regimental commander who first checked for social origins, education and religion (Jews found it almost impossible to become officers) and then conducted extensive interviews in order to determine general suitability. The same commander

6. War Dept ed, Absence without Leave (Washington DC, 1944) p. 14.

7. Stouffer, op. cit., i, p. 227.

8. Based on MGFA ed, Handbuch, v, p. 88 ff.

9. For a very sharp criticism of these schools see Ein Stabsoffizier, op. cit., chp. 1.

also decided whether a candidate, his training completed, should be given a commission; his decision did require the endorsement of the sovereign, but this was normally a mere formality.

In sifting applicants regimental commanders looked for willpower and a sense of responsibility above all -- in short, it was "character" that counted. Character, needless to say, was often equated with social origins; no men coming from unsuitable families (anything below middle class was, as demonstrated in a previous chapter, definitely unsuitable) need apply.

Though education was deliberately and consciously put behind "character"¹⁰ the general level of schooling tended to rise during the quarter century before World War I, as the following figures show:¹¹

Table XXXX

The Education of German Cadets, to 1914

year	1890	1900	1905	1910
Abiturienten ¹² among Prussian cadets	35%	44%	48%	63%
year				
Abiturienten among naval cadets	1895-9 31.1%	1900-4 43.5%	1905-9 65.0%	1910-14 77.8%

Of the various German states, only Bavaria demanded the Abitur as a sine qua non; the remainder were content if a Reifeprüfung (a diploma taken after six years of gymnasium) could be shown, and even here exceptions were made in favour of families regarded as particularly deserving. On the whole, however, the trend towards more and more education was both irresistible and officially sanctioned. Not only were Abiturienten upon

10. In 1835 the Saxon adjutant general, writing to his King, put forward a classic justification for this policy. While the need for a general education could not be denied, it should not be allowed to become the cardinal factor. The growing sophistication of war required professional knowledge even in junior officers, and if the result should be occasional distraction from day to day duties this was the fault not of the knowledge but of the way in which it was imparted. For a practical officer knowledge was not enough; competence was what he needed. But competence could only be acquired through knowledge. See Demeter, op. cit., p. 102.

11. D Bald, E Lippert and R Zabel, Zur Sozialen Herkunft des Offiziers (Bonn, 1977) p. 42.

12. i.e. men possessed of the Abitur, a diploma granted after nine years at a gymnasium, which carried the right to enter a University.

commissioning given a two year headstart in seniority, but acceptance for General Staff training -- the shining goal towards which the vast majority of officers aspired -- depended on it.¹³

Such was the prestige surrounding the officer's profession that, even in comparatively bourgeois Bavaria, Abiturienten flocked into the Army, some going so far as to apply to thirty regiments simultaneously. In an average year the authorities could expect a flood of 3,000 aspirants who competed for 154 vacancies; one could really choose!¹⁴

World War I, by generating a hugely increased demand for officers, radically altered this favourable situation, forced a sharp drop in social and educational standards and enabled anyone only halfway acceptable to obtain a commission. As casualties among the regular officer corps mounted elderly reservists and young Einjährige took their places. From 1916 on Supreme Headquarters, as part of a deliberate policy aimed at preserving what was left of the old officer corps, began withdrawing its members from the front into general staff service, thus causing a further dilution of front line leadership. The results, already commented upon, may certainly be regarded as one reason behind Germany's defeat in World War I.

In 1919, forced to radically cut down the number of officers in order to conform to the limits set by the Treaty of Versailles, Noske and Groener selected 3,000 out of 200,000 men. They also promoted 1,000 deserving NCO's, thus helping to remove one of the principal sources of dissatisfaction that had marred the last years of World War I. Selected among those who had served in combat units, been decorated for bravery and performed the duties of a sergeant lieutenant (Offizierstellvertreter) for at least six months these men in most cases were only given their commissions after completing their education and passing through officer school.¹⁵

It was, however, the next chief of the Truppenamt -- the disguised Gene-

13. K Hesse, "Militärisches Erziehungs- und Bildungswesen in Deutschland", in Wezell ed, Die deutsche Wehrmacht (Berlin, 1939) p. 472.

14. Rumschöttel, loc. cit., p. 131, fn. 131.

15. W A Robertson, "Officer Selection in the Reichswehr 1918-1926", University of Oklahoma Diss, 1978, p. 143 ff.

ral Staff of the Reichswehr -- who took on the task of reforming the officer corps in earnest. General von Seeckt closed the cadet schools and abolished the institution of the Einjährige. Official doctrine now had it that "from knowledge to competence it is a big step; from ignorance to competence, an even bigger one".¹⁶ Officer candidates were accordingly expected to possess an education that would have earned them the right to enter a University though the Abitur itself was not made into a formal requirement. Its lack could be made up for by taking examinations (the Vor- and Nachprüfung), a system which left the way open to enlisted men to become officers and thus presented them with an incentive for study.¹⁷

Seeckt also did much to improve the education of his officers in other ways. Thursday Lectures were instituted, and sitting for the General Staff Candidacy Exam (Wehrkreis Prüfung) was made obligatory for all officers instead of voluntary as hitherto.¹⁸ A considerable number of officers were detailed to technical schools, the reasoning being that lack of technical education had been a cardinal reason behind the defeat in World War I.¹⁹ These measures had their effect and by 1930 no fewer than 77.5% of newly commissioned officers were Abiturienten.²⁰

In other things Seeckt was a restorer rather than an innovator. The demand for "character" remained decisive, and to help guarantee it he insisted that candidates be graduates of a sports- or youth movement. More important still, the decision as to who was to become an officer remained in the hands of regimental commanders, and it was only after Seeckt's retirement in 1926 that Groener prevailed upon the Army to set up a psychological testing office.

The road to becoming a cadet was now as follows; Candidates continued to present themselves to the regiments of their choice, were screened in regard to background (age, education, police record, political acti-

16. Quoted in Demeter, op. cit., p. 103.

17. Robertson, op. cit., pp. 218-20.

18. MGFA ed, Handbuch, vii, p. 367. Officers who failed this examination (which could be repeated) stood scant chance of ever reaching general rank.

19. Demeter, op. cit., p. 104.

20. F Doepner, "Zur Auswahl der Offizieranwärter im 100,000 Mann Heer", Wehrkunde, 22, 1973, p. 261.

vities) and, if found acceptable by the regimental commander, were called for a series of examinations held in their local Wehrkreis, all expenses paid.²¹ Here the candidates, in groups of five or six, would remain for 2-3 days. They underwent extensive interviews with officers and psychologists of Simoneit's laboratory, and were subjected to strenuous bodily exercises (e.g. repeatedly climbing a smooth wall in full pack, or flexing an extender through which a gradually increasing electrical current was passed) designed to test will power; meanwhile, a hidden movie camera would record gestures and facial expression for subsequent study. Technical aptitude was tested by means of a variety of instruments, including a children's construction set. To determine pedagogic ability the candidate was required to teach a group of soldiers -- always kept at hand -- e.g. how to make a coat hanger out of a piece of wire. He might be asked to describe a picture, paraphrase a poem, or explain -- in writing -- how he would set about leading his class on an excursion to Berlin. "The height of the characterological examination" (Simoneit) was reached when the candidate was asked to enthuse his fellow candidates by talking about a subject of his own choice; it being assumed, again quoting Simoneit, that "men can influence men only when they show themselves adequate and free".

The entire lengthy procedure was brought to a close by an interview with a board made up of one officer one psychiatrically-trained physician and one psychologist.²² The results were first summed up separately by the three men who then met to reach a final decision. This was laid down in writing -- there was no point system -- and sent to the regimental commander on whom, however, it was not formally binding. The final decision continued to rest in his hands alone.

Not the least remarkable feature of the system was that it did not systematically attempt to study intelligence -- it being assumed, as the Truppenführung put it, that war is a matter of character above all.

21. The present account is based on Harell and Churchill, loc. cit; Ansbacher, "German Military Psychology"; and A H Martin, "Examination of Applicants for Commissioned Rank" in L Farago, German Psychological Warfare (New York, 1941) pp. 171-8.
22. See M Simoneit, Leitgedanken über die psychologische Untersuchung des Offizier-Nachwuchs in der Wehrmacht (Berlin, 1938) pp. 24-5; also H Masuhr, "Zur Unterstützung militärischer Menschengauslese durch soziologische Statistiken", Soldatentum, I, 1934, pp. 145-61.

The nearest thing to a straightforward intelligence test were a series of 32 objects of various sizes, colours and shapes which could be arranged in accordance with various principles, but even here the way in which the candidate went about his task was adjudged more important than his actual performance. Willpower and the inclination towards an outdoor life; technical competence and a warlike nature (manifested, among other things, by rebelliousness at school; to have repeated a class or two was accordingly taken as a point in favour); the capacity to represent and the ability to lead; these, and not cerebral excellence per se, were presumed to be the prime qualities needed in an officer.

The effectiveness of these methods is hard to assess except indirectly. The scope of the examination being so broad, its results were impossible to quantify and difficult to follow up, the more so since it was recognized that men possessing very different personalities might make equally good officers. Being a practical man above all Simoneit was little concerned with theoretical justification for his methods so long as they produced results; he himself claimed a success rate of well over 80% (one source even claims a 98% correlation between the Laboratory's assessments and the trainees' subsequent ratings) and no evidence to contradict this has ever come to light. American psychologists reporting on the system for the benefit of the US Army in 1940-41 were unanimous in their opinion that it was likely to prove effective. So were subsequent observers who, without exception, commented on the high quality of German officers before and during World War II. It may be, as one of Simoneit's critics wrote, that his ideas on the qualities of an officer were preconceived and unsupported by empirical evidence; even this critic, however, calls his methods "exemplary".²³

If the psychological testing of officer-candidates during the Nazi years was thorough indeed the hugely increased demand soon made it necessary to lower standards in other ways. Above all, social and educational requirements were relaxed -- something which accorded well with Nazi ideology and which, in the eyes of some, goes a long way to explain why the officer corps, now for the first time in its history made up of men of all classes, fought a lost war down to the bitter end.²⁴

23. R F Bigler, Der einsame Soldat (Frauenfeld, 1963) p. 30.

24. G Blumentritt, "Warum hat der deutsche Soldat in aussichtloser

Though the Army that invaded Poland on 1 September 1939 also included considerable numbers of elderly reserve officers trained in the Reichswehr and even the old Imperial Army, as well as ex-Austrian officers, the majority especially among junior ranks were graduates of Simoneit's Laboratory. The latter, nevertheless, was and remained a mere technical organ; it could make suggestions, but the decision in regard both to the acceptance of a man for officer training and his commissioning stayed firmly in the hands of regimental commanders. Only through this decentralized system, it was thought, could the indispensable mutual confidence among officers in the same unit be created and maintained.

US Army

In the US Army during World War II, the "paramount requirement" of an officer was the ability to lead men in battle. Administrative positions, it is true, had to be filled; since it was necessary for one officer to be able to step into the shoes of another, however, an excess of specialization among junior officers was regarded as undesirable.²⁵

For officers of the ground arms, "the ability to direct the performance of enlisted men and to cooperate with other officers amid the hazards and uncertainties of battle" were major prerequisites. These were summed up in the ideas of "responsibility and leadership" in that order.

Though the Army's doctrine was thus quite well defined, no clear procedure existed to determine a man's "intangible" "potential as a fighter or combat leader".²⁶ Direct means being unavailable (or, at any rate, extremely time consuming to devise, prepare and apply) reliance was placed on "more or less indirect indications" among which the Army General Classification Test was paramount.²⁷ Since this Test discriminated

Lage bis zum Schluss des Krieges 1939-1945 gekämpft?" US Army Historical Division Study No. B 338 (Allendorf, 1947) pp. 18-20.

25. Palmer, op. cit., pp. 93-4.

26. Ibid, pp. 10, 11.

27. No information on the IQ required of officer candidates is available in the official history. From L A Pennington, The Psychology of Military Leadership (New York, 1943) p. 166 we learn that class I men "make excellent material... for officer training schools". Since they numbered only 7 in 100, however, it is clear that many class II men also became officers.

in favour of the well educated, but also because the American draft swept up men of all age groups between 18 and 37 and not merely 19 year olds, American officers tended to be better educated than German ones, 86.5% of them having completed high school and no fewer than 51.8% having spent at least some time in college.²⁸

Aspiring officers, after being tested, would travel to an Officer Candidate School of which there were many throughout the country; travel and lodging were at their own expense. The actual selection was in the hands of the School Commandant and his staff who interviewed applicants.²⁹ Standards varied, but always involved age, physical condition, military service, capacity for leadership, learning ability, citizenship, character and education.

Again, however, the practical tools available did not match the ideal put forward by official doctrine. For a school Commandant to determine qualities of leadership was anything but easy; on the other hand, the results of the written AGCT were readily available. Hence, in the words of the official history, they "remained the principal instrument for selection".³⁰

The differences between the German and American systems are worth summing up as they are entirely typical of the way things were managed in the two armies. Both recognized leadership as the paramount prerequisite in officers, but whereas the German Army took very great pains to determine its presence the US Army, no doubt partly because of the pressure of time, did not. The German looked for character, the Americans for intelligence. Though the Germans did make very extensive use of psychological testing³¹ the selection of officers ultimately lay in the hands of the very men who were later to train the cadets

28. Menninger, op. cit., p. 110.

29. How long these interviews took is unclear. In one OCS, however, a committee of 4-5 officers interviewed cadets already in training. This lasted 15 minutes. Answers were recorded on a point scale.

30. Palmer, op. cit., p. 329. A follow up later established that there was little connection between pen and paper performance and combat ratings of officers; see J W Eaton, "Experiments in Testing for Leadership", American Journal of Sociology, 52, 1947, pp. 523-35.

31. The number of German publications on the selection of military personnel exceeded that in all other languages combined; Harell and Churchill, loc. cit., p. 331.

and lead them in battle -- whereas the selection of American officers was split between a psychological office and School Commanders who, though responsible for training, were unlikely to again meet a man once he had been commissioned. The German system was thus personal and decentralized; the American one, impersonal and decentralized.

Behind these differences, of course, there lurked diverging ideas as to the nature of leadership and, indeed, that of war. German officers were combat leaders above all; the main problem, in Simoneit's view, was to reconcile this requirement with the need for educators during long periods of peace.³² Though the identification of "character" and the prediction of its future development were enormously difficult tasks that must sometimes have led to errors (not to mention the influence of political considerations which, prior to 1933, denied "character" not merely to anybody tinted slightly red but also to scions of the "wrong" families) it cannot be denied that the Germans tried hard and, in so doing, pioneered methods that are still in use in many armies. The US Army, by contrast, was mainly interested in intelligence; though its officers were also supposed to lead men in combat, this was regarded essentially as a problem in "human engineering". To become a qualified "personnel technician" an officer had to acquire "the tricks of the trade".³³ The differences between the two Armies are therefore clear.

c. Training

German Army

In the old Imperial Army, officer-candidates (i.e. those enlisted at 19 years of age who had not passed through one of the cadet schools) received 18 months' training before being commissioned. Of these 9 were spent in basic and advanced training and advanced training and 9 at officers' school.³⁴

As World War I progressed and the demand for officers grew, these pe-

32. Simoneit, Leitgedanken, p. 27.

33. Pennington, op. cit., pp. 1, 167.

34. See Hesse, "Militärische Erziehung", p. 478 ff.

riods had to be progressively cut down. In 1918 active officers received 3 months' basic training in the Replacement Army, served for 3 months with a unit of the Field Army, were sent for a 3 months' officer training course, took an exam, returned for another period with the Field Army,³⁵ and were finally given their commissions. A reserve officer's training was similar, except that the period spent with the fighting troops (fechtende Truppe) was much longer.

In the Reichswehr, thanks to the very long period of service imposed by the Allies, it was possible to extend officer training and make it more thorough than ever before. Candidates now spent a full two years with the troops (whose quarters they shared) before being taken into officer school, which lasted ten and a half months. Then there followed another ten and a half months at the officers' specialized arm school; overall time from enlistement to commissioning thus was close on 4 years.³⁶

Under the guiding hand of Seeckt, the contents of training were also revised. Though the German Army's tradition of putting personality before knowledge and character before intellect was reaffirmed,³⁷ considerably more attention was now devoted to the so-called "scientific" (wissenschaftliche) subjects. In officer school the curriculum was as follows: tactics 6 hours a week, weapon technology 3 hours, engineering service 3 hours, topography, army organization and citizenship 2 hours each, antiaircraft defence, signals and motor vehicle technology 1 hour each, sport theory 1 hour, sanitary service $\frac{2}{3}$ hour, and military administration $\frac{1}{3}$ hour. Later on, when an officer continued his training in one of the specialized arm schools, some of the theoretical subjects (including citizenship) were dropped; on the other hand, 2-3 hours of military history -- based on independent work by the students, and regarded as second in importance only to tactics -- were added. Also added were such specialized subjects as mathematics, physics and chemistry.

On the whole, this system stayed in force until 1937. Training remained

35. The length of this period is unknown and may not have been fixed.

36. M Messerschmidt et al, "Verhältniss von allgemeinbildenden und fachlichen Inhalten in der Ausbildung zum Offizier", typescript, Militär-geschichtliche Forschungsamt, Freiburg 1971, pp. 9-10.

37. Seeckt order of 1.1.1921, quoted in Hesse, "Militärische Erziehung", p. 481.

divided into three parts, i.e one consisting of basic training with the troops, one at officer school, and one at an arm school. A further period of service with the troops followed, and a cadet could expect to be commissioned approximately two years after enlistment. The contents of instruction at officer school were made more practical; tactics now occupied 9 hours a week, and an hour's indoctrination in National Socialist principles took the place of citizenship. The Reifezeugniss remained as the minimum standard of education required, although late in 1942 this had to be dropped.³⁸

Following the outbreak of World War II there was a growing tendency to replace formal training in officer school by periods of active service at the front. Thus, until the end of 1942, prospective officers were first given six months' training in the Replacement Army, did a spell of 3 months at the front, returned for three months in officer school, served another 2-4 months at the front, and were finally commissioned after 14-16 months' service. Losses among the cadets during their periods at the front were so heavy, however, that the system had to be changed once again. From the fall of 1942 to the end of the war, the road to becoming an officer was normally marked by the following stages:³⁹

basic training in the Replacement Army	3- 4 months
NCO training in the Replacement Army	2- 4 "
platoon-leader training in the Replacement Army	2 "
promotion to NCO	
service at the front	2 "
promotion to cadet (Fahnenjunker)	
officer school	3- 4 "
promotion to senior cadet (Oberfahnrich)	
advanced officer training	2 "
total	14-18 "

In addition, men not originally destined for officer training, but who had given a good account of themselves while on active service, could now be recommended by their regimental commanders for officer training

38. Messerschmidt et al, loc. cit., pp. 13-15.

39. G Bachlin, "Deckung des Offiziersbedarf im deutschen Heer während des 2. Weltkrieg", US Army Historical Division Study D 110 (n.p, n.d) p. 10.

after a minimum of 6 months if they possessed the Abitur and after 12 if they did not. Selected on the basis of "demonstrated leadership... personality, soldierly behaviour and achievements", such men would be sent to officer school and then, under normal circumstances, return to their own units in order to receive their commissions at the hands of the regimental commander.⁴⁰ This arrangement, which made sterling service in front of the enemy (Bewahrung vor den Feind) into the predominant criterion for officer selection, enabled tens of thousands of NCO's and enlisted men to gain their commissions during the war.

Whatever a man's road to becoming an officer, it is thus clear that active service at the front was regarded as the best training he could receive. Though circumstances did not make it possible to retain the 5-7 months instituted at the beginning of the war, no candidate was commissioned without having first fired quite a number of shots in anger.

US Army

During the years before World War II, as today, officer training in American Service academies lasted four years. For various reasons, however, the proportion of all training time devoted to professional subjects tended to decline; at Annapolis e.g a midshipman spent 31.6% of his time on "cultural subjects" of the kind that could be learnt at any college, 31.2% on technical subjects, and only 37.2% on professional training.⁴¹

At West Point -- which then as now served as a model for others to imitate -- the Thayer System tended to turn out men who were excellent managers above all. Great emphasis was placed on getting things done quickly and effectively, even under pressure.⁴²

Since the Army was small and, moreover, scattered in penny packets all

40. Heeres Dienstvorschrift g 151, Mobilmachungsplan für das Heer: E. Erhaltung des Heeres im Kriegszustand (Berlin, 1939) articles 553 ff.

41. Huntington, op. cit., p. 295 ff. No equivalent figures for West Point are available, but here too general cultural subjects tended to grow in importance.

42. For an excellent discussion of the West Point system see G Ellis and R Moore, School for Soldiers, West Point and the Profession of Arms (New York, 1974).

over the vast country, opportunities for practical training were few. American officers accordingly spent much of their careers in schools, either teaching or being taught, and were seldom put in command of any sizeable body of troops. The one exception was formed by the inevitable tour of duty in the Philippines, where the presence of a considerable garrison enabled officers to gain at least some practical experience.

When rearmament got under way in 1940 the US Army, then numbering a mere 20,000 regular officers, was faced with the Herculean task of finding officers to command and administer a force which, though its ultimate size was still unknown, would certainly number millions of men. Early in 1943 this task had been accomplished; within two years, the officer corps had expanded over thirtyfold and the shortage of commissioned personnel turned into a surplus that continued right down to the end of the war. Since the fighting had by this time hardly begun scant possibility existed for commissioning enlisted men on the basis of service at the front. Worse still, the surplus meant that personnel inducted after the early months of 1943 stood little chance of earning a commission regardless of ability. Instead, the best of them tended to become NCO's -- with unfortunate results for everybody concerned.⁴³

Like all enlisted men, future officers in the US Army first received 13 (later 17) weeks of basic training. Next came 4 weeks at an OCS preparatory school where weapons, small unit tactics, map reading and drill were taught. Officer Candidate School itself lasted about 17 weeks and was specialized by arm; in this the system differed from the German one. The total time a man spent in the Army from enlistment to commissioning was around 8-9 months, though in some cases men were commissioned after a mere 7 months.⁴⁴

The curriculum of one OCS, responsible for the training of armoured branch officers, looked as follows:

43. See above p. 143.

44. Palmer, op. cit., pp. 264 ff, 353.

Table XXXXI

The Training of American Officers, by Subject

subject	No. hours	
	common training	branch training
drill and discipline	99	-
general subjects	52.5	-
tactics	129	108
communications	42	-
motors, wheeled	50	-
motors, full track	-	46
gunnery	136	94
instructor training	33	-
orientation	17	-
reserved time	9.5	-
total	568	248

Besides being examined on these subjects, officer-candidates were constantly rated on attitude in class, force, initiative, leadership etc.⁴⁵ Performance was recorded by means of point scales, though there existed no uniform standards throughout the Army.

A dearth of detailed information makes it impossible to compare the contents of American officer training with its German equivalent, and no attempt to do so will be made here. It will be noted, however, that an American officer candidate received a total of 8-9 months' training, whereas a German one, depending on the period in the war in which he was drafted, received 9-16 in addition to a period of frontline service varying from 2 to as many as 7 months. An American cadet upon graduation would enter a pool (the very word was unknown in the German Service, "reserve" being used instead) and was then assigned to any one of the Army's 89 divisions in accordance with T/O vacancies. A German one, by contrast, would be commissioned into a regiment in whose ranks he had seen previous service and whose commander would indeed often ask for him by name.

45. Ibid, pp. 330-4. According to this source the system tended to produce candidates who were afraid of asking questions, taking responsibility and showing initiative. Evidence is also said to exist that they took these qualities along into combat.

d. Promotion

German Army

Promotion in the old Imperial Army went by seniority and was, by modern standards, excruciatingly slow. For a lieutenant to become a captain took 15 years. For a captain to be promoted major took another 10. The vast majority of active officers ended their career as majors.⁴⁶

To qualify for preferred promotion an officer had to possess General Staff training as a virtual sine qua non -- a fact which tended to cancel out the comparatively low educational standards of the lower ranks. General Staff officers, selected by competitive examinations and numbering 3-4% of the total, could expect comparatively rapid promotion even in peacetime.

Though the system did ensure that there would be no Colonel Blimps in the Army (a Blimp would be discharged before attaining the rank of colonel) it also meant that company and battalion commanders were often elderly gentlemen of doubtful competence. During World War I, therefore, these ranks were repeatedly combed out: twice in 1914, twice in 1915, three times in 1916, seven times (!) in 1917 and twice again in 1918.

The essentials of this system were retained during the Weimar period, although the restricted size of the Army meant that promotion was now even slower than before. Seeckt, however, did reform the Evaluation Forms in which superiors of every rank judged their subordinates and which constituted the main instrument for selection; in 1920 these were redrafted to put an even heavier emphasis on "character", i.e. honesty, selflessness, readiness to commit oneself, and a sense of responsibility. Careerism was frowned upon, whereas the ability to generate and maintain trust was counted as the single most important virtue.

To prevent the system of Evaluations from developing into a free-for-all commanding officers were warned that they would be judged, among

46. Based on MGFA ed, Handbuch, v, p. 89, and Hofman, loc. cit., p. 3 ff.

other things, by the quality of their reports. The latter had to be kept brief but to contain everything essential: personality, character, professional competence, and achievements.

On the basis of this system, officers in the normal course of service could expect to end up, at most, as regimental commanders -- a post which, in the German service, carried considerable responsibilities and prestige. To advance further in the ranks, however, one normally had to serve as the chief of staff (Ia) of a division and thus be possessed of general staff training. The next highest post, that of divisional commander, therefore depended on the completion of this training in virtually all cases.

One problem that Reichswehr personnel planners faced, and tried to solve, was that of preventing the limited opportunities for promotion in a small professional army from adversely affecting the spirit of the officer corps. This was done by adding ability to seniority and entering exceptionally qualified officers -- on the average, perhaps 15% of the total -- on special lists. Selected on the basis of their ability to fill the next highest position, most of these officers were general staff men; others, however, could also be considered in exceptional cases, and a sine qua non for the preferred promotion of a general staff officer was the completion of a tour of duty with a field unit. Once granted, preferred promotion meant a real boost (worth 200-275 places on the Army Lists) to a man's career. The dismal opportunities for promotion created by the Treaty of Versailles were thus to some corrected, at the cost, it is true, of considerable mobility in and out of the officer corps.⁴⁷

Apart from the fact that the Army's expansion led to a rapid and welcome rejuvenation of the officer corps, this system was retained during the thirties also. General Staff officers continued to receive preferred promotion, as did a small number of exceptionally competent troops-officers who could be promoted ahead of the rest.⁴⁸ The officer corps' rapid expansion, together with the opportunities that this created, were not without disadvantages; this was indeed the time for

47. Spires, op. cit., p. 218 ff.

48. Hoffman, loc. cit., p. 57.

"careers".

The system of Evaluations, too, was retained in its entirety. Troop officers were now judged in uneven years, members of the General Staff and generals in even ones -- a division which enabled the latter to receive attention out of all proportion to their number. In addition to marking the next two higher positions for which a subordinate was suited, superiors were asked to rate their men as "above average", "average" or "below average"; in time of peace the latter were automatically eliminated. Neither forced comparisons nor point systems were used. In 1938 a suggestion for the introduction of the latter was raised, but rejected by the great majority of officers on the grounds that the much desired picture of "the whole man" would thereby be lost.⁴⁹

Drawing on the Evaluations, each division kept lists of officers divided into seven parts. These were a. those suitable for service at the Army High Command; b. those suitable for general staff duty; c. those suitable for the adjudantur; d. those with a special aptitude for training or research; e. those temporarily deserving consideration on grounds of ill health; f. those considered unsuitable for the next highest position; and g. those who were not properly carrying out their present duties.

In these lists, together with the Evaluations, the Army Personnel Office possessed an admirable instrument for deciding on promotions and assignments. The Office's officers, moreover, were frequent participators in manoeuvres and exercises; they personally knew virtually every general and general staff officer and could shape their policy accordingly.⁵⁰

During the first half of the war this system, the product of centuries of development, was retained even though growing losses inevitably tended to make seniority count for less, and competence for more. In November 1942, acting upon Hitler's direct orders, HPA embarked on a series of reforms which institutionalized the situation thus created:⁵¹

49. Ibid, p. 45.

50. No system existed for evaluating the Beurteilungen, but HPA officers nevertheless tried to check on their reliability by means of personal acquaintances etc.

51. Quoted in Meier-Welcker, op. cit., p. 205.

The Fuehrer orders that any officer who successfully leads a unit against the enemy and has given proof of the necessary qualities be promoted to the rank corresponding with his position.

The Fuehrer demands, in addition, that officers possessed of exceptional personal qualities and achievements be put into commanding positions and promoted.

A system of equal promotion for all [i.e. by seniority] is contrary to the leadership- and Fuehrer principle to which the Wehrmacht, for the sake of victory, must commit itself...

The present order applies to front-line officers above all. They are nearest death, and should be rewarded accordingly.

Under this system promotion for frontline officers, especially those who stepped into their fallen comrades' shoes, was radically sped up. E.g., a second lieutenant commanding a company could become a first lieutenant after a mere two months in that position, and a first lieutenant commanding a battalion could be made a captain after only six months. The ranks thus attained were, moreover, permanent.⁵²

The longer the war, the heavier the pressure on officers to earn promotion by means of frontline service. From July 1944 on general staff officers could only qualify for promotion by doing a tour at the front. A new character attribute -- Krisenfest, or "crisis proof" -- made its appearance in the Evaluations. Constantly urged on by Hitler, HPA more and more downgraded seniority and upgraded character, the latter often being equated with outstanding service at the front. The system's advantages in bringing to the fore men of proven ability cannot be denied; on the other hand, it did contribute in breaking up the officer corps' traditional homogeneity and esprit de corps, which may indeed have been Hitler's intention.⁵³

That the measures thus taken did not fail to have their effect is shown

52. Hofmann, loc. cit., p. 56.

53. Meier-Welcker, op. cit., p. 206.

by the following figures, comparing planned versus preferred promotion during the first half of 1943:⁵⁴

Table XXXXII

Planned Versus Preferred Promotion in the German Army, 1943					
promoted to	total No.	preferred promotion		planned promotion	
		No.	%	No.	%
colonel general	3	3	100.0	-	0.0
general	26	25	96.1	1	3.9
lieut. general	86	67	77.9	19	22.1
major general	154	58	37.7	96	62.3
colonel	328	198	60.4	130	39.6
lieut. colonel	309	206	67.7	103	33.3
major	384	245	96.0	39	4.0
total	1290	902	69.2	368	30.8

The number of officers in each arm who received retroactive promotion (i.e. were given a rank corresponding with the actual position they were holding) was directly related to that arm's losses, as the following figures show:⁵⁵

Table XXXXIII

Retroactive Promotion in the German Army, by Arm		
arm	retroactive promotions (percent of total)	arm's losses (as percent of total)
infantry	57	53
armour	19	20
artillery	16	18
engineers	6	7
signals	1	2
general staff ⁵⁶	1	-

Dangerous service, it is clear, was well rewarded.

⁵⁴. W Keilig, Truppe und Verbände der deutsche Wehrmacht (Wiesbaden, 1950-) iii, pp. 203/4.

⁵⁵. Ibid, iii, pp. 204/5. Figures valid for the period to 31 May 1945.

⁵⁶. General Staff losses are included in those of the various arms.

US Army

In the US Army during the interwar period promotion went strictly by seniority. In 1920, it is true, a plan had been proposed for preferred promotion to be given to a small number of exceptionally able men; it was rejected however, on the grounds that "it was impossible in peacetime to predict which junior officers would make good higher commanders in war-time", and that the Army consequently had to "rely upon the general competence of the officer corps rather than upon a relatively small number of brilliant individuals".⁵⁷

As the Army began its expansion in 1941, a shortage of officers developed and it became necessary to decide which junior officers should be promoted to field ranks. Selection accordingly replaced seniority with 60% of all recommendations tendered by field commanders and 40% reserved to the War Department.⁵⁸ This policy caused each part of the Army to go its own way and created considerable confusion. In a directive of July 1943, therefore, the War Department ordered that promotion again be tied to "the rate prevalent throughout the Army", which in turn was based on the number of months spent in each rank.⁵⁹

By this time, a large surplus of officers had replaced the shortage of 1941. Any officers who became casualties could easily be replaced from T/O overstrengths (which all units had been authorized to carry) or from pools of OCS graduates in the Zone of the Interior. Furthermore, replacements arriving from the USA often carried ranks higher than those of the men whom they were meant to replace.⁶⁰ The result was a double blow to morale: whereas the men in combat units saw themselves robbed of a chance of promotion, the new arrivals were forced into positions below those to which they were entitled by rank.

In 1944, the average monthly number of promotions per 1,000 officers was 36 in the Quartermaster Corps, 31 in the Corps of Engineers, 28 in the

57. Huntington, op. cit., p. 297.

58. War Dept. Press Release, 12.6.1941, NA file 407/14103/12/3/B.

59. War Dept/HQ ASF/Adjutant General, Memorandum No. S 605-17-43, 21.7. 1943, NA file 204/58 (106-253).

60. This complaint occurs dozens of times in the Replacement Board's Report, "The Replacement System World Wide", bk. 6.

Field Artillery but only 25 in the Infantry.⁶¹ Since promotion continued to be tied to the number of months spent in each rank there is only one possible explanation for these differentials: in the infantry officers were becoming casualties before they could attain the necessary seniority, and a stream of replacements stepped into their shoes. A greater contrast with the German system cannot be imagined.

Amidst all this the system of Efficiency Ratings continued to operate. The form did contain a rubric earmarking an officer as belonging to the "lowest quarter", but in practice it was almost impossible to get rid of an inefficient officer except by having him transferred elsewhere.⁶² There existed a strong tendency, moreover, to enter the majority of all officers as belonging to the "highest quarter". This obviously ruined the entire system, and was indeed a major reason why a new form relying on forced comparisons between all officers in a unit was introduced soon after the war in an attempt, so typical of the entire American approach, to compensate for human frailties by employing a piece of social engineering.⁶³

e. Digression: the General Staff System

German Army

In the German Army until the middle of World War II, as we saw, membership of the general staff corps constituted virtually the sole way by which a man could qualify for preferred promotion or attain general rank. The corps' officers formed an exclusive club, an elite within an elite; their prestige in the eyes of the people was unrivalled, their influence on national life out of all proportion to their numbers. The impact of the General Staff on the Army's fighting power cannot be overestimated.⁶⁴

61. Stouffer, op. cit., ii, p. 271. Only in the Coastal Artillery was the rate lower still: 20 per 1,000.

62. Out of 872,000 officers who passed through the Army from September 1940 to April 1946 only 6,700 or 0.77% were brought before reclassification boards. 327 were demoted, 2,593 honourably separated, 1,500 separated other than honourably, and 253 reassigned. Menninger, op. cit., p. 16.

63. E D Sisssoh, "The New Army Rating", Personnel Psychology, 1, 1948, pp. 365-81.

64. The number of works on the German General Staff is legion. See W

In the Imperial Army before World War I selection for the War Academy (Kriegsakademie) was by means of annual competitive examinations. Subjects included tactics, fieldcraft, engineer service, weapons, languages, geography and history with a strong emphasis on tactics. After 1920 sitting for the examination was made obligatory on all officers and the subjects extended to include mathematics, physics, chemistry and physical exercises as well. The seriousness of the examination can be gauged from the fact that it normally took five months to prepare for. As always under Seeckt, the results were used not only to assess knowledge and competence but also in an attempt to gain insight into the personality and character of the examinees; the difficulty of the preparation (which had to take place in an officer's spare time) and the excitement surrounding the examination proper were, accordingly, regarded as one of their principal advantages and something of a substitute for the stress of war.⁶⁵

Expanded during the Nazi years, the system of examinations was retained with little modification (except that the natural sciences were made optional and reserved for officers aspiring to a career in one of the technical branches) until the outbreak of World War II. From this time future general staff officers, mostly captains who had given proof of outstanding ability on active service and were often the holders of high decorations, were detailed for attendance at staff courses by their corps commanders. The latter had to evaluate the candidates' character, performance, professional achievements and health in that order. All Evaluations had to end with the explicit statement: "X is fit for service with the General Staff".

Candidates before 1914 were normally 30-35 years old; this went down to 25-30 in the Weimar period, but rose again to 28-32 after 1933. Most students entering the War Academy were thus officers of several years' experience, yet not too old to learn something new. Standards being extremely high, the number of successful candidates was always very small; 150-60 each year before 1914, 70 during the Weimar years (of whom only

Goerlitz, History of the German General Staff, 1657-1945 (New York, 1953); W Erfurth, Die Geschichte des deutschen Generalstab von 1918 bis 1945 (Göttingen, 1957); and, above all, H-G Model, Der deutsche Generalstabsoffizier (Frankfurt am Main, 1968) on which the present account is mainly based.

65. Spires, op. cit., p. 102.

10-15 could hope to complete the full course and 5-10 to be accepted as permanent members of the staff) and 150 out of 1,000 e.g even in 1936 in the face of a growing shortage. During World War II itself 17 courses (Lehrgänge) for general staff officers were held, attended by 60-80 and, after 1943, 100-150 officers each.

Training in the War Academy lasted three years.⁶⁶ Its purpose was to produce operational experts qualified, above all else, to occupy the post of chief of staff cum operations officer (Ia) in a division. Tactics and military history accordingly formed the principal subjects, followed at quite a distance by all the rest; staff work and army organization, intelligence, supply, transport, weapons-technology and inter-service cooperation, all taught in such a way as to emphasize the overriding importance of tactics. Nonmilitary subjects included foreign languages and, during the third year of study (which always took place in Berlin) international affairs, politics and economics which were lectured upon by visiting experts. A number of students each year were sent to attend courses at technical universities. Sport was always given a prominent place.

Training methods were graduated. Students in groups of 10-15 attended lectures during their first year, then progressed to exercises, seminars, independent presentations (often on subjects of military history), the planning of manoeuvres and operations, plan-games and wargames. Exercises in class alternated with outdoor ones, and staff rides and excursions to historical battlefields and military installations were held several times a year. During the summer, kept free of formal teaching, the students were detailed to the various arms in order to gain insight into the possibilities and limitations of each. The three year course was crowned by a two week staff ride during which a major operation would be simulated and worked out in meticulous detail. This exercise was also decisive for the final grading of the students.

Selection at the end of the course was carried out by the supervising staff (though in some particularly difficult cases the students might be asked to rate each other) on the basis of their intimate knowledge of the

66. During the Weimar years, owing to the Treat of Versailles, the first two years had to take place at the various Wehrkreise and only during the third were the survivors of the selection process concentrated in Berlin.

students gained by informal social visits also; there were no written examinations. Intelligence and logical thought; speed in decision and an eye for essentials; creativity and the ability to work long hours, intensively and reliably, without fatigue; these were the main qualities looked for.

Graduates of the War Academy were taken on the general staff for a probationary period lasting 1-2 years. Only then were they taken on as full members, entitled to wear the coveted crimson stripes and silver collar insignia, and to add "i.G" (im Generalstab) after their rank. They had arrived.

When World War II broke out in 1939 the shortage of staff officers and the expectation of a short conflict caused the War Academy to be closed. Its three years were replaced by eight week courses designed to enable graduates "to perform usefully at the lower echelons of the general staff in accordance with their superiors' directives and under their supervision". Character, the capacity for independent thought and inner force remained decisive for selection. The subject matter was kept strictly practical with a strong emphasis on tactics, supply, transport, staff work, intelligence and counterintelligence. Methods of teaching were, as far as possible, kept similar to those employed in peacetime though the number of excursions etc. naturally suffered. Normally some 80% of the graduates were evaluated as "suitable for being detailed to the general staff"; the rest were either "not yet suitable" or "unsuitable".

In March 1942, as casualties mounted and the need for general staff officers became desperate, another reorganization gave the system its final form. Aspiring general staff officers were first to receive six months' practical training on the staff of a division; to follow this with three months' work on a higher staff, e.g. that of an Army; to spend eight weeks at a General Staff Lehrgang; and to undergo another six month probationary period before finally being taken into the general staff. Training therefore lasted approximately a year and a half in all and, since it included much practical work at the front in accordance with the usual German idea that war is the best teacher of war, frequently involved not inconsider-

able casualties among the trainees.

A remarkable aspect of the German system was the absence of an inter-service academy, explicable on the grounds that the land army was, after all, by far the most important of the three services and possessed of the longest history. An interservice (OKW) Academy was in fact set up in 1939 but quickly closed at the outbreak of war; its first course is said not to have been a success. During the Norwegian and Mediterranean campaigns interservice cooperation on the tactical and operational levels nevertheless functioned admirably (in both cases, interestingly, it was Air Force officers who were put in supreme command). Germany's war effort being essentially continental by character, the country did not perhaps require an interservice academy to the same extent that did Britain and the US.

While all authorities are unanimous that the training given before 1939 was, on the whole, excellent opinions about that dished out during the war differ and cannot be reconciled here. Instead it is worth repeating a few points which to a large extent gave the system its unique character. The existence of a single, all-embracing academy; the enormous emphasis put on tactical and operational expertise to the neglect, some would say, of strategy and the higher conduct of war; the very great importance attributed to the students' character as opposed to their knowledge and competence per se; the reliance on intimate knowledge of the students by their instructors rather than on written examinations, much less point scales; the emphasis on practical work as well as formal teaching in both peace and war; the long probationary period; the use of the Academy, at any rate until 1943, as almost the sole vehicle for promotion to higher rank; and finally the exclusiveness and separatedness of the general staff corps -- these were the distinguishing features of an institution which generations of historians since the Franco-Prussian War have never tired of describing.

US Army

The US War Department General Staff, founded in 1903 by Elihu Root and in many ways deliberately modelled on the German system, nevertheless bore a different character right from the beginning. It was, as the name implies, both a War Department and a General Staff; to a degree far greater

ter than the German organization, it combined general administration with the command of armies in war, and its members were trained accordingly. As a result, Pershing e.g. when he went to war in 1917 found himself without a body of staff officers capable of running operations at the highest level and had to train his own.⁶⁷

Preparation for service on the general staff proceeded in two stages. In 1901, the infantry and cavalry school at Fort Leavenworth was expanded and turned into the Command and General Staff School offering one year courses in staff work to officers (normally lieutenants) recommended for proficiency. The graduates were employed in staff positions throughout the Army, thus constituting in effect a much diluted counterpart of the German Truppengeneralstab (general staff with the troops).

To prepare officers for service in the General Staff proper the War College was founded in 1904, though it was not until 1922 that graduation from this institution was made into a sine qua non. Selection for the War College depended on graduating from Fort Leavenworth first, though officers with outstanding efficiency ratings could sometimes skip this stage. Highly prestigious lists of officers eligible for the College were kept and published pour encourager les autres. In 1928 e.g. the List carried the names of 1,400 Regulars and 125 National Guard officers. How many attended the College each year is not clear. Courses lasted one year.

The mission of the College, according to a lecture given by its Assistant Commander to new students in 1928, was a. to prepare officers for the conduct of field operations at the higher echelons, including the political, economic and social matters pertaining to the conduct of war; b. to instruct them in War Department General Staff duties; c. to train them for joint operations with the Navy; and d. give instruction in the strategy, tactics and logistics of past conflicts, including especially the World War.⁶⁸ In practice, the curriculum was weighted on the side of international relations, economics, industry and interservice prob-

67. Pershing Report, Infantry Journal, xv, 1919, pp. 691, 692.

68. Col. J L De Witt lecture, 4.9.1928, Center of Military History files, unnumbered, pp. 19-20.

lems, since its purpose was not so much to train officers for command in the field as to prepare them for the general administrative duties of the War Department.

Learning was mainly by doing. Committees, conferences and guest lectures were supervised by the students themselves. Relations between faculty and students are said to have been informal, freedom of expression encouraged.⁶⁹

The War College, to sum up, differed considerably from the Kriegsakademie; whereas the latter trained staff officers for service in field units as well as with the General Staff proper the former prepared senior administrators for War Department duties, as shown also by the upper age limit for admission, which was 52. It could not therefore be employed as the principal vehicle for selection, or perhaps one should rather say that selection started later than it did under the German system. The General Staff corps itself was less exclusive than its German equivalent; on the one hand there was no probationary period, and on the other service in the General Staff was limited to four years after which the officer would return to his own arm or service. The American fear of elitism may have played a role in this, as also in the fact that not until 1933 were the corps given their own insignia.

Given its organization and purpose, the War College could not of course turn out the large numbers of staff officers needed during World War II. Instead, these were trained in eight-week courses opened at Fort Leavenworth from 1940 on.

f. Numbers and Distribution

German Army

In the days before World War I the Imperial Army was 751,000 men strong; of these 29,000 (3.8%) were active officers. Mobilization brought in another 91,000 reserve officers, so that total mobilized officer strength reached 120,000 (3%) in an army numbering 4,000,000.⁷⁰

69. G S Pappas, Prudens Futuri; the US Army War College 1901-67 (Carlisle, Pa, n.d) chp. vi.

70. MGFA ed, Handbuch, v, pp. 90-1, vii, p. 353.

The overall number of officers (both active and reserve) who saw service in World War I is put at 272,053.⁷¹ This figure, if correct, constitutes approximately 2.1% of the number of men who went through the Army during four years of war. It serves to demonstrate the German Army's readiness to accept a shortage of officers rather than to compromise in regard to their quality.

Little information is available on the distribution of these officers among the various arms and services. It appears that, in 1914, the infantry as the least technical arm had proportionally fewer officers than the Army as a whole: it constituted 65% of total strength, but counted only 53% of all officers. In peacetime an infantry battalion counted between 2.64% and (in a Jaeger battalion) 3% of its strength in officers.⁷² The difference between the proportion of officers in the Army as a whole and their number inside an infantry battalion of the line was therefore quite small.

The Treaty of Versailles authorized 4,000 officers (4% of strength); in spite of this and the favourable situation in regard to recruitment, however, the actual number in 1933 is said to have been just 3,600. In the same year the Reichswehr had 47 officers of general rank, so that their ratio to overall strength was 1:2,100. No details are available on the officers' distribution among the arms and services.

In 1934, when rearmament started, the Army lost 500 officers to the newly established Air Force. Some 1,100 officers were added in 1934, and a similar number in 1935, so that the total was now close on to 5,000. In the same period the Army as a whole grew by 150%, so that the proportion of officers fell by one half.

Though more officers were lost to the Air Force in 1935, the promotion of NCO's, reactivation of reserve officers, incorporation of police officers and new commissionings enabled the Army to register a net gain of 2,400 officers. By 1936, out of approximately 10,800 officers, more than half had received their commissions since 1933. The fall in the

71. Demeter, op. cit., p. 47.

72. H Metz, "Die deutsche Infanterie", in Wezel, op. cit., p. 169.

proportion of officers continued, however; it was not until the autumn of 1937 that their percentage in the Army -- now counting 590,000 men -- again reached half the Weimar figure.⁷³

In 1938, the incorporation of the Austrian Army brought a welcome addition to strength. Officers in the Austrian Army were proportionally more numerous than in the German one (2,128 or 3.6% in a force of 58,000) but many of these were elderly men. In the end only 1,600 were transferred to the Wehrmacht; no fewer than 55% of the generals had to go.⁷⁴

On 1 September 1939, upon mobilization, the situation was as follows:⁷⁵

Table XXXIV

The Distribution of Officers in the German Army

	total strength	officers
Field Army	2741064	81314 (2.98%)
Replacement Army	996040	24080 (2.41%)
Inside the Infantry Division		
combat elements	13462	457 (3.34%)
service elements ⁷⁶	4293	83 (1.93%)
total Infantry Division	19895	540 (3.01%)

In July 1944, Field-Army officers forward of the regimental level formed 3.7%, rearward 3.2% of total actual strength.⁷⁷ Though differentials are not large, officers clearly became more numerous the closer a unit to the front.

In 1944, the officers of the Wehrmacht were distributed as follows:⁷⁸

73. MGFA, Handbuch, vii, p. 308.

74. Ibid, p. 310.

75. Figures for the Army as a whole from Mueller-Hillebrand, Das Heer, iii, p. 255; for the infantry division see above p. 63.

76. Including the Field Replacement Battalion.

77. Tagesbuch Heerespersonal Amt, 19.7.1944, BAMA H4/12.

78. Bachlin, loc.cit., p. 22.

Table XXXXV
The Distribution of German Officers, by Type

	<u>Total</u>	<u>Active</u>	<u>Reserve</u>
troop officers	245000	55000 (22.4%)	190000 (77.5%)
sanitary officers	28000	3000 (10.7%)	25000 (89.3%)
veterinary officers	9000	1000 (11.1%)	8000 (88.9%)
home guard officers	5800	2800 (40.7%)	3000 (59.3%)
administrative officers	61000	11000 (18.0%)	50000 (82.0%)
transport officers	4800	1000 (20.8%)	3800 (79.2%)
judges	1200	400 (33.3%)	800 (66.6%)
total	345800	74200 (21.5%)	280600 (78.5%)

70 percent of all officers, therefore, were with the troops, whereas administrative officers by contrast formed only 17.4% of the total. 74.2% of all active officers were with the troops, as opposed to only 67.7% of all reserve officers. Active officers were proportionally most numerous in the home guard -- which by this time was made up largely of disabled personnel -- and among military judges; apart from these exceptions, however, they were fairly equally distributed.

The distribution of active officers among the ranks at various times before and during the war was as follows:⁷⁹

Table XXXXVI
Rank Structure of the German Officer Corps (Active) 1932-1943

	May 1932	October 1936	October 1938	May 1943
field marshals	-	1	-	15
colonel generals	-	1	3	18
generals	3	16	31	141
lieutenant generals	14	41	87	369
major generals	27	91	140	501
total general officers	44 (1.18%)	150 (1.77%)	261 (1.59%)	1044 (2.44%)
colonels	105	328	472	325
lieutenant colonels	191	421	872	448
majors	374	1139	1303	4304
captains	1097	2466	3161	7794

79. Figures for 1932-38 from MGFA ed, Handbuch, p. 373; those for 1943 from Keilig, op. cit., iii, 203/21.

Table XXXXVI (continued)

	May 1932	October 1936	October 1938	May 1943
first lieutenants	1275	1584	2006	11126
second lieutenants	638	2366	8283	11418
total	3724	8454	16358	42709

Though the column on the extreme right only comprises some 20% of all officers the decline in the number of generals within the army as a whole (from 1:2,100 in 1932 to 1:4,600 in 1944⁸⁰) makes it clear that there was no inflation of ranks. Indeed, the opposite may have been the case: in 1944, the Wehrmacht had hundreds of battalions commanded by majors, captains and even first lieutenants.⁸¹

In May 1944, the German land Army was short of 5,157 infantry officers, 1,407 armoured corps officers, 1,827 artillery officers, 551 engineering officers, 429 signals officers, 516 supply officers, and 3,000 officers in army troops, security divisions, etc; the total shortages amounted to 12,887.⁸² Under such conditions, the question as to what was to be done with an officer did not arise.

US Army

At the end of 1943, the US Army (inclusive of the Air Force) had around 600,000 officers. Of those 15,000 (2.5 percent) were Regulars of the pre-Pearl Harbour Army; 19,000 were National Guards; 180,000 came from the officers' Reserve Corps; 100,000, mostly specialists such as physicians, administrators and chaplains, had been commissioned directly from civilian life; and 300,000 had passed through either OCS or flying school.⁸³

The percentage of officers in the US Army had always been much higher than in the German one. In 1940 officers numbered 14,000 (5.75%) in a strength of 243,095,⁸⁴ and at the time of VE Day this had risen to 885,645 (9.6%) out of 8,290,993. This figure includes approximately 57,000 warrant and flight officers.

80. Bachlin, loc. cit., pp. 22-3.

81. Keilig, op. cit., iii, 204/1.

82. Ibid., 204/4.

83. Palmer, op. cit., pp. 92-3.

84. Figures from Greenfield, op. cit., pp. 1-2, 210.

Officers were distributed among the ranks in the following manner:⁸⁵

Table XXXXVII

Rank Structure of the American Officer Corps, 1928-1944

	1928	Jan. 1944
generals	n.d	5
lieutenant generals	"	28
major generals	"	303
brigadier generals	"	860
total general officers	"	1196 (0.17%)
colonels	531	7854
lieutenant colonels	660	19568
majors	2172	48280
captains	4142	130422
first lieutenants	2774	182294
second lieutenants	1464	283081
total	11743	672697

With majors outnumbering second lieutenants, the 1928 officer corps was clearly top heavy; whereas the 1944 Army had a surplus of junior officers (second lieutenant to captain) recently graduated from OCS.

In the land Army in December 1944, officers numbered 485,185 or 8.8% in an overall strength of 5,506,197.⁸⁶ Since officers were supposed to number 54 per 1,000 in AGF, and 97 per 1,000 in ASF,⁸⁷ it is possible to calculate that there existed a surplus of approximately 50,000 officers. To reduce it units had already been authorized to take on officer over-strengths, i.e 25% in the Zone of the Interior and 15% overseas; in December 1944 divisions were even authorized to set up special companies of lieutenants up to 200 strong.⁸⁸ All these measures proved unavailing,

85. 1928 data from Hearings before Subcommittee 1 of the Committee on Military Affairs, House of Representatives, 25.1.1928; 1944 ones from War Department ed, World Wide Strength Index (n.p, n.d) p. 4.

86. Replacement Board, "Replacement System World Wide", bd. 2 part 19.

87. Palmer, op. cit., p. 105.

88. Adjutant General's Directive, 27 March 1942, No. AG 320.3(3-20-1942), NA file 407/4103/12/3/B; also Dept of the Army ed, The Personnel Replacement System, p. 446.

however, and the Army -- with the highly significant exception of the Infantry, which just happened to suffer 70% of all casualties -- retained a surplus of officers right down to the end of the war.⁸⁹

The following table shows the share of officers as a percentage of all personnel in the various units, theaters, arms and services:

Table XXXXVIII⁹⁰

The Distribution of Officers in the US Army					
rifle companies	infantry regiments	infantry divisions	6. Army	Overseas Theaters	ZI
3.5%	5.0%	5.7%	6.2%	8.5%	9.1%

Within the Zone of the Interior itself, officers formed 9.3% of all ASF personnel but only 7.0% of all AGF personnel.⁹¹ These figures make it perfectly clear that, the further away any unit from the actual fighting, the higher the percentage of officers it contained.⁹²

f. Casualties

The German Army's casualties (dead) in World War I can be broken down as follows:⁹³

Table XXXXIX

German Dead in World War I, by Rank			
active officers	11,357	=	24.7% of total
reserve officers	35,494	=	15.7% " "
NCO's and men	1,751,809	=	13.3% " "

89. Palmer, op. cit., p. 105.

90. Rifle companies: actual strength, 6 June 1944, Stouffer, op. cit., ii, p. 8. Infantry regiments: T/O strength, 10 April 1945, "The Replacement System World Wide", bk. 6 part 83. Infantry divisions: average actual strength, six infantry divisions, 6. Army, autumn 1944, ibid., bk. 6 part 81. 6. Army: actual strength, autumn 1944, ibid. Overseas Theaters: actual strength, exclusive of AAF. Calculated by subtracting ZI strength from total strength as given in War Dept ed, World Wide Strength Index, p. 11.

91. Ibid., ibid.

92. That the high percentage of officers in the US Army was not solely the result of greater mechanization is shown by a present Bundeswehr division containing only 3.6% of its personnel in officers.

93. Volkmann, op. cit., p. 35. For more detailed figures see C von Altrock, Vom sterben des deutschen Offizierkorps (Berlin, 1922) p. 57 ff.

For the period from 1 September 1939 to 31 December 1944 the figures, again referring to dead only, are as follows:⁹⁴

Table L
German Dead in World War II, by Rank and Year

year	total number	officers
1939/40	73,829	4,357 = 5.9%
1940/41	138,301	7,831 = 5.6%
1941/42	445,036	16,960 = 3.8%
1942/43	418,276	16,484 = 3.9%
1943/44	534,112	20,696 = 3.9%
1944/45 to Dec. 1944	167,335	5,304 = 3.2%
total	1,776,889	71,614 = 4.0%

Early in the war, therefore, an officer's chance of getting himself killed was twice as good as that of all military personnel; by 1944, since the proportion of officers in the army as a whole had fallen to just under 2.5%,⁹⁵ it still stood at over 150%. This relative predominance of officers among the dead holds true for every single campaign that could be examined, and also for individual units.⁹⁶

Proceeding now to break down officer casualties according to type, the following picture emerges:⁹⁷

Table LI
German Officer Casualties in World War II, by Type and Campaign

campaign	officer losses as % of total losses		
	killed	wounded	missing
Poland 1939	4.60	1.95	1.35
France 1940	4.85	3.10	2.00
Russia to 3.8.1941	5.45	3.65	1.90
Russia to 1.10.1941	4.37	3.25	1.74
Russia to 31.12.1941	4.27	3.16	1.75
Russia to 10.9.1942	3.82	2.89	1.40

94. HPA file, "Verluste der Wehrmacht", BAMA HG/737.

95. Keilig, op. cit., iii, 204/1.

96. E.g VI corps (22.6.1941-2.10.1942) and 9. Army (30.7-10.8.1942); BAMA file 29234/9. Also Army Group B during operations in France, 1.7-31.12.1944, ibid, HG 737.

97. Mueller-Hillebrand, "Statistisches System", pp.119-20.

Table LI (continued)

	killed	wounded	missing
Russia to 31.7.1944	3.40	2.85	2.62
Russia to 31.12.1944	3.20	2.86	3.01
total Field Army to 31.12.1944	4.07	n.d	1.68

Officers, in other words, were excessively numerous among the dead; more or less met their quota among the wounded; and were conspicuously absent (apart from the second half of 1944, when vast battles of encirclement were fought both in Russia and in France) from the ranks of the missing. Again, the same is true for every individual unit checked.⁹⁸

Finally, it is possible to compare the number of noncombat dead among officers with similar figures for enlisted men and NCO's:⁹⁹

Table LII

Noncombat Dead in the German Army, World War II, by Year, Type, and Rank

year	accident, suicide, illness		death sentences	
	total	officers	total	officers
1939/40	14,138	986 = 6.9%	519	3 = 0.6%
1940/41	21,296	1,601 7.5%	447	- 0.0%
1941/42	38,252	2,333 6.0%	1,637	10 0.6%
1942/43	44,117	2,501 5.6%	2,769	30 1.6%
1943/44	45,312	2,447 5.9%	4,118	51 1.2%
1944/45 (to 31.12.1945)	15,186	529 3.9%	206	9 4.3%
total	178,301	10,477 5.9%	9,696	103 1.0%

This may not be a bad measure of the extra strain on officers.

US Army

According to one source,¹⁰⁰ the overall number of US Army battle casualties

98. XX. Mountain Corps (1.9.1939-31.1.1945), BAMA Hg/737; VI. Corps, 22.6.1941-2.10.1942, BAMA 29234/9; also Army Group South, 22.6.41-31.10.44, according to ObKdo HG Súd/IIa/No. 3052/44 g, 16.11.1944, BAMA RH19/v/55.

99. BAMA HG 737.

100. Department of the Army, The Army Almanac (Washington DC, 1950) pp.

in World War II (killed, wounded, missing-captured-interned) was 984,574 of whom 99,954 or 10.5% were officers. Officers formed 24,546 or 13.9% of 175,407 killed in action; 39,936 or 6.6% of 598,528 wounded (including those who later died of their wounds); and 34,487 or 19.7% of 174,639 missing, captured and interned. Officers were therefore overrepresented among the dead, considerably underrepresented among the wounded, and even more strongly overrepresented among the missing, captured and interned. Their share among all casualties was somewhat, though no much, in excess of their numbers in the Army as a whole.

These figures thus present a pattern very different from the German one and are only explicable by the fact that the US Army included the Air Force also. In the Air Force one man in six was an officer, and the proportion among flying crew was much higher still. Hence the large numbers of missing, captured and interned.

In the land forces alone battle casualties numbered 829,760 of whom 48,216 or 5.8% were officers. Officers constituted 6.6% of those killed in action, 5.5% of the wounded, and 5.3% of those who were missing, captured or interned. These figures are considerably below the proportion of officers in the land forces; on the other hand, they correspond very well with the share of officers in the Army Ground Forces, which is said to have been 54:1,000.

Officers in AGF units, in other words, took their share in casualties, though not much more than that. On the other hand, the vast numbers sheltering in ASF clearly did not. While officers formed 97:1,000 in ASF units, they comprised only 7.2% of all casualties in the Signal Corps and 5.3% in the Quartermaster Corps. For the remaining Services similar figures can be adduced.

An examination of ETO casualty reports supports this interpretation. Between D Day and D+90 (6 September 1944) 82.9% of all ETO losses consisted of infantry, whereas the Services (engineer corps, plus medical corps, plus signal corps, plus quartermaster corps, plus military police,

667-8. Other figures, different because they include nonbattle losses, can be found in Department of the Army, Statistical and Accounting Branch of the Adjutant General, Army Battle Casualties and Nonbattle Deaths in World War II (n.p, n.d) p. 5.

plus chemical warfare, plus transportation corps) took only 9.4% of all losses. As of 21 December 1944, however, only 19.2% of all (landbound) ETO officers were in the Infantry; whereas 40.7% were to be found in the above-named Services, so that Service officers actually outnumbered Infantry ones by better than two to one.¹⁰¹

Passing now to nonbattle casualties (which, we recall, were much higher for officers than for enlisted men in the German Army) the following picture presents itself:¹⁰²

Table LIII

Noncombat Hospital Admissions in the US Army, by Type and Rank cause and area of admission	hospital admission rate per 1,000 (male) strength, 1942-5	
	officers	enlisted men
nonbattle admissions, all areas	507	680
Continental US	480	678
all Overseas Theaters	554	683
disease admissions	454	601
Continental US	434	611
all Overseas Theaters	490	588
nonbattle injury admissions	53	79
Continental US	46	67
all Overseas Theaters	64	95

Not only were officers less likely to be admitted to hospital, but once there their stay was likely to be more prolonged. The evidence that officers were pampered therefore begins to look overwhelming.

101. Replacement Board, "Replacement System World Wide", bk. 3 part 42.

102. US Army, Medical Department, Medical Statistics, p. 27.

12. Conclusions

The causes of the German Army's superior fighting power are, by this time, so glaringly obvious that a detailed recapitulation appears superfluous. Instead, we shall note down some reflections on a. the nature of the German Army; b. the nature of the American one; c. the impact of modern technology on military manpower systems; and d. the nature of military organization in general.

a. Reflections on the German Army

The German Army, as these pages have shown, was a superb fighting organization. In point of morale, elan, unit cohesion and resilience it probably had no equal among twentieth century armies.¹

To some extent indoctrination with National Socialist ideas, the exalted social status of the military, and (even) some odd quirks of national character may have contributed to this result; none of these would have availed, however, were it not for the Army's internal organization. It was this organization, the product both of centuries-long development and of lessons consciously drawn from defeat, which succeeded in creating and maintaining fighting power.

The average German soldier in World War II was not psychotically inclined. He did not fight to gain social prestige, at any rate not after the winter of 1941. He did not as a rule fight out of a belief in Nazi ideology -- indeed, the opposite may have been nearer the truth in many cases.² Instead, he fought for the reasons that men have always fought: because he felt himself a member of a well-integrated, well-led team whose structure, administration and functioning were perceived to be, on the whole and in spite of the inevitable existence of Drückeberger (shirkers) and "Golden Pheasants" (Party hacks on their gorgeous uniforms), equitable and just.

Constructed on the basis of Clausewitzian principles (war as a clash be-

1. A parallel that does come to mind is the Israeli Army of 1967 -- but that war lasted six days rather than six years.
2. During the thirties many people "emigrated" into the Army precisely because it was regarded as non-, or anti-, Nazi.

tween independent wills) and traditionally hemmed in by severe economic and material constraints (both absolutely and in comparison with the opponents it would have to face in a two-front war) the German Army responded by developing a single minded concentration on the operational aspects of war to the detriment, not to say neglect, of everything else. A fighting force first and foremost, the Army's doctrine, training and organization were all geared to fighting in the narrower sense. In striking a balance between "function related" and "output related" tasks it spent comparatively few resources -- sometimes, perhaps, too few -- on logistics, administration, or management. It systematically and consistently sent its best men forward to the front, consciously and deliberately weakening the rear. In matters of pay, promotion, decorations etc. its organization was designed to produce and reward fighting men. It went for quality, and quality was what it got. In this, without a doubt, lay the secret of its fighting power.

Given its single minded concentration on operations, the German Army did not have to develop scientific management to the same extent as did the American one and was, by modern and even contemporary standards, in many ways a crude organization. Much to the consternation of American officers who interrogated its personnel after the war,³ it employed neither mechanized methods of administration nor point systems. It had no use for opinion polls, social workers or psychoanalysis. It was content to collect only modest amounts of statistical information, and it did not as a rule employ mathematical models.

Much of this backwardness was due to neegative factors, such as conservatism (business machines), lack of interest (polls) and Nazi ideology (Freud). In part, however, it was the product of positive ones: the decision to do without certain kinds of detailed information, for example, prevented a threat to the position of subordinate commanders from developing and at the same time reflected a desire to reduce the burden of paperwork resting on the troops. In its attempts to simplify administration and cut red tape, the Army was greatly helped by the fact that, from 1942 on, it was short of almost everything in any case; thus necessity could be turned into a virtue.

3. It was out of these interrogations that the Studies by German ex-officers, on which much reliance was placed in the present work, were born.

Parallelism within administrative philosophy

In many instances, therefore, information which an American headquarters would regard as indispensable was unavailable to a German one; and, conversely, when information was available the absence of mechanized methods of data processing prevented its efficient utilization. To a far greater extent than their American counterparts, therefore, German commanders at all levels were compelled to select essentials and concentrate on them, while leaving the details to subordinates to work out. The system of mission-type tactics, the meticulous way in which officers were selected, and the distinction drawn between all efficiency reports and those of staff officers are but three examples of this remorseless concentration on essentials.

The differences between the two armies in this respect are reflected by their thought-processes and even by their language. A German officer, confronted by some task, would ask: worauf kommt es eigentlich an? (what is the core of the problem?) An American one, trained in the "engineering approach" to war, would inquire: what are the problem's component parts?⁴

Illuminating as such differences are, they do not by any means penetrate into the heart of the matter. In the final account, the German Army's system of organization reflected a deliberate choice, a conscious determination to maintain at all costs that which was believed to be decisive to the conduct of war: mutual trust, a willingness to assume responsibility, the right and duty of subordinate commanders at all levels to make independent decisions and carry them out.

To generate independence, freedom had to be granted. To educate men towards responsibility, authority had to be delegated. To create trust, reliability and long-standing acquaintanceships had to be assured. A direct outcome of these considerations which, in comparison with American ones, were frequently general and even vague. A decentralized system of administration left much to the discretion, not to say intuition, of individual commanders and men, but at the same time put complete and undivided responsibility squarely upon their shoulders; To help create the

4. It is an interesting and by no means insignificant fact that many key terms used in German military writing have no English equivalents and are indeed almost untranslatable. Among them are "Truppenführung", "Verantwortungsfreudigkeit" and, of course, "Kampfkraft" itself.

Core of problem becomes mirror image for counterpart concept - hence
again another way of adhering to the counterpart philosophy

familiarity that is an indispensable prerequisite of both reliability and trust, considerable administrative and technical complications were frequently taken in stride.

The German Army, in other words, was built around the needs, social and psychological, of the individual fighting man. The crucial, indeed decisive, importance of the latter was fully recognized; and the Army's doctrine, command technique, organization and administration were shaped accordingly.

This, however, did not mean that German troops -- especially in comparison with American ones -- were pampered. Indeed, the opposite was true: the German Army at all times regarded itself as a fighting organization above all, and the treatment meted out to its personnel was designed solely in order to raise their combat effectiveness to the highest possible peak. In a German officer's instructions, the need to look after his men invariably figured well behind the imperative of maintaining fighting power, and as a function thereof.

Yet the coin also has a reverse side. Precisely because its power was the product of organization and not of any ideals, the German Army was capable both of fighting with the utmost heroism and of cold-bloodedly butchering untold numbers of innocent people. So perfect was its organization, so excellent its methods, that its personnel simply did not care whom they fought and why. They were soldiers and did their duty, regardless of whether that duty involved an offensive in the south, a defensive in the north, or the extermination of "bandits" in the centre.

Writing in his diary on the eve of Operation Barbarossa, the invasion of Russia that was the largest military undertaking of all time, Friedrich Sachsse said:⁵

Rumours follow each other. The vast German deployment is meant to make the Russians grant us free passage to Iraq... Caucasus, Tiflis? ... A lieutenant says that his division is going to India. Some say we are going to fight the Russians. We shall

5. op. cit., pp. 94-5.

see. In any case: we want to go somewhere, quickly.

As Adolf Hitler, that great connoisseur of the German people, put it at about the same time but in a different context:⁶ the German soldier can do anything!

b. Reflections on the US Army

Between 1940 and 1945 the US Army grew from 243,000 officers and men into a force numbering over 8,000,000. With 89 divisions, made up of men who had shortly before been civilians in one of the world's less militarized nations, it crossed the oceans and played a decisive role in the defeat of two of the most highly militarized Powers the world has ever known. It is doubtful whether any other nation would have been capable of such feats: not for nothing, indeed, has General Marshall been called "the organizer of victory".

Many of the US Army's shortcomings, as illustrated in the present study, were the direct result of overrapid expansion. Other objective factors also played their part: long lines of communications e.g prevented American officers from being trained as German ones were, i.e by service at the front, and were also partly responsible for the enormous divisional slices. There was, too, a desperate shortage of cadres; this helps explain why the system had to be so centralized, and why, in consequence, mechanical methods of administration had to be employed to the extent that they were.

Inexperience, too, played a role in shaping the American Army; yet inexperience as an explanation has its limitations. No amount of inexperience can excuse a cruel Replacement System under which individual replacements were allowed to travel, without comrades or commanders, from one depot to the next and then to enter battle without even their names being known to the men around them.⁷ No amount of inexperience can excuse a system under which it was those officers whose lives were least endangered that got the fastest promotions. No inexperience can

6. "Dem deutsche Soldat is nichts unmöglich!" Speech of 31 May 1941 in honour of the fall of Crete.

7. In the Korean War the "buddy system", designed to allow four men to train, travel and fight together, was adopted to remedy this fault.

excuse (given the first class experience that was available from World War I) the way in which the whole question of psychiatric casualties was handled. Not inexperience but bureaucratic inefficiency pure and simple can explain the slowness of the decoration system. Not inexperience but a laxness intolerable in war -- however admirable it may be in times of peace -- can explain a justice system which treated military offences as if they were matters of no consequence.

A point to be noted about each of the above factors is the fact that they did not involve "mechanical" performance, in which respect the US Army was for the most part as good as, and often vastly superior to, the German one. We saw, for example, that American divisions did not contain significantly more "fat" than did their German equivalents; that the US Army developed logistic capabilities which the Germans could only dream about hardly requires mentioning. It was not here, but in the dearth of attention paid to the most elementary psychological needs of the soldier (combined, paradoxically, with a far reaching readiness to accept "psychology" as an excuse) that the weakness lay. A case in point was the system under which technical NCO's, but not leadership-type ones, received special training. An even more glaring one was the treatment of the wounded; while the American medical services were considerably better at saving lives than were the German ones, the morale effect of this fact was counteracted by the way these men were handled after recovery.

Coming now to the true core of things, it would appear that the US Army, backed by a gigantic productive engine and possibly looking across its shoulder at the organization of an automobile factory, chose to regard war not so much as a struggle between opposing troops but rather as one whose outcome would be decided largely by machines.⁸ Rather than concentrating on fighting power, therefore, it aimed at confronting the enemy with the greatest possible firepower. Not attention to the needs of the soldier, but scientific management and the optimum distribution and deployment of resources became the name of the game. Not a single minded concentration on operational (the very word,

8. See E N Luttwak and S L Canby, "Mindset: National Styles in Warfare and the Operational Level of Planning, Conduct and Analysis", unpublished paper, C&L, Washington DC, 1980, especially p. 4.

incidentally, has no exact English equivalent) aspects of war but a balanced organization aimed at coordination and control was the result. This approach tended to turn men into adjuncts of their machines, and largely explains the gulf between the Army's "mechanical" efficiency and the scant attention it paid to social and psychological problems.

To deploy all resources as well as possible, to put every man and screw in their proper place, a highly centralized organization and vast amounts of detailed information were needed. Information being superabundant, mechanical means to process it were needed. Business machines being available, any- and everything had to be shaped in such a way as to enable them to process it as efficiently as possible. Conversely, anything that could not be processed by mechanical means did not exist; and this, unfortunately, included precisely those *seelische* (the expression, once again, is untranslatable)-attitudes that constitute the core of fighting power.

These considerations, which ultimately derive from the peculiar American balance between men and machines, may explain why wounded and replacements were handled as they were; why units were put together without regard to geographic origins; and why men were allowed to enter combat without knowing either their commanders or their comrades. They also explain much about the way in which the divisions operated and the absence of a unit rotation system. From a purely managerial point of view aiming at the optimal coordination of available resources, a system which treats men as if they were interchangeable cogs undoubtedly IS the most efficient. Again, the haste with which the Army was organized probably played a role in this; equally important, however, was the determination of headquarters at all levels to put administrative efficiency above all else.

The addiction to information also had further unfortunate results. Since knowledge -- as extensive and complete as possible -- was regarded as the key to victory, the best and the brightest were, not unnaturally, put to the task of producing, procuring and processing it. The number of -- frequently commissioned -- pen pushers in the rear was enormous, whereas the fighting arms were starved of high-quality manpower. The fact that Class I and II men were proportionally least numerous in the arms that suffered the most casualties, and the definitely low number of ground officers killed, leave little doubt that the American democracy fought

World War II primarily at the expense of the "tired, the poor, the huddled masses".

If it is indeed true, as is so often said, that the officer corps counts for everything in war then the American officer corps of World War II was less than mediocre. Owing partly no doubt to pressure of time the methods used to select and train officers were, not to put to fine a point on it, lousy. Far too many officers had soft jobs in the rear, far too few commanded at the front. Those who did command at the front were, as the official history frankly admits⁹ and the casualty figures confirm, often guilty of bad leadership. Between them and their German opposite numbers there simply is no comparison possible.

Yet when all is said and done the fact remains that the American GI did win World War II. He did so, moreover, without assaulting, raping, and otherwise molesting too many people. Wherever he came -- even within Germany itself -- he was received with relief, or at any rate without fear. To him, no greater tribute than this is conceivable.

c. Reflections on the Impact of Technology

Technology, it has been known since at least Adam Smith, brings specialization in its wake, and specialization inevitably implies a decreasing degree of flexibility and all-round capability. The more specialized the components -- human or material -- of a given military machine, the more important it becomes to make sure that each one is employed in its proper place, and supported in concert by all others. Consequently top level planning, control and coordination, detailed and continuous, gain in importance; that these functions can only be carried out with the aid of mechanized (and therefore digital) data processing systems is, given the sheer complexity of modern armies, beyond dispute. Thus, to mention but a single example, the mere fact that a present day Bundeswehr division contains 900 different MOS, as against only 40 in World War II, is itself sufficient to turn the Wehrmacht's entire loose and decentralized personnel management system into a historical curiosity.¹⁰

9. Greenfield, op. cit., p. 316.

10. Whether such extreme specialization is in fact necessary may perhaps be doubted but is beyond the present author's competence to judge. See on this point the Bericht des Kommission des Bundesministers der Verteidigung zur Stärkung der Führungsfähigkeit und Entscheidungsverantwortung in der Bundeswehr (Bonn, 1979) passim.

That the advance of technology has rendered much of the German Army's organization out of date is thus readily granted, but this does not mean that its experience has lost all relevance. This applies in the first place to those aspects of manpower-management that are "eternal" in the sense of being largely independent of technology. The principle that officers should be the leaders and educators of their men in every field; a system of military terminology and customs that will emphasize the basic unity among officers and men as well as the difference between them; a pay, decorations and promotion system that will ensure proper rewards to those men whose lives are in the greatest danger; a justice system that will be as swift and effective in protecting the individual (something made all the more necessary by the authoritarian nature of all military organizations) as it is in enforcing discipline; and an outlook that will condemn military offences, directed as they are not merely against private individuals but against the nation as a whole, at least as severely as it does civilian ones -- without all of these no army can hope to develop, much less maintain, fighting power.

While an organization as specialized for operations as was the German Army is inconceivable under modern conditions the opposite extreme, i.e. that of overemphasizing the role of technical and supporting services, should also be avoided. An Army's first and overriding function, after all, is to fight; it is not primarily to administer personnel, gather intelligence, or even bring up supplies and repair vehicles.¹¹ To the extent that the German Army's selection, training and promotion systems took this fact into account something might still be learnt from it today.

Passing to fundamental principles of organization, there would appear to exist no prima facie reason why the armed forces of a large nation should not employ a regional structure in order to secure a modicum of social cohesion inside the units (as is in fact the practice of the Bundeswehr), nor why a regimental system on the British model should not be retained in spite of the administrative complications involved. There appears no reason, furthermore, why large units should not be tied to specific training centers, receive their recruits and replacements by means of closed

11. This remains as true in today's age of deterrence as it was in every previous one. Today's armies' function can be summed up in Helmut Schmidt's words: kämpfen zu können, um nicht zu müssen (to be able to fight, so as not to be compelled to).

Marching battalions, and absorb them by way of Field Replacement Battalions; both institutions do, in fact, exist in the Bundeswehr.

Regarding the details of personnel-management, the German Army's system of assigning responsibility for the appointment and discharge of NCO's to company and battalion commanders would appear to be still relevant and has, indeed, been retained by several armies. Nor, in principle, is there any a priori reason why it should not be possible to go even farther and give regimental commanders a measure of control over the selection, training and commissioning (possibly by means of a probationary period) of their own officers. Both measures would undoubtedly involve a degree of administrative inefficiency and even waste; whether these would not be outweighed by the increased cohesion of units, however, should be carefully considered in each case. Such a system, with its delegation of important responsibilities, might also do something to correct the low social status under which the officer corps of most highly developed countries seem to labour.

In many cases, the organization of modern armies on such lines would be facilitated rather than retarded by the availability of modern data-processing systems, which could easily be programmed e.g. to match a man's regional origins against his professional qualifications on one hand and available vacancies on the other. Computers and mathematical models could also be used, to bring another example, to regulate "churning" in such a way as to make possible the return of junior officers to their own units after training. The availability and capacity of modern means of communication and transport might be used to maintain ties between front and rear, ZI and overseas theaters, to an extent that was impossible in World War II.

Learning from the German Army, in brief, would not involve any return to some more primitive methods of organization and administration; rather, true learning would consist of designing a system which, in addition to meeting the necessary technical and professional requirements, would take into account the social and psychological needs of man.

c. Reflections on Military Organization

A question which remains to be answered, and which has indeed haunted

this study from the very beginning, is the following: if American military organization was so bad at producing fighting power, why was American economic and industrial organization so good at producing the material goods of war? Why was e.g. Volkswagen modelled on Ford, and not vice versa? In what lies the essential difference between business and war that enabled the US to assemble the most efficient, most productive economic machine ever, but at the same time prevented its armed forces from developing equally great fighting power?

In recent years, and especially since sociologists have started taking an interest in military organizations, it has become fashionable to talk of the similarities between armies and business corporations. Both are seen essentially as exercises in management, structures whose function is to coordinate human and material resources in such a way as to produce the greatest possible output at the lowest possible price -- death by napalm, say, or instant coffee.

The more intensely technical armies become, the more sophisticated their bureaucratic structure, the greater the temptation to draw parallels of this kind. Modern armies, it is correctly pointed out, employ only a small and diminishing fraction of their manpower on combat-related tasks. More and more of their personnel are managers, technicians, specialists of every kind, whose jobs differ little, if at all, from those of their counterparts in civilian life with whom, indeed, they often have more in common than with the traditional image of the fighting man.¹² Even combat itself, it is claimed, is no longer the raw and primitive business it once was; instead it has become a highly complex, technological affair demanding, e.g., from a tank driver skills that are not, according to one authority, very different from those required in a crane operator.¹³

There is, admittedly, an element of truth in this. So long as he is engaged in mere manoeuvres, the skills demanded of a tank driver are, in fact, quite similar to those of a crane operator. Both need spatial orientation, a certain manual dexterity, a good understanding of their machines, and the willingness to cooperate with others in a team.

12. See e.g. E A Fleishman, "Differences between Military and Industrial Organizations", in R M Stogdill and C L Shartle, Patterns of Administrative Performance (Columbus, Ohio, 1956) pp. 31-8.

13. J van Doorn, The Soldier and Social Change (London, 1975) pp. 19-20.

Manoeuvres, however, are in the final account mere games. In time of war -- der Ernstfall, as the Germans say¹⁴ -- things are different. Vital as the skills of a crane operator are to the smooth functioning of an army, they cannot substitute for what, in this study, has been termed fighting power: discipline and cohesion, morale and initiative, courage and toughness, the willingness to fight and the readiness to die. Without these, a crane operator is destined to remain just that -- a technician fit for service (so long as things go well) in some safe spot far behind the front.

It is the predominance of the above qualities -- elusive, but absolutely vital -- which distinguishes peace from war, business from military organization. This not only causes most studies concerning the similarities between armies and business corporations to miss their target; on a deeper level, it means no less than that an army -- and it is here that its unique character lies -- neither can nor should be constructed on the basis of utilitarian considerations alone. Reason acting in the service of interest may, to be sure, serve as the foundation of a nation's decision to go to war, and even of an army's readiness to fight; it is a matter of definition, however, that no kind of utilitarian reasoning in the world can render an individual willing to lay down HIS life. It is at this point, the very essence of fighting power, that a completely different set of non-rational, socio-psychological factors enters the picture.

Business life, in other words, is based on self interest and the reason serving it; armies, on the other hand, cannot be based on either. Much as armies should encourage reason and make use of it, the latter cannot in the final account serve as the cornerstone on which they are built. Reason is essential, to be sure, but the vital Something Else is more essential still.

The problem of balancing between rationality and irrationality, efficiency and psychology, is complicated further by the fact that armies do not spend all of their time in either peace or war. Unlike business corporations, which do their thing yesterday, today, always, armies are faced with the additional problem of switching -- often at great speed

14. Another untranslatable term: "the real thing" would be closest.

and without warning -- from one type of activity to another. When such a change takes place systems of command, channels of communication, relations with comrades, attitudes towards various kinds of resources and indeed to human life itself all assume very different forms. The entire structure is shaken to its foundations, altered, metamorphized, flooded by enormous quantities of adrenalin.

How is the balance between rationality and irrationality to be struck? Can fighting power be built up in peace, utilitarian reasoning be preserved in war? Can one achieve fighting power as high as that of the German Army without at the same time producing soldiers to whom an order, regardless of its nature, is an order? What price fighting power? Far from offering a way to escape these questions modern technology, by adding intellectual ability and technical competence to the list of qualities required of the individual warrior, has enhanced their importance. On their correct solution, the effectiveness of any army depends.

13. Notes on method

Historians, unfortunately, cannot manufacture their own material to order. No number of questionnaires, interviews, or "impressionistic" accounts can conjure up an age long past. All a historian can do is to try and make the best possible use of the material available even when, as is so often the case, it is woefully inadequate.

To study history, and especially military history, on the basis of written records is always a hazardous undertaking. Much that mattered was never recorded. Much that was recorded did not matter. To check on the trustworthiness of official records one may occasionally use personal reminiscences and even fiction -- but these by their very nature are subjective and for that reason probably unrepresentative. There is, in short, no failproof way to discover whether and to what extent official records -- on the distribution of leave e.g, or on methods of training -- reflected actual practice in the field.

Yet for a comparative study such as the present one the untrustworthiness of written records is of comparatively little importance. They may not constitute a true picture of what an army was, but they do at any rate demonstrate what it wanted to be. Probably few soldiers read, much less digested, the bellicose reflections on the nature of war contained in the Truppenführung of 1936 (or the more managerial ones in the Regulations of 1941); yet in both cases the views put forward constituted an ideal to be striven for which, directly and indirectly, affected practice in a thousand ways.

The present study concentrates on the German Army. It therefore mostly follows German practices in regard to terminology, classification, organization etc. This sometimes gave rise to difficulties. It was, for example, by no means easy to decide just which parts of an American division constituted the equivalent of a German divisional headquarters (Kommand). Throughout the study I tried to compare like with like in so far as this was possible.

For the same reason, too, I generally avoided using an enormous body of American material for which there exists no German equivalent whatsoever -- namely the very numerous opinion-surveys carried out among US troops

during the war and published in The American Soldier. Since the Germans for many reasons lagged behind in sampling and polling techniques, and were in any case little interested in them, there just is no way in which a historian can discover, e.g., whether German troops felt more, or less, satisfied with their army lives than American ones. Great as is the temptation to use this material as an indication of the results of organization, faulty or otherwise, the temptation in most cases had to be resisted.

A more serious objection which might be raised against the present study is that it misrepresents the nature of modern war and, in consequence, does an injustice not merely to the US Army but to America's armed forces and, indeed, to the entire social-economic-industrial-military complex with which the US waged, and won, World War II. The importance of the US land forces within the American military establishment cannot, after all, be compared with that of the German land army within the Wehrmacht. The latter may have developed awesome fighting power, but only at the cost of neglecting numerous other factors. Behind it, moreover, there was a political and industrial system which, for sheer efficiency, could not begin to compete with American might.

To put the same point more bluntly still: trusing in fighting power, Germany's leaders in 1939-1945 gave proof of their criminal misjudgment of the forces that shape today's world and, as their just reward, ended up by sacrificing the lives of perhaps four millions of their countrymen and reducing the country to a shambles such as has rarely been equalled in history. America's leaders, by contrast, relying on high technology and an enormously productive system of economic organization, demanded the lives of but 300,000 of their compatriots -- and, at this comparatively trifling cost, not only won the war but also propelled their country into the position of the world's greatest, indeed almost sole, Superpower.

My reply to this objection is this: it uses results as the sole measure of performance, thereby falling into the very trap against which warning was served on the first page of this study. By ignoring a host of fundamental factors that led to Germany's defeat (the difference in relative size between the opponents, to mention the most obvious one only), and by neglecting to look for intrinsic qualities for measuring excellence,

such an approach distorts reality just as much as does one that regards fighting power as the sole constituent of victory.

To recall the formula used on the first page of this study: within the limits of its size, the military worth of an army equals the quantity and quality of its equipment multiplied by its fighting power. This formula does justice to both factors, the moral and the material, implying as it does that each can make up for the other only to a limited extent and that each without the other is utterly worthless. This is as true today as it has ever been in the past. Fashionable talk about electronic battlefields and push button wars to the contrary, there is nothing in the history of armed conflict as waged since 1945 to indicate that fighting power has become at all less decisive; against a nation relying solely on technology and scientific management, it could be very decisive indeed.

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Appendix A

List of 78 Engagements from Table I

No.	Engagement
1	Port of Salerno, 9-11.9.1943
2	Amphitheater, 9-11.9.1943
3	Sele-Calore Corridor, 11.9.1943
4	Tobacco Factory, 13-14.9.1943
5	Vietri I, 12-14.9.1943
6	Battipaglia I, 12-15.9.1943
7	Vietri II, 12-14.9.1943
8	Battipaglia II, 17-18.9.1943
9	Eboli, 17-18.9.1943
10	Grazzanise, 12-14.10.1943
11	Capua, 13.10.1943
12	Triflisco, 13-14.10.1943
13	Monte Acero, 13-14.10.1943
14	Caiazzo, 13-14.10.1943
15	Castel Volturno, 13-15.10.1943
16	Dragoni, 15-17.10.1943
17	Canal I, 15-20.10.1943
18	Canal II, 17-18.10.1943
19	Francolise, 20-22.10.1943
20	Monte Grande, 16-17.10.1943
21	Santa Maria Oliveto, 4-5.11.1943
22	Monte Lungo, 6-7.11.1943
23	Pozzilli, 6-7.11.1943
24	Monte Camino I, 5-7.11.1943
25	Monte Camino II, 8-12.11.1943
26	Monte Rotondo, 8-10.11.1943
27	Monte Camino III, 2-6.12.1943
28	Calabritto, 1-2.12.1943
29	Monte Maggiore, 2-3.12.1943
30	Aprillia I, 25-6.1.1944
31	The Factory, 27.1.1944
32	Campoleone, 39-31.1.1944
33	Campoleone counterattack, 3-5.2.1944
34	Carroceto, 7-8.2.1944
35	Moletta River defence, 7-9.2.1944
36	Aprilia II, 9.2.1944
37	Factory Counterattack, 11-12.2.1944
38	Bowling Alley, 16-19.2.1944

Appendix A (continued)

No.	Engagement
39	Moletta River II, 16-19.2.1944
40	Fioccia, 21-23.2.1944
41	Santa Maria Infante, 12-13.5.1944
42	San Martino, 12-13.5.1944
43	Spigno, 14-15.5.1944
44	Castellonorato, 14-15.5.1944
45	Monte Grande, 17-19.5.1944
46	Formia, 16-18.5.1944
47	Itri-Fondi, 20-22.5.1944
48	Terracina, 22-24.5.1944
49	Moletta Offensive, 23-24.5.1944
50	Anzio-Albano Road, 23-24.5.1944
51	Anzio Breakout, 23-25.5.1944
52	Cisterna, 23-25.5.1944
53	Sezze, 25-27.5.1944
54	Velletri, 26.5.1944
55	Villa Crocetta, 27-28.5.1944
56	Campoleone Station, 26-28.5.1944
57	Ardea, 28-30.5.1944
58	Lanuvio, 29.5-1.6.1944
59	Campoleone, 29-31.5.1944
60	Tarto-Tiber, 3-4.6.1944
61	Seine River, 23-25.8.1944
62	Moselle-Metz, 6-11.9.1944
63	Metz, 1.9.1944
64	Chartres, 16.8.1944
65	Melun, 23-25.8.1944
66	Chateau Salins, 10-11.11.1944
67	Morhange-Cohthill, 13-15.11.1944
68	Bourgaltroff, 14-15.11.1944
69	Baerendorf I, 24-25.11.1944
70	Baerendorf II, 26.11.1944
71	Burbach-Dursel, 27-30.11.1944
72	Sarre Union, 1-2.12.1944
73	Singling-Bining, 6-7.12.1944
74	Seille River, 8-12.11.1944
75	Morhange-Faulquemont, 13-16.11.1944

Appendix A (continued)

No.	Engagement
76	Francaltroff-St Avoird, 20-27.11.1944
77	Durstil-Faversviller, 28-29.11.1944
78	Sarre River, 5-7.12.1944

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