

# NOTES

## Introduction

1. An example of how a few out-of-context Russian Front examples can be advanced as evidence in support of a general doctrinal theory is F. W. von Mellenthin, R. H. S. Stolfi, and E. Sobik, *NATO Under Attack* (Durham, NC: Duke University Press, 1984).
2. The best English-language history of the Eastern Front is Albert Seaton, *The Russo-German War, 1941–1945* (New York: Praeger Publishers, 1970). A good narrative account, though less rigorous in its use of original sources, is Alan Clark, *Barbarossa: The Russo-German Conflict, 1941–1945* (New York: William Morrow and Co., 1965). Earle F. Ziemke, *Stalingrad to Berlin: The German Defeat in the East*, Army Historical Series (Washington, DC: Office of the Chief of Military History, U.S. Army, 1968), is a well-documented history of the years 1943–45 but includes only a brief summary of the campaigns before Stalingrad. John Erickson's *The Road to Stalingrad* (New York: Harper and Row, 1975) and *The Road to Berlin* (Boulder, CO: Westview Press, 1983) are fairly comprehensive accounts of the war as seen from the Soviet side. For a brief commentary on the professional ignorance of U.S. Army officers concerning the Russo-German War, see Michael A. Phipps, "A Forgotten War," *Infantry* 74 (November–December 1984):38–40.
3. See Mellenthin, Stolfi, and Sobik, *NATO*, 51, 66. J. R. Alford, "Mobile Defence: The Pervasive Myth (A Historical Investigation)" (London: Department of War Studies, King's College, 1977), 104–40, discredits the view that German defensive operations on the Russian Front generally amounted to any sort of successful mobile defense.
4. Phipps, "A Forgotten War," 40.
5. Mellenthin, Stolfi, and Sobik, *NATO*, 73.

## Chapter 1

1. The German publication that set forth the new doctrine did not give a specific title to the new defensive technique. "Grundsätze für die Abwehrschlacht im Stellungskriege [Principles for Defensive Combat in Positional Warfare]," 20 September 1918 ed., in *Urkunden der Obersten Heeresleitung*, 3d ed., edited by Erich von Ludendorff (Berlin: E. S. Mittler und Sohn, 1922), hereafter cited as "Grundsätze." Captain Graeme C. Wynne, a British authority on German defensive doctrine during World War I, suggests that the term "elastic defense" was used informally within the Imperial German Army. Graeme C. Wynne, *If Germany Attacks: The Battle in Depth in the West* (1940; reprint, Westport, CT: Greenwood Press, 1976), 156, 158–59. The German official history of World War I used the expression "elastic battle procedure" (*das elastische Kampfverfahren*) in its discussion of the new doctrine. Oberkommando des Heeres, *Der Weltkrieg 1914–1918* (Berlin: E. S. Mittler, 1939), 12:45. When the Oberkommando des Heeres (Army High Command) is the author of a source, it is cited as OKH. This research survey will use the term "Elastic Defense" as a title for the German technique of defense in depth.
2. Wilhelm Balck, *Development of Tactics—World War*, translated by Harry Bell (Fort Leavenworth, KS: The General Service Schools Press, 1922), 79–80.
3. The discussion of the Elastic Defense that follows in the text is from Wynne, *If Germany Attacks*, 148–64; Timothy T. Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War*, Leavenworth Papers no. 4 (Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1981), 11–21; "Grundsätze"; and "Allgemeines über Stellungsbau [Principles of Position Construction]," 10 August 1918 ed., in *Urkunden*, and edited by Ludendorff.

4. "Grundsätze," 607.
5. Ibid., 617. The German military vocabulary included separate doctrinal terms for each type of counterattack. A hasty local counterattack by engaged units was a *Gegenstoss in der Stellung*; one reinforced with fresh reserves was a *Gegenstoss aus der Tief*; and a deliberate, coordinated counterattack was a *Gegenangriff*. This distinctive vocabulary illustrates the careful attention the Germans paid to counterattack. No comparable terms exist in the American military lexicon.
6. Ibid., 606–15; Wynne, *If Germany Attacks*, 209–10.
7. Wilhelm, Crown Prince of Germany, *My War Experiences* (London: Hurst and Blackett, 1923), 267.
8. See, for example, "General von Maur's Memorandum on the English Tank Attack of April 11, 1917," translated by David G. Rempel and Gertrude Rendtorff, in *Fall of the German Empire, 1914–1918*, edited by Ralph Haswell Lutz (Stanford, CA: Stanford University Press, 1932), 1:625–27.
9. Erich von Ludendorff, *Ludendorff's Own Story* (New York: Harper and Brothers, 1919), 2:202–3.
10. See "Grundsätze."
11. A good critique of the German 1918 strategy is given in Gordon Craig, "Delbruck: The Military Historian," in *Makers of Modern Strategy*, edited by Edward Mead Earle (1941; reprint, New York: Atheneum, 1969), 275–82. Following World War I, an official German investigating commission examined the 1918 collapse and later presented its findings to the *Reichstag*. Extracts from the commission's reports appear as "Report of the Commission of the German Constituent Assembly and of the German Reichstag, 1919–1928," in *The Causes of the German Collapse in 1918*, edited by Ralph Haswell Lutz, translated by W. L. Campbell (Stanford, CA: Stanford University Press, 1934), hereafter cited as "Commission Report." A critical assessment of the 1918 German offensive strategy is on pages 72–90.
12. Balck, *Development of Tactics*, 87.
13. "Commission Report," 81. See also Lupfer, *Dynamics of Doctrine*, 48–49.
14. Crown Prince Wilhelm, who commanded a German Army Group in the 1918 battles, wrote after the war that, "In view of the ever-increasing weight of the attack . . . it [the Elastic Defense] was without doubt right in principle, but it was dependent upon strictly-disciplined, well-trained and skillfully-led troops. As the war progressed, these conditions became increasingly difficult to fulfill." Wilhelm, *My War Experiences*, 282–83.
15. Ludendorff, *Ludendorff's Own Story*, 2:341–42.
16. "Commission Report," 71–72; Hermann Joseph von Kuhl, *Entstehung, Durchführung und Zusammenbruch der Offensive von 1918* (Berlin: Deutsche Verlagsgesellschaft für Politik und Geschichte m.b.H., 1927), 79–86.
17. Balck, *Development of Tactics*, 289–90.
18. "Headquarters, Fifth [German] Reserve Corps: Experiences from the Fighting on the West Bank of the Meuse, 29 September 1918," in Lutz, *Fall*, 662.
19. Hans Ritter, *Kritik des Weltkrieges: das Erbe Moltkes und Schlieffen im grossen Kriege* (Leipzig: K. F. Koehler, 1920), 64. Published anonymously by "A General Staff Officer."
20. Wilhelm, *My War Experiences*, 267.
21. Balck, *Development of Tactics*, 288.
22. A particularly impassioned version of the "stab in the back" is given by Balck, who asserted that the "criminal responsible for our fall . . . should be sought in the ranks of the leaders of our political parties [who] . . . placed pursuit of their own ends above the weal and woe of Germany." These cowards, according to Balck, struck down the German Army "like Hagen of old did to the unconquerable hero, Siegfried." Ibid., 294.
23. Graeme C. Wynne, "The Legacy," *Army Quarterly* 39 (October 1939 and January 1940), 26.

24. The early rebuilding of the German Army is described in Harold J. Gordon, *The Reichswehr and the German Republic, 1919—1926* (Princeton, NJ: Princeton University Press, 1957), 169—216; and Herbert Rosinski, *The German Army*, rev. ed. (Washington, DC: Infantry Journal, 1944), 123—29.
25. The most prominent spokesman of the “trench school” was General Walter Reinhardt, who served briefly as *Chef der Heeresleitung* prior to Seeckt. Reinhardt was dismissed from this position as a result of the Kapp *Putsch* in 1920. Rosinski, *German Army*, 103.
26. Reichswehrministerium, *Führung und Gefecht der verbundenen Waffen*, 2 vols. (Berlin: Offene Worte, 1921), 223, hereafter cited as *FuG*.
27. *Ibid.*, 223.
28. *Ibid.*, 221—22.
29. *Ibid.*, 206.
30. *Ibid.*, 215—16.
31. *Ibid.*, 192.
32. *Ibid.*, 196.
33. *Ibid.*, 197—201.
34. On Seeckt’s personal dogmatism, see Francis L. Carsten, *The Reichswehr and Politics, 1918 to 1933* (Oxford: Oxford University Press, 1966), 106—7. On his suppression of contradictory theories, see Friedrich von Rabenau, *Seeckt: Aus seinem Leben 1918—1936* (Leipzig: Von Hasse und Koehler, 1940), 505.
35. See “Grundlegende Gedanken für den Wiederaufbau unserer Wehrmacht,” in Rabenau, *Seeckt*, 474—75. This same 1921 memorandum also first set forth Seeckt’s idea of the *Reichswehr* as a *Führerheer* (Leader Army), a high-quality cadre for a future expansion of the German Army.
36. *Ibid.*, 511.
37. *Ibid.*, 512.
38. *Ibid.*, 509. For the strategic dimensions of Seeckt’s theories, see Hans von Seeckt, *Die Reichswehr* (Leipzig: R. Kittler, 1933), 34—64; Hans von Seeckt, *Thoughts of a Soldier*, translated by Gilbert Waterhouse (London: E. Benn, 1930), 59—64; and Larry H. Addington, *The Blitzkrieg Era and the German General Staff, 1865—1941* (New Brunswick, NJ: Rutgers University Press, 1971), 28—30.
39. Ritter, *Kritik*, 47; Rosinski, *German Army*, 81—91. Rosinski flatly states that the German decision in November 1914 “against a return to the mobile strategy of the first weeks of the war . . . must be considered to be the real turning point of the war [italics in original].” Hans Delbruck, the prominent German military historian and critic, argued even during the war that Germany’s only hope for escape from *Stellungskrieg* lay in the direction of a political settlement since a German military victory was no longer within reach. Craig, “Delbruck,” 278—80.
40. The military constraints on Germany are detailed in Part V (Military, Naval and Air Clauses) of the Versailles Treaty. Article 160 limited the size and composition of the German Army; Article 171 prohibited poison gas and tanks; Article 180 prohibited fortifications along Germany’s western frontiers. Table II (Armament Establishment) listed allowed types and quantities of weapons. In addition to “offensive weapons” such as tanks, aircraft, and poison gas, the Germans were also forbidden to possess such patently defensive weapons as antitank and antiaircraft guns. *The Treaty of Peace with Germany, June 28, 1919* (Washington, DC, 1920).
41. Paramilitary units such as the *Freikorps* and the *Stahlhelm* remained essential to the defense of the eastern frontiers until Germany’s rearmament in the mid-1930s. Carsten, *Reichswehr*, 149—50, 231—32, 265—68, 355—56.
42. Gordon, *Reichswehr*, 254—61.
43. Albert Seaton, *The German Army, 1933—1945* (New York: St. Martin’s Press, 1982), 51—71. One of the earliest rearmament measures ordered by Hitler was the construction of fortifications

along Germany's border with France—a repudiation not only of the Versailles Treaty, but also of Seeckt's doctrines of offensive maneuver. Burkhart Mueller-Hillebrand, *Das Heer 1933—1945* (Darmstadt: E. S. Mittler und Sohn, 1954), 1:38—43.

44. Philip C. F. Bankwitz, *Maxime Weygand and Civil-Military Relations in Modern France* (Cambridge, MA: Harvard University Press, 1967), 40—45. Ironically, the building of the Maginot Line was inspired in part by French fears of Seeckt's theories of preemptive offensive warfare.

45. A summary of Beck's role in the development of all facets of German doctrine during this period is in Addington, *Blitzkrieg Era*, 35—38; see also S. J. Lewis, *Forgotten Legions: German Army Infantry Policy, 1918—41* (New York: Praeger, 1985), 45—55. Beck's role in restoring the Elastic Defense is spitefully discredited by Heinz Guderian in *Panzer Leader*, translated by Constantine Fitzgibbon (New York: E. P. Dutton and Co., 1952), 31—33. Guderian, who saw Beck as an obstacle to his own pet schemes of armored warfare, characterized Beck in his memoirs as “a paralyzing element wherever he appeared.” As evidence of this, Guderian cited “his [Beck's] much-boosted method of fighting which he called ‘delaying defense.’ . . . In the 100,000-man army this delaying defense became the cardinal principle.” Guderian credits the “fine, chivalrous, clever, careful” General Freiherr von Fritsch—who coincidentally tended to support Guderian's ideas—with jettisoning the “confusing” and “unsatisfactory” delaying defense in the early 1930s. In all of this, Guderian is mistaken. The *Hinhaltendes Gefecht* was not Beck's brainchild at all, but rather part of Seeckt's schemes for defense by offensive maneuver. It was conversely through Beck's efforts in *Truppenführung* that the “delaying defense” was supplanted by the more workable Elastic Defense system. Guderian's story is repeated uncritically by Robert J. O'Neill, “Doctrine and Training in the German Army, 1919—1939,” in *The Theory and Practice of War*, edited by Michael Howard (New York: Frederick A. Praeger, 1966), 153.

46. Reichswehrministerium, *Truppenführung*, Teil 1, H.Dv. 300/1, dated October 1933 (1933; reprint, Berlin, 1936), 179, hereafter cited as *TF* 1.

47. *Ibid.*, 179—208. *Truppenführung* also made minor changes in nomenclature. The battle zone (*Grosskampffzone*), for example, was retitled the main battle position (*Hauptkampffeld*).

48. OKH, *Der Stellungskrieg*, H.Dv. 91 (1938; reprint, Berlin, 1940), 59—90; OKH, Generalstab des Heeres/Ausbildungsabteilung (II) [Training Branch of the Army General Staff], *Die Ständige Front*, Teil 1: *Die Abwehr in Ständiger Front*, H.Dv. 89/1 (Berlin, 1940), 5—24; the OKH Training Branch is hereafter cited as OKH, GSII. Techniques to be used in positional warfare were also written into various branch and training manuals as well. For example, see OKH, GSII, *Ausbildungsvorschrift für die Infanterie*, Heft 11: *Feldbefestigung der Infanterie*, H.Dv. 130/11 (Berlin, 1940), and OKH, GSII, *Pionierdienst aller Waffen*, H.Dv. 316 (Berlin, 1935).

49. See, for example, “Truppenführung. Stellungskrieg, Stosstrupp-Unternehmen und Angriff mit begrenzten Ziele,” *Militär-Wochenblatt*, no. 23 (2 December 1938):1508—12; and “Truppen-Kriegsgeschichte: Gegenangriff des R.I.R. 93 am 15.8.1917,” *Militär-Wochenblatt*, no. 38 (18 March 1938):2435—37, and no. 39 (25 March 1938), 2499—2500.

50. Leeb's articles were compiled into book form as *Die Abwehr* (Berlin, 1938). The cited portion is from Wilhelm Ritter von Leeb, *Defense*, translated and edited by Stefan T. Possony and Daniel Vilfroy (Harrisburg, PA: Military Service Publishing Co., 1943), 121.

51. Leeb, *Defense*, 115—19.

52. Generalmajor Klingbeil, “Das Problem ‘Stellungskrieg,’” *Militär-Wochenblatt*, no. 36 (19 March 1937):2149.

53. One major exception to the general trend in German strategic thought was Colonel Hermann Foertsch's *The Art of Modern Warfare*, translated by Theodore W. Knauth (Camden, NJ: Veritas Press, 1940). Foertsch theorized that modern weapons and mobility merely increased the lethality and extended the size of the battlefield. He concluded that, therefore, “the defensive has greatly gained strength as compared with the attack . . . The war of the future will see more defense than has been the case for the last hundred years.” *Ibid.*, 217. Foertsch was convinced that future wars would necessarily be decided by the exhaustion of one of the belligerents and urged a defense in depth to conserve military resources. Foertsch later served as an army group chief of staff and commander of an infantry division during World War II.

54. Guderian, *Panzer Leader*, 32—33; Addington, *Blitzkrieg Era*, 35—38.

55. OKH, GSII, *Truppenführung*, Teil 2, H.Dv. 300/2 (1934; reprint, Berlin, 1941), 8–10 (“Abwehr gepanzerter Kampffahrzeuge”); OKH, GSII, *Die Ständige Front*, Teil 2: *Der Kampf der Infanterie* (Berlin, 1940), 25–27.
56. OKH, *Der Stellungskrieg*, 77–78. See also the sketch in “Truppenführung. Stellungskrieg,” 1509–10.
57. OKH, *Die Infanterie*, Waffenhefte des Heeres (Munich: Deutscher Volksverlag, 1938?), 7; Mueller-Hillebrand, *Das Heer*, 1:158–59. The German antitank rifles were the 7.92-mm *Panzerbüchse 38* and *Panzerbüchse 39*. Neither proved particularly effective in combat. The German crew-served antitank gun was the 37-mm *Pak*, whose armor-piercing ammunition could penetrate 1.93 inches of homogeneous armor (30-degree slope) at 400 yards. U.S. War Department, TM-E 30–451, *Handbook on German Military Forces* (Washington, DC: U.S. Government Printing Office, 1945), VII-9–VII-10, VII-31–VII-32.
58. One outspoken critic of the German antitank concept was General Ludwig Ritter von Eimannsberger, who proposed a complete overhaul of German defensive doctrine in order to place primary importance on antitank defense. Eimannsberger's ideas on this and other topics related to mechanized warfare are in his *Der Kampfwagen Krieg* (Munich: J. F. Lehmanns Verlag, 1934), typescript English translation at the U.S. Army Military History Institute, Carlisle Barracks, Pennsylvania. Antitank defense is discussed on pages 117–49 of this typescript.
59. Ludwig Ritter von Eimannsberger, “Panzertaktik,” *Militär-Wochenblatt*, no. 26 (8 January 1937):1448–53.
60. Major Sieberg, untitled commentary on fighting in Spain, *Militär-Wochenblatt*, no. 33 (11 February 1938):2097. Foertsch asserted that the combination of new antitank weaponry and skillful use of elastic defense in depth meant that “such advantages as tanks enjoyed in 1917 and 1918 will hardly survive.” Foertsch, *Modern Warfare*, 136–37. For examples of technical disputes on antitank tactics, see “Panzerabwehr in der Praxis,” *Militär-Wochenblatt*, no. 18 (29 October 1937): 1101–3; Guderian, *Panzer Leader*, 37; and Eimannsberger, “Panzertaktik,” 1452.
61. Eimannsberger, *Kampfwagen Krieg* (MHI typescript), 143.
62. At the outbreak of World War II, German tank armaments were: Panzer I, two machine guns only; Panzer II, a 20-mm cannon; Panzer III, a 37-mm cannon (same ammunition and performance characteristics as the 37-mm *Pak*); and Panzer IV, a short-barreled, low-velocity 75-mm cannon. The last three models also had machine guns of various types.
63. Compare *FuG*, 2:46; *TF* 1:195; and Foertsch, *Modern Warfare*, 155.
64. *TF* 1:195; OKH, *Der Stellungskrieg*, 77.
65. Edgar Röhricht, *Probleme der Kesselschlacht* (Karlsruhe: Condor-Verlag, 1958), xv; Hermann Metz, “Die Deutsche Infanterie,” in *Die Deutsche Wehrmacht*, edited by G. Wetzel (Berlin, 1939).
66. The impact of the Polish campaign on the German Army is described in Williamson Murray, “The German Response to Victory in Poland: A Case Study in Professionalism,” *Armed Forces and Society* 7 (Winter 1981).
67. *Ibid.*, 289.
68. Der Oberbefehlshaber des Heeres, GS Ia Nr. 400/39g, dated 13 October 1939, “Ausbildung des Feldheeres,” microfilm series T-312, roll 234, frame 7787781, National Archives, Washington, DC. Further references to National Archives microfilm will be cited as NAM.
69. OKH, GSII, *Richtlinien für Führung und Einsatz der Panzer-Division*, D-66, dated 3 December 1940 (Berlin, 1940). The two paragraphs on defense are on page 54.
70. Guderian, *Panzer Leader*, 143–44. Although the Panzer III's main gun was enlarged to 50-mm, the German Army Ordnance Office selected a shorter, lower-velocity gun tube than the 50-mm L60 ordered by Hitler.
71. Some units also received Czechoslovakian 37-mm antitank guns. The expansion of the German Army prior to Barbarossa caused many new German divisions to have fewer antitank guns of any type than authorized. Mueller-Hillebrand, *Das Heer*, 2:108. Despite the proliferation of new weapons, German antitank training remained based on dated manuals and training guides. See

OKH, GSII, *Die Infanterie-Panzerabwehrkompanie*, H.Dv. 130/5 (Berlin, 1938); and Edler Ritter von Peter and Kurt von Tippelskirch, *Das Panzerabwehrbuch* (Berlin: Offene Worte, 1937).

72. Joseph Prinner, "Organization, Advance and Combat of the 81st Artillery Regiment in 1941," Foreign Military Studies no. MS D-251 (Historical Division, U.S. Army, Europe, 1947), 2, hereafter cited as MS D-251.

73. Wynne, "Legacy," 29. See also Armand Mermet, *Siegfried Taktik 37* (Paris: Charles-Lavauzelle, 1939).

## Chapter 2

1. "Directive Number 21, 'Operation BARBAROSSA,' 18 December 1941," in U.S. Department of the Army, Pamphlet no. 20-261a, *The German Campaign in Russia: Planning and Operations, 1940-1942*, by George E. Blau (Washington, DC: U.S. Government Printing Office, 1955), 22, hereafter cited as DA Pam 20-261a.

2. The particular merits of *Keil und Kessel* tactics in Operation Barbarossa are discussed in Hans von Greiffenberg, et al., "Battle of Moscow, 1941-1942," Foreign Military Studies no. MS T-28 (Historical Division, U.S. Army, Europe, n.d.), 91-92, hereafter cited as MS T-28. For comments on the coordination of early encirclement battles, see Franz Halder, *The Private War Journal of Generaloberst Franz Halder*, edited by Arnold Lissance (Washington, DC: Office of the Chief of Military History, 1950), 7:167, 170 (entries for 24 and 25 June 1941), and 8:1 (entry for 1 August 1941); Hermann Hoth, *Panzer-Operationen: Die Panzergruppe 3 und der operative Gedanke der deutschen Führung, Sommer 1941* (Heidelberg: Kurt Vowinckel, 1956), 62-66; and Guderian, *Panzer Leader*, 161.

3. The principle of the "strategic offensive, tactical defensive" was first established in German military art by Helmuth von Moltke, chief of the Prussian (and later German) General Staff from 1857 to 1888. See Addington, *Blitzkrieg Era*, 3-4.

4. At the beginning of Barbarossa, German panzer divisions consisted of one panzer regiment and two rifle regiments plus supporting elements. Each infantry regiment had only two infantry battalions, however, giving a panzer division a total organic infantry strength of only four battalions. (This total excludes divisional reconnaissance, antitank, and other combat support units that might perform missions as infantry on occasion. Some panzer divisions also contained an additional motorcycle infantry battalion under the division headquarters.) In comparison, regular German infantry divisions consisted of three infantry regiments, each of three battalions. Panzer divisions therefore had roughly half the infantry strength of infantry divisions and were proportionately less able to hold terrain. Mueller-Hillebrand, *Das Heer*, 2:161-83.

5. Erich von Manstein, *Lost Victories*, edited and translated by Anthony G. Powell (Chicago: Henry Regnery Co., 1958), 185.

6. Wolfgang Werthen, *Geschichte der 16. Panzer-Division 1939-1945* (Bad Nauheim: Hans-Henning Podzun, 1958), 46; U.S. Department of the Army, Pamphlet no. 20-201, *Military Improvisations During the Russian Campaign* (Washington, DC: U.S. Government Printing Office, 1951), 22, hereafter cited as DA Pam 20-201.

7. Halder, *War Journal*, 7:1 (entry for 1 August 1941).

8. On 22 June 1941, all ten of the German Army's motorized infantry divisions and four *Waffen SS* motorized divisions (*Leibstandarte Adolf Hitler*, *Das Reich*, *Totenkopf*, and *Wiking*) were deployed on the Russian Front. Of these, all were assigned to one of the four German panzer groups except for 60th Motorized Division, which was initially held in *OKH* reserve. Mueller-Hillebrand, *Das Heer*, 2:190-91. Four of the army's motorized divisions (14th, 18th, 25th, and 36th) were equipped wholly or in part with captured French materiel. Halder, *War Journal*, 6:48 (entry for 3 April 1941). In mid-May 1941, General Halder noted that the training of the 18th Motorized Division was "sketchy" with "no unit training" due to its late conversion from a regular infantry division. *Ibid.*, 6:122 (entry for 17 May 1941). Motorized infantry divisions contained only two infantry regiments and were therefore not equal to regular infantry divisions in their ability to occupy and defend terrain. Mueller-Hillebrand, *Das Heer*, 2:179. For a description of the

difficulties encountered by the German 29th Motorized Division in containing surrounded Soviet forces on 29–30 June 1941 at the cost of “very heavy losses,” see Bryan I. Fugate, *Operation Barbarossa: Strategy and Tactics on the Eastern Front, 1941* (Novato, CA: Presidio Press, 1984), 112–13.

9. For a discussion of the problems inherent to subduing a “wandering pocket,” see “Das Phänomen der wandernden Kessel” in Rudolf Steiger, *Panzertaktik im Spiegel deutscher Kriegstagebücher 1939–1941* (Freiburg: Romach, 1973), 52–56; and MS T-28, 91–92.

10. An account of the tactical difficulties experienced by one panzer division in defensive combat is Werthen, *Geschichte*, 53–67. See also Guderian, *Panzer Leader*, 158–67; and Rolf Hinze, *Hitze, Frost und Pulverdampf: Der Schicksalsweg der 20. Panzer-Division* (Bochum: Heinrich Pöppinghaus Verlag, 1981), 49–56.

11. Röhricht, *Probleme*, 30; Halder, *War Journal*, 6:209 (entry for 7 July). On 29 June, Halder had already expressed surprise at the small number of prisoners taken in relation to the vast quantities of equipment seized, a sign that many enemy soldiers were escaping through the German lines. *Ibid.*, 6:181 (entry for 28 June). This problem became more pronounced as the campaign progressed. On 25 August, for example, Halder wrote that “it appears that considerable enemy elements did manage to escape encirclement. . . . The trouble is that our panzer divisions now have such a low combat strength that they just do not have the men to seal off any sizeable areas.” *Ibid.*, 7:64 (entry for 25 August).

12. The inferiority of German tanks compared to the Soviet T-34 is discussed in Steiger, *Panzertaktik*, 103–13; and Erich Schneider, “Antitank Defense in the East,” *Foreign Military Studies* no. MS D-253 (Historical Division, U.S. Army, Europe, 1947), 22–25, hereafter cited as MS D-253. An overview of German and Soviet tank development, including performance characteristics of specific models, is Richard M. Ogorkiewicz, *Armor: A History of Mechanized Forces* (New York: Frederick A. Praeger, 1960), 206–36.

13. Hermann Plocher, *The German Air Force Versus Russia, 1941*, edited by Harry R. Fletcher, *USAF Historical Studies* no. 153 (New York: Arno Press, 1968), 74–75. In one of the functional redundancies typical of Nazi Germany, the *Luftwaffe* and the army had overlapping air defense responsibilities in the field. Thus, those *Luftwaffe* flak units assigned to German combat divisions were in addition to the army flak detachments organic to every German division.

14. Halder, *War Journal*, 6:173 (entry for 26 June).

15. Friedrich Hossbach, *Infanterie im Ostfeldzug, 1941–1942* (Osterode-Harz: Giebel und Oehlschlägel, 1951), 50.

16. See *TF* 1:182–83.

17. An impression of the nearly constant fighting—both offensive and defensive—performed at the small-unit level during the German advance can be gained from Wilhelm Koehler, “Engagements Fought by the 488th Infantry Regiment at the Stryanitsa and Desna Rivers (6–29 Sep 1941),” *Foreign Military Studies* no. MS D-134 (Historical Division, U.S. Army, Europe, 1947); and Maximilian Fretter-Pico, *Missbrauchte Infanterie: Deutsche Infanteriedivision im osteuropäischen Grossraum 1941 bis 1944* (Frankfurt am Main: Verlag für Wehrwesen, 1957), 26.

18. “Directive 3,” issued by Marshal Semën K. Timoshenko on the evening of 22 June 1941, ordered an all-out counteroffensive by Red Army forces. Although “virtually impossible to carry out from a purely military point of view, [Directive 3] in a way formulated the character of the war. The idea was to make unceasing and powerful counterblows.” Amnon Sella, “‘Barbarossa’: Surprise Attack and Communication,” *Journal of Contemporary History*, 13 (July 1978):574. See also John Erickson, “The Soviet Response to Surprise Attack: Three Directives, 22 June 1941,” *Soviet Studies* 23 (April 1972):549–53. Senior Soviet military officers recognized the futility of such an order but, for the most part, endorsed its aggressive spirit. See G. K. Zhukov, *Vospominaniya i razmyshleniya* (Moscow: Novosti Press, 1971), 240.

19. MS D-251, 6. The attachment of artillery batteries to German infantry units during marches and hasty attacks was a lesson learned from the 1939 campaign in Poland. See U.S. Department of the Army, Pamphlet no. 20–255, *The German Campaign in Poland (1939)*, by Robert M. Kennedy (Washington, DC: U.S. Government Printing Office, 1956), 134.

20. Werner Prellberg, "Employment of Flak in an Army Defense Zone," Foreign Military Studies no. MS D-050 (Historical Division, U.S. Army, Europe, 1947), 14.
21. German accounts are unanimous in confirming the ineffectiveness of the 37-mm antitank gun. The German 50-mm *Pak* was somewhat more effective at short ranges against the heavier Soviet tanks, but it was still inadequate. See MS D-253, 5, 17; I. G. Andronikow and W. D. Mostowenko, *Die Roten Panzer: Geschichte der sowjetischen Panzertruppen* (Munich: J. F. Lehmanns Verlag, 1963), 252-54; and Fugate, *Barbarossa*, 106-7.
22. The problems of using field artillery for antitank defense are described in MS D-253, 9-12, 27. For a somewhat heroic account of the exploits of German artillery against Russian tanks, see Eugen Beinhauer, ed., *Artillerie im Osten* (Berlin: Wilhelm Limpert Verlag, 1944), 44-49, 55-58, 230-39.
23. See Friedrich August von Metzsch, *Die Geschichte der 22. Infanterie-Division, 1939-1945* (Kiel: Hans-Henning Podzun, 1952), 19-20; Paul Carrell, *Hitler Moves East, 1941-1943*, translated by Ewald Osers (Boston: Little, Brown and Co., 1964), 76-78; Charles W. Sydnor, *Soldiers of Destruction: The SS Death's Head Division, 1933-1945* (Princeton, NJ: Princeton University Press, 1977), 192, including note 68; and Fretter-Pico, *Infanterie*, 49.
24. Halder, *War Journal*, 6:221 (entry for 10 July).
25. Fretter-Pico, *Infanterie*, 25; Hans Breithaupt, *Die Geschichte der 30. Infanterie-Division, 1940-1945* (Bad Nauheim: Hans-Henning Podzun, 1955), 119.
26. Fretter-Pico, *Infanterie*, 21-26. This same engagement is described from the standpoint of the German artillery in MS D-251, 6-7. German light infantry divisions contained only two infantry regiments rather than three as in regular infantry divisions. Mueller-Hillebrand, *Das Heer*, 2:174-75. For an assessment of German lessons learned in this battle, see Ernst Ott, *Jäger am Feind: Geschichte und Opfergang der 97. Jäger-Division 1940-1945* (Munich: Kameradschaft der Spielhahnjäger, 1966), 37.
27. Hossbach, *Infanterie*, 54-59.
28. See Malcolm Mackintosh, *Juggernaut: A History of the Soviet Armed Forces* (New York: Macmillan Co., 1967), 132-36; and Erickson, *Road to Stalingrad*, 60-73. For the tactical readiness of Soviet forces, see Amnon Sella, "Red Army Doctrine and Training on the Eve of the Second World War," *Soviet Studies* 27 (April 1975).
29. Halder, *War Journal*, 6:195 (entry for 3 July).
30. *Ibid.*, 6:205 (entry for 6 July). General Eugen Ott delivered this report. Although commanding a corps at the time this observation was given, General Ott had recently served as inspector general of infantry within the German Army. Ott's observations on Soviet and Russian tactics seem to have been particularly valued by Halder. General Ott's service record is in Wolf Keilig, *Das Deutsche Heer, 1939-1945: Gliederung, Einsatz, Stellenbesetzung*, 3 vols. (Bad Nauheim: Hans-Henning Podzun, 1956), 3:243.
31. Halder, *War Journal*, 7:35 (entry for 11 August).
32. The operational problems caused by the separation of German units are discussed at length in Heinz Guderian, "Flank Defense in Far-Reaching Operations," Foreign Military Studies no. MS T-11 (Historical Division, U.S. Army, Europe, 1948).
33. Halder, *War Journal*, 6:203 (entry for 5 July).
34. *Ibid.*, 6:255 (entry for 19 July).
35. *Ibid.*, 6:197, 272-73 (entries for 3 and 25 July); Walter Warlimont, *Inside Hitler's Headquarters, 1939-1945*, translated by R. H. Barry (New York: Frederick A. Praeger, 1964), 183.
36. Warlimont, *Inside*, 184.
37. DA Pam 20-261a, 56.
38. The German strategic indecision is traced in *Ibid.*, 61-70; and Warlimont, *Inside*, 180-92.
39. P. N. Pospelov, et al., eds., *Great Patriotic War of the Soviet Union, 1941-1945: A General Outline*, translated by David Skvirsky and Vic Schneierson (Moscow: Progress Publishers, 1974).

- 66, hereafter cited as *GPWSU*; Werner Haupt, *Heeresgruppe Nord 1941—1942* (Bad Nauheim: Hans-Henning Podzun, 1967), 78—81; Percy Ernst Schramm, ed., *Kriegstagebuch des Oberkommandos der Wehrmacht 1940—1945*, vol. 1, 1 August 1940—31 December 1941 (Frankfurt am Main: Bernard und Graefe Verlag für Wehrwesen, 1965), 465—70 (entries for 13—18 August 1941), hereafter cited as *KTB/OKW*.
40. Breithaupt, *Geschichte*, 98—110.
41. Halder, *War Journal*, 7:52 (entry for 18 August).
42. Oberkommando der Wehrmacht, WFSt/L (I Op.) Nr. 441386/41, "Anlage 36," dated 15 August 1941, in *KTB/OKW*, 1:1045; Halder, *War Journal*, 7:44 (entry for 15 August).
43. Sydnor, *Soldiers*, 175—78; Manstein, *Lost Victories*, 199—201. Manstein's account misidentifies the Soviet units participating in the engagement.
44. "Operative Gedanken des Führers und Weisungen am 21. August 1941," *KTB/OKW*, 1:1061—62; and letter from Hitler to Brauchitsch, dated 21 August 1941, *KTB/OKW*, 1:1062—63.
45. Hitler's interest in strategic objectives other than Moscow predated the beginning of the Barbarossa campaign. Brauchitsch, Halder, and other officers ignored this interest insofar as possible, hoping that events would favor their preference for a drive on Moscow. The Soviet attack near Staraya Russa in mid-August roused Hitler to action. This Russian thrust seemed to confirm Hitler's prescience about the vulnerability of the German flanks and to discredit the judgment of Halder, who as late as 15 August did not regard the situation as serious. Halder, *War Journal*, 7:44 (entry for 15 August). His judgment fortified by this incident, Hitler proceeded peremptorily to order the diverging offensives to the north and south, thereby totally rejecting the strategic reasoning of his senior military advisers. Hitler added insult to injury by bluntly criticizing the army leadership in a study dated 22 August. This criticism, together with Hitler's apparent lack of confidence in the professional skills of the Army High Command, nearly led Halder and Brauchitsch to resign. Hitler's criticism is in his signed "Studie," dated 22 August 1941, in *KTB/OKW*, 1:1063—68. Halder regarded Hitler's decision to postpone the attack on Moscow to be "the final turning point of the Eastern campaign" and admitted that the Staraya Russa attack had helped influence Hitler's decisions at this critical time. See Franz Halder, *Hitler as War Lord*, translated by Paul Findlay (London: Putnam, 1950), 44—47. See also Barry Leach, *German Strategy Against Russia, 1939—1941* (London: Oxford University Press, 1973), 209—17; Seaton, *Russo-German War*, 142—52; and Warlimont, *Inside*, 190—92.
46. Halder, *War Journal*, 7:63 (entry for 24 August). Halder's assessment is confirmed by the strength reports of forward units. On 21 August, for example, the German Sixteenth Army (Army Group North) reported that each of its divisions had suffered at least 40 percent total casualties since the beginning of the campaign. A.O.K. 16 [Armeeoberkommando 16], Ia, "Gefechtskraft der Div., An Heeresgruppe Nord," dated 21 August 1941, NAM T-312/548/8156867—8156869.
47. For an analysis of German supply problems throughout Operation Barbarossa, see "Russian Roulette," in Martin van Creveld, *Supplying War* (London: Cambridge University Press, 1977), 142—80. See also U.S. Department of the Army, Pamphlet no. 20—202, *German Tank Maintenance in World War II* (Washington, DC: U.S. Government Printing Office, 1954), 2—3, 21—23, 26.
48. On 16 August, Halder projected that German personnel replacements would be virtually exhausted by 1 October. Halder, *War Journal*, 7:49. By 1 September, Halder was weighing the possibility of disbanding twelve divisions to cover anticipated winter losses. *Ibid.*, 7:79. See also DA Pam 20—261a, 71—72; and Seaton, *Russo-German War*, 171—75.
49. Alan S. Milward, *The German Economy at War* (New York: Oxford University Press, 1965), 39—45; Leach, *German Strategy*, 133—35, 140—45.
50. The battles around Smolensk are described in Hans Baumann, "Die Kesselschlacht von Smolensk und die Abwehrkämpfe westlich des Wop," in *Die 35. Infanterie-Division im 2. Weltkrieg, 1939—1945*, edited by Hans Baumann (Karlsruhe: Verlag G. Braun, 1964), 93—100; Hoth, *Panzer-Operationen*, 98—102; Guderian, *Panzer Leader*, 176—82; and *KTB/OKW*, 1:439—58 (entries for 22 July—8 August). According to the Soviet official history, the Russians first used their new *Katyusha* multiple rocket launchers in this fighting. P.N. Pospelov, et al., eds., *Istoriya Velikoi*

*Otechestvennoi Voiny Sovetskogo Soyuz 1941—1945*, 6 vols. (Moscow: Voenizdat, 1961), 2:66, hereafter cited as *Istoriya*.

51. *Istoriya*, 2:69.
52. Guderian, *Panzer Leader*, 181, 186. The figure of 450 miles given by Guderian on page 186 is presumably the distance to the nearest serviceable rebuilt railroad—probably not far from the 22 June border. On the formation of the Yelnya salient, see Fugate, *Barbarossa*, 128—33.
53. Guderian, *Panzer Leader*, 181, 182, 186; Halder, *War Journal*, 7:2 (entry for 1 August).
54. Guderian, *Panzer Leader*, 179.
55. Plocher, *German Air Force*, 107—8, 110—11.
56. Guderian, *Panzer Leader*, 185.
57. *Ibid.*, 189.
58. Halder, *War Journal*, 7:11—12 (entry for 3 August).
59. Plocher, *German Air Force*, 116.
60. DA Pam 20—261a, 65; "Tagesmeldungen der Operations-Abteilung des GenStdH," *KTB/OKW*, 1:558, 561 (reports for 7 and 8 August). See also Fugate, *Barbarossa*, 163—67.
61. Halder, *War Journal*, 7:17 (entry for 4 August).
62. *Ibid.*, 7:22 (entry for 6 August).
63. DA Pam 20—261a, 65; "Tagesmeldungen," *KTB/OKW*, 1:567 (report for 12 August).
64. *Istoriya*, 2:73—74.
65. Halder, *War Journal*, 7:47 (entry for 15 August).
66. Soviet air superiority is mentioned in "Tagesmeldungen," *KTB/OKW*, 1:565 (report for 11 August). The pressure on Ninth Army is discussed briefly in Fugate, *Barbarossa*, 201—2.
67. Werner Haupt, *Heeresgruppe Mitte 1941—1945* (Dorheim: Hans-Henning Podzun, 1968), 73.
68. "Tagesmeldungen," *KTB/OKW*, 1:575—89 (reports for 17—24 August); Halder, *War Journal*, 7:55, 70—71 (entries for 19 and 28 August). The unit on the 161st Division's right flank was the 7th Regiment, 28th Infantry Division. The Soviet attacks during this period are described in the 7th Regiment's unit history, Romuald Bergner, *Schlesische Infanterie: Grenadier-Regiment 7* (Bochum: Heinrich Pöppinghaus Verlag, 1980), 88—103. The 161st Division was replaced by the 14th Motorized Infantry Division. This unit became available for employment only through Bock's pleas to delay that unit's departure for the attack on Leningrad. "Tagesmeldungen," *KTB/OKW*, 1:589 (report for 24 August).
69. "Tagesmeldungen," *KTB/OKW*, 1:591 (report for 25 August).
70. Halder, *War Journal*, 7:70 (entry for 28 August). The fighting in the V Corps sector is described in Baumann, *35. Infanterie-Division*, 100—102.
71. "Tagesmeldungen," *KTB/OKW*, 1:595 (report for 27 August).
72. Halder, *War Journal*, 7:69 (entry for 27 August).
73. *Ibid.*, 7:49 (entry for 16 August).
74. Günther Blumentritt, "Moscow," in *The Fatal Decisions*, edited by Seymour Freidin and William Richardson (New York: William Sloane Associates, 1956), 61.
75. *Das Buch der 78. Sturm Division* (Tubingen: Buchdruckerei H. Lauppir, n.d.), 59—60. The general shortage of barbed wire and mines is mentioned in Halder, *War Journal*, 7:50 (entry for 16 August).
76. *78. Sturm Division*, 60—61. Other comments on the state of Yelnya defenses are in Benignus Dippold, "Commitment of the 183rd Infantry Division," *Foreign Military Studies* no. MS D-223 (Historical Division, U.S. Army, Europe, 1947), 25. General Dippold's 183d Division relieved the 78th Division at Yelnya between 18 and 20 September.

77. Halder, *War Journal*, 7:43, 49 (entries for 14 and 16 August); Wilhelm Meyer-Detring, *Die 137. Infanteriedivision im Mittelabschnitt der Ostfront* (Petzenkirchen, Austria: Kameradschaft der Bergmann-Division, 1962), 62–77, 274–75.
78. "Tagesmeldungen," *KTB/OKW*, 1:584 (report for 22 August); *Istoriya*, 2:75; and Zhukov, *Vospominaniya*, 289. The Soviet Reserve Front facing Yelnya was Zhukov's first field command of World War II. Zhukov had previously served as chief of the Soviet General Staff, being reassigned from that post on 29 July. Zhukov observed German tanks and assault guns dug in near Yelnya at the time of his arrival there. These presumably were elements of the German XLVI Panzer Corps. If Zhukov is correct, it means that the Germans were so pressed to occupy their thin lines at Yelnya that they violated the cardinal principle of panzer operations by posting stationary armored vehicles along their perimeter instead of holding them exclusively in reserve for counterattack.
79. Zhukov, *Vospominaniya*, 290.
80. Halder, *War Journal*, 7:69 (entry for 27 August); Guderian, *Panzer Leader*, 203, 208. Guderian was a difficult subordinate and managed, at one time or another, to alienate all three field marshals under whom he served during Barbarossa (Brauchitsch, Bock, and Günther von Kluge), as well as General Halder, the chief of the General Staff. On Guderian's relations with his superiors during this period, see Guderian, *Panzer Leader*, 208–10; Halder, *War Journal*, 7:62, 68–69, 77 (entries for 24, 27, and 31 August); and Kenneth Macksey, *Guderian: Creator of the Blitzkrieg* (New York: Stein and Day, 1975), 131–33, 137–40, 148–51.
81. "Tagesmeldungen," *KTB/OKW*, 1:601, 603 (reports for 30 and 31 August).
82. Small-unit actions in the Yelnya area are described in Carrell, *Hitler*, 90–96; and 78. *Sturm Division*, 62–69.
83. "Tagesmeldungen," *KTB/OKW*, 1:568–604 (reports for 13–31 August); Halder, *War Journal*, 7:77 (entry for 31 August).
84. Halder, *War Journal*, 7:80 (entry for 2 September); "Tagesmeldungen," *KTB/OKW*, 1:614 (report for 5 September). The Soviet official history claims that Red Army forces finally stormed Yelnya and overran German defenses. However, Zhukov supports the German version by noting that the Germans voluntarily withdrew. Compare *Istoriya*, 2:75; and Zhukov, *Vospominaniya*, 292. The best account of the Yelnya fighting in English is Fugate, *Barbarossa*, 167–83.
85. *Istoriya*, 2:75–76.
86. 78. *Sturm Division*, 67; Haupt, *Heeresgruppe Mitte*, 78.
87. Halder, *War Journal*, 7:124 (entry for 26 September). Halder also recorded that the German armies on the Eastern Front had a net deficit of 200,000 men.
88. Klaus Reinhardt, *Die Wende vor Moskau: Das Scheitern der Strategie Hitlers im Winter 1941–1942* (Stuttgart: Deutsche Verlags-Anstalt, 1972), 315; Blumentritt, "Moscow," 61.
89. Quoted in Albert Seaton, *The Battle for Moscow, 1941–1942* (London: Rupert Hart-Davis, 1971), 300.
90. Halder noted on 11 September that Army Group Center had managed to accumulate only one ammunition issue in its stockpiles. Halder, *War Journal*, 7:91. Even this paltry ammunition buildup was apparently accomplished at the expense of fuel and ration deliveries. See Van Creveld, *Supplying War*, 168–71.
91. Sydnor, *Soldiers*, 170–86; Haupt, *Heeresgruppe Nord*, 67–86.
92. Leon Goure, *The Siege of Leningrad* (Stanford, CA: Stanford University Press, 1962), 83–85; DA Pam 20–261a, 73–75.
93. "Tagesmeldungen," *KTB/OKW*, 1:661 (report for 26 September).
94. Halder, *War Journal*, 7:106. See also Guderian, *Panzer Leader*, 202–25; and Werthen, *Geschichte*, 63–67.
95. "Weisung Nr. 35," in Walter Hubatsch, ed., *Hitlers Weisungen für die Kriegführungen 1939–1945: Dokumente des Oberkommandos der Wehrmacht* (Frankfurt am Main: Bernard und Graefe Verlag für Wehrwesen, 1962), 150–53; DA Pam 20–261a, 75–76.

96. Halder, *War Journal*, 7:84 (entry for 5 September).
97. Alan F. Wilt, "Hitler's Late Summer Pause in 1941," *Military Affairs* 45 (December 1981):189.
98. Seaton, *Russo-German War*, 177—78; Hoth, *Panzer-Operationen*, 130—31.
99. The *Totenkopf* Division was holding an extremely wide sector—approximately fifteen miles—at the time of these Russian attacks. Even so, the *Waffen SS* officers and soldiers seem to have been somewhat lax in preparing their defensive positions. See Sydnor, *Soldiers*, 185—86, 188—97. Although *Waffen SS* tactical doctrine was nearly identical to that of the German Army in most respects, *Waffen SS* units apparently despised the elastic defense in depth as being unworthy of their courage and steadfastness. The *SS* increasingly accepted the principles of Elastic Defense as the war progressed. See Klaus Moelhoff, "Experiences with Russian Methods of Warfare and Their Utilization in Training at the *Waffen SS* Panzer Grenadier School," *Foreign Military Studies* no. MS D-154 (Historical Division, U.S. Army, Europe, 1947), 11—13. Early in the war, *SS* units occasionally suffered heavy casualties by putting National Socialist ardor ahead of tactical good sense. See George H. Stein, *The Waffen SS: Hitler's Elite Guard at War, 1939—1945* (Ithaca, NY: Cornell University Press, 1966), 91—92.
100. Breithaupt, *Geschichte*, 123—33.
101. Halder, *War Journal*, 7:138 (entry for 4 October).
102. Hoth, *Panzer-Operationen*, 136; "Tagesmeldungen," *KTB/OKW*, 1:702 (report for 15 October). Soviet accounts of the Vyazma-Bryansk battles are vague about Russian losses. The Vyazma pocket contained the Nineteenth, Twentieth, Twenty-Fourth, and Thirty-Second Armies, while the Bryansk *Kessel* snared major elements of the Third and Thirteenth Armies. *GPWSU*, 86—90 (including map facing page 88).
103. See, for example, Walter Kranz, "Meine Feuertaufe bei Wjasma," in Baumann, *35. Infanterie-Division*; and the account of 6th Panzer Division in "hedgehog defense" at Vyazma in DA Pam 20—201, 22—23. An analysis of the German tactics at Vyazma is in MS T-28, 89—92.
104. *Istoriya*, 2:240—44; Zhukov, *Vospominaniya*, 326—29; and Erickson, *Road to Stalingrad*, 216—19.
105. Halder, *War Journal*, 7:147 (entry for 8 October); Otto Dietrich quoted in Alan Bullock, *Hitler: A Study in Tyranny*, rev. ed. (New York: Harper and Row, 1962), 654.
106. Seaton, *Russo-German War*, 197.
107. See Eberhard von Mackensen, *Vom Bug zum Kaukasus: Das III. Panzerkorps im Feldzug gegen Sowjetrussland 1941/42* (Neckargemuend: Scharnhorst Buchkameradschaft, 1967), 41—42; and also the comments of Ewald von Kleist in Basil H. Liddell Hart, *The Other Side of the Hill*, 2d ed. (London: Cassell, 1973), 281—82.
108. Halder, *War Journal*, 7:187—89 (entries for 28 and 29 November). See also Rundstedt's remarks in Liddell Hart, *The Other Side*, 282.
109. Halder, *War Journal*, 7:193, 195 (entries for 30 November and 1 December); Seaton, *Russo-German War*, 197; Warlimont, *Inside*, 194.
110. Halder, *War Journal*, 7:196 (entry for 1 December); "Tagesmeldungen," *KTB/OKW*, 1:786—87 (report for 1 December).
111. Plocher, *German Air Force*, 222.
112. Seaton, *Russo-German War*, 194.
113. Mackensen, *Bug*, 44.
114. Halder, *War Journal*, 7:173 (entry for 21 November).
115. Werthen, *Geschichte*, 76.
116. Halder, *War Journal*, 7:195 (entry for 1 December).

117. A secret General Staff memorandum dated 6 November 1941 calculated the effective strength of the 136 German divisions deployed in Russia to be that of only 83 full-strength divisions. Infantry divisions averaged 65 percent of full combat strength, while motorized infantry divisions and panzer divisions were rated at 60 percent and 35 percent respectively. "Beurteilung der Kampfkraft des Ostheeres," *KTB/OKW*, 1:1074—75.

118. For accounts of Operation Taifun's final phase, see Reinhardt, *Die Wende*, 162—71; Seaton, *Battle for Moscow*, 152—69; Alfred Turney, *Disaster at Moscow: Von Bock's Campaigns, 1941—1942* (London: Cassell and Co., 1971), 136—51; Bergner, *Schlesische Infanterie*, 119—33; and MS T-28, 61—73.

119. Halder, *War Journal*, 7:170, 178, 190 (entries for 19, 23, and 29 November).

120. "Weisung Nr. 39," in Hubatsch, *Hitlers*, 171—74. The army's implementing directive, "Weisung für die Aufgaben des Ostheeres im Winter 1941/42," is in *KTB/OKW*, 1:1076—82.

### Chapter 3

1. "Anlage 1 zu OKH, GenStdH, Op.Abt.(Ia) Nr. 1693141," in *KTB/OKW*, 1:1075—76. See also DA Pam 20—261a, 91; Reinhardt, *Die Wende*, 202—4; and MS T-28, 134—36.

2. Guderian, *Panzer Leader*, 260.

3. Army Group Center War Diary, quoted in Reinhardt, *Die Wende*, 214; Halder, *War Journal*, 7:209 (entry for 8 December).

4. Halder, *War Journal*, 7:206 (entry for 7 December).

5. *Istoriya*, 2:280—81; Halder, *War Journal*, 7:206, 211 (entries for 7 and 10 December); and Guderian, *Panzer Leader*, 261—62. The fighting withdrawal of the 10th Motorized Division from its positions east of Tula is described in August Schmidt, *Geschichte der 10. Division, 1933—1945* (Bad Nauheim: Podzun Verlag, 1963), 117—19. Retreats by the 10th Motorized Division and by the 269th Infantry Division both opened critical gaps in the German front that could not immediately be closed. See Hossbach, *Infanterie*, 170—71; and Halder, *War Journal*, 7:215 (entry for 12 December).

6. *Istoriya*, 2:281; Halder, *War Journal*, 7:212—15 (entries for 10 and 12 December); Guderian, *Panzer Leader*, 262; and MS T-28, 33.

7. Halder, *War Journal*, 7:225 (entry for 15 December).

8. Guderian argues that some of the intermediate positions occupied by the Germans in October during the advance on Moscow had been partially fortified and constituted rearward positions of a sort. This is probably an exaggeration. At best, these positions would have consisted of hastily prepared bunkers and trenches without minefields or other obstacles. All would probably have been buried by the intervening snowfall. Field Marshal von Bock, Guderian's superior, discounted the value of any such positions. Compare Guderian, *Panzer Leader*, 259, 262; and Seaton, *Battle for Moscow*, 181.

9. See comments by General Günther Blumentritt and General Kurt von Tippelskirch described in Liddell Hart, *The Other Side*, 284, 289; and MS T-28, 58—59. One particularly eerie reminder of the 1812 campaign was the Kutusov Monument at Borodino, commemorating the Russian field marshal's victorious efforts to repel Napoleon's invasion. Several German divisions passed by that site during their own winter retreats, an omen that did not go unremarked. See Meyer-Detring, *137. Infanteriedivision*, 100; and Martin Gareis, *Kampf und Ende der Frankisch-Sudetendeutschen 98. Infanterie-Division* (Bad Nauheim: Hans-Henning Podzun, 1956), picture facing page 176, 177.

10. Guderian, *Panzer Leader*, 259; Halder, *War Journal*, 7:221—22 (entry for 14 December).

11. Halder, *War Journal*, 7:224 (entry for 15 December); Reinhardt, *Die Wende*, 214; and MS T-28, 119.

12. Seaton, *Battle for Moscow*, 181; Seaton, *Russo-German War*, 227 (entry for 16 December); and "Abschrift, OpAbt (IM) Nr. 1725/41," dated 16 December 1941, in *KTB/OKW*, 1:1083.
13. Halder, *War Journal*, 7:227 (entry for 16 December). Schmundt was completely dedicated to Hitler and had made a recent visit to Army Group Center's headquarters. While Schmundt was there, Bock had incautiously confessed his own misgivings about a winter retreat. Schmundt reported these to Hitler, who used them as ammunition to refute the recommendations of Brauchitsch, Halder, and even Bock. See Seaton, *Battle for Moscow*, 180–81.
14. Seaton, *Battle for Moscow*, 178–79; Halder, *War Journal*, 7:227 (entry for 16 December).
15. "Fernschreiben, GenStdH, OpAbt (III) Nr. 1736/41," dated 18 December 1941, in *KTB/OKW*, 1:1084.
16. See Bullock, *Hitler*, 665–69; Walter Görlitz, *History of the German General Staff, 1657–1945*, translated by Brian Battershaw (New York: Praeger, 1953), 404–6; and Gordon Craig, *The Politics of the Prussian Army, 1640–1945* (London: Oxford University Press, 1955), 468–503. Hitler's stand-fast order was almost universally opposed by high-level commanders, and most made no secret of their dislike of Hitler's instructions. See Reinhardt, *Die Wende*, 222.
17. Halder, *War Journal*, 7:193, 206 (entries for 30 November and 7 December).
18. Joseph Goebbels, *The Goebbels Diaries, 1942–1943*, edited, translated, and with an introduction by Louis P. Lochner (Garden City, NY: Doubleday, 1948), 135–36, hereafter cited as *Goebbels Diaries*.
19. Halder, *Hitler as War Lord*, 49.
20. Guderian, *Panzer Leader*, 263–70.
21. Halder, *War Journal*, 7:250 (entry for 8 January 1942). Not all of the sanctions against Hoepner were enforced. See Seaton, *Russo-German War*, 236. Hoepner wore his uniform on at least one later occasion—as an accomplice in the 20 July 1944 attempt to assassinate Hitler and seize control of the German government. See Gerald Reitlinger, *The SS: Alibi of a Nation, 1922–1945* (Englewood Cliffs, NJ: Prentice-Hall, 1981), 321–22.
22. Seaton, *Russo-German War*, 245; Haupt, *Heeresgruppe Nord*, 111.
23. A brief summary of major command changes, including relief dates, is in Andreas Hillgruber, "Einführung," *KTB/OKW*, 2:39–40. Görlitz counts General Karl von Stülpnagel, who was relieved from command of the Seventeenth Army in early October, as a victim of Hitler's vengeance as well. However, Stülpnagel's relief seems to have been primarily the result of criticism by Rundstedt and Brauchitsch of Stülpnagel's timid leadership. Compare Görlitz, *History*, 403; and Halder, *War Journal*, 7:138 (entry for 4 October). See also Guderian, *Panzer Leader*, 273–74.
24. See testimony of General August Winter in *Trial of the Major War Criminals Before the International Military Tribunal, Nuremberg, 14 November 1945–October 1946* (Nuremberg: International Military Tribunal, 1948), 15:604–5. Most changes of senior commanders were publicly represented as being due to the incumbent's ill health. Poor health was a contributing factor in the replacement of some officers, several of whom were more than sixty years old. (Rundstedt, born in 1875, had actually been called out of retirement to take command of an army group in 1939.) Brauchitsch, Bock, and Strauss, to name three, were all suffering from physical ailments at the time they were relieved. However, Hitler's primary intent was to remove uncooperative senior officers, not just unhealthy ones.
25. Seaton, *Battle for Moscow*, 222–26.
26. T. N. Dupuy, *A Genius for War: The German Army and General Staff, 1807–1945* (Englewood Cliffs, NJ: Prentice-Hall, 1977), 116. See also Rudolf Hofmann, "Das XXIX A.K. in der Abwehr auf breiter Front am Nordflügel der 6. Armee im Winter 1941/42," chapter 5 in "Selected Corps Operations on the Eastern Front," by Hellmuth Reinhardt, et al., *Foreign Military Studies* no. MS P-143b (Historical Division, U.S. Army, Europe, 1954), 178, hereafter cited as MS P-143b-5.
27. Halder, *War Journal*, 7:197 (entry for 3 July). Hitler had an intellectual grasp of *Auftragstaktik*, even if he found it difficult to tolerate in practice. In one of the rambling monologues that he periodically inflicted on his dinner guests, Hitler had remarked on 1 August 1941: "The

Wehrmacht gives its highest distinction to the man who, acting against orders, saves the situation by his discernment and decisiveness." Adolph Hitler, *Hitler's Table Talk, 1941—1944: His Private Conversations*, 2d ed., translated by Norman Cameron and R. H. Stevens (London: Weidenfeld and Nicholson, 1973), 19.

28. Frido von Senger und Etterlin, *Neither Fear Nor Hope*, translated by George Malcolm (New York: E. P. Dutton and Co., 1964), 219—22.

29. "197. Inf. Division Abt.Ia Nr. 264/42. Betr.: Fragebogen," dated 10 May 1942, NAM T-78/202/6145735.

30. Hossbach, *Infanterie*, 170.

31. *Ibid.*, 171. See also the experiences of the 52d Infantry Division described in Lothar Rendulic, "Combat in Deep Snow," *Foreign Military Studies* no. MS D-106 (Historical Division, U.S. Army, Europe, 1947), 12—14.

32. Rudolf von Roman, "The 35th Infantry Division Between Moscow and Gzhatsk, 1941," *Foreign Military Studies* no. MS D-285 (Historical Division, U.S. Army, Europe, 1947), 8, hereafter cited as MS D-285.

33. Gareis, *Kampf*, 178—79.

34. MS D-285, 3—6, 22—30.

35. MS T-28, 123.

36. A discussion of the problems affecting German weapons in deep snow and severe cold is in "Anlage zu Gen.Kdo. XX.A.K. Ia Nr. 2644/42 (Erfahrungen im Winterfeldzug)," dated 16 May 1942, NAM T-78/202/6145569, 6145578—6145581, hereafter cited as "XX.A.K.—Erfahrungen"; and in "5 Panzer-Division Abt Ia Nr. 427/42. Erfahrungsbericht der 5. Panzer-Division über den Winterkrieg 1941/42 in Russland," dated 20 May 1942, NAM T-78/202/6145541—6145542. Though the German Army had previously developed a shaped-charge antitank shell, bureaucratic resistance had limited distribution of this ammunition. According to Greiffenberg, an appeal by Field Marshal von Kluge directly to Hitler helped to speed up deliveries of this ammunition, which stiffened German antitank defense somewhat. See MS T-28, 140.

37. MS T-28, 123; MS P-143b-5, 163.

38. Hossbach, *Infanterie*, 173—74.

39. MS P-143b-5, 162; MS T-28, 139. Through 5 January 1942, total German officer losses on the Eastern Front amounted to 26,775 killed, wounded, and missing. In view of the shortage of combat officers, General Halder agreed on 3 January that the "promotion of First Lieutenants and Captains must be accelerated, as nearly all are commanding battalions now." Halder, *War Journal*, 7:248 (entries for 3 and 5 January). Through the first six months of the Russian campaign, the German Army included large numbers of elderly reserve officers as regimental and even battalion commanders. Although these officers were adequate for the relatively easy campaigns in Poland and France, the arduous conditions in Russia led to the wholesale replacement of these reservists with younger, tougher officers. According to one officer with extensive Eastern Front experience, "in 1942 we had no more commanders older than 40 years except generals." Statement by Lieutenant General (Ret.) Heinz-Georg Lemm at the 1985 Art of War Symposium, reproduced in U.S. Army War College, Center for Land Warfare, 1985 *Art of War Symposium: From the Dnepr to the Vistula—Soviet Offensive Operations, November 1943—August 1944, a Transcript of Proceedings* (Carlisle Barracks, PA: U.S. Army War College, August 1985), 582.

40. Hossbach, *Infanterie*, 173. See also "263. Infanterie Division. Der 1. Generalstabsoffizier (Anlage 5 zu A.O.K. 4 Ia Nr. 677/42)," dated 21 August 1942, NAM T-312/184/7730365; and "XXXVIII A.K. Der Chef der Generalstabes Ia Nr. 1391/42. Betr.: 'Stützpunkt,' 'Widerstandlinie,'" dated 22 August 1942, NAM T-312/184/7730355.

41. Meyer-Detring, *137. Infanteriedivision*, 114. The gradual adoption of strongpoint tactics in the 34th Infantry Division is traced by the commander of the 107th Infantry Regiment in "Infanterie-Regiment 107 Kommandeur. Betr., 'Stützpunkt' oder Widerstandlinie. Bericht eines Truppenkommandeurs," dated 17 August 1942, NAM T-312/184/7730359—7730360.

42. MS T-28, 283d.
43. Baumann, *35. Infanterie-Division*, 137.
44. Panzer Group 3 War Diary, 19 December 1941, quoted in Reinhardt, *Die Wende*, 207.
45. MS D-285, 9; Gerhard Dieckhoff, *Die 3. Infanterie-Division* (Göttingen: Erich Borries, 1960), 149; and Horst Grossman, *Geschichte der rheinisch-westfälischen 6. Infanterie-Division 1939—1945* (Bad Nauheim: Hans-Henning Podzun, 1958), 103. Some divisions disbanded entire infantry battalions, using those personnel as fillers for other units. The 78th Division, for example, disbanded one battalion in each of its regiments, and these disbanded battalions were never reconstituted. See 78. *Sturm Division*, 151.
46. Panzer Group 3 War Diary, 19 December 1941; Panzer Group 4 War Diary, 18 December 1941; both quoted in Reinhardt, *Die Wende*, 207.
47. Allen F. Chew, *Fighting the Russians in Winter: Three Case Studies*, Leavenworth Papers no. 5 (Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1981), 33; MS T-28, 272; and U.S. Department of the Army, Pamphlet no. 20—291, *Effects of Climate on Combat in European Russia* (Washington, DC: U.S. Government Printing Office, 1952), 3—4, hereafter cited as DA Pam 20—291.
48. On taking command of the German Army on 19 December, Hitler cited the inadequate cold-weather provisions as proof of the “mechanical,” uninspired spirit of the army’s officer leadership. Halder, *War Journal*, 7:233 (entry for 19 December). Concerning the winter clothing drive, see *Goebbels Diaries*, 130—31, 136. The *Sicherheitsdienst* (Security Service or *SD*), whose unsavory activities included monitoring German civilian morale, noted in a secret report on 22 January 1942: “As regards the reasons for and the implications of the wool collection [Nazi Party clothing drive], the event . . . has affected the population in the civilian sector more than any other since the beginning of the war. . . . People had seen in the dismissal of Brauchitsch an indirect reply to the many questions as to who was responsible for the failures to provide winter clothing.” See Jeremy Noakes and Geoffrey Pridham, eds., *Documents on Nazism, 1919—1945* (New York: Viking Press, 1975), 661—62. See also Willi A. Boelcke, ed., *The Secret Conferences of Dr. Goebbels: The Nazi Propaganda War, 1939—1943*, translated by Ewald Osers (New York: E. P. Dutton, 1970), 196—97, 199—200, 223—24.
49. Guderian, for example, consistently blames the *OKH* (the army’s leadership) for his supply problems and claims that the problem of winter clothing “would have been the easiest to avoid of all our difficulties” had senior General Staff planners only exercised sufficient forethought. Guderian absolves Hitler from responsibility by asserting that the army’s quartermaster general lied to Hitler about winter clothing deliveries so that Hitler was unaware of any deficiency until informed of it by Guderian on 20 December. (Guderian also credits himself with having inspired the Nazi Party’s clothing collection with his complaints. Based on entries in Goebbels’ diary predating Guderian’s 20 December meeting with Hitler, Guderian’s claim is greatly exaggerated.) Guderian, *Panzer Leader*, 233—35, 237, 266—67. See also MS T-28, 141, where one of the German officer authors blames the winter clothing shortage on the “lack of foresight on the part of competent headquarters.”
50. Halder, *War Journal*, 6:216 (entry for 9 July), 7:7, 159 (entries for 2 August and 10 November). See also Boelcke, ed., *Secret Conferences*, 191—92.
51. Mueller-Hillebrand, *Das Heer*, 3:30; and Van Creveld, *Supplying War*, 173—74.
52. MS T-28, 275—76; DA Pam 20—291, 19; and Guderian, *Panzer Leader*, 265—66.
53. Van Creveld, *Supplying War*, 174. See also Seaton, *Russo-German War*, 218—19; and MS T-28, 210.
54. German summer clothing included a long wool overcoat which, with some padding from straw or newspapers, made a passable winter outer garment. Lieutenant General (Ret.) Heinz-Georg Lemm, interview with the author, Carlisle Barracks, PA, 2 May 1985. Lemm was a platoon leader and company commander on the Eastern Front during the winter of 1941—42. Also, many German troops removed suitable winter clothing items from Soviet corpses and, in some cases at least, probably from Russian prisoners as well. Such expedients were risky, however. A 17 December 1941 regimental order to soldiers of the 488th Infantry Regiment directed that German soldiers

in the forward lines wear only German uniform items, since German prisoners taken wearing Russian garments were being regarded by the enemy as looters and "handled accordingly" (i.e., shot). German combat troops were ordered to "exchange" any such Russian items with troops assigned to rearward units, a directive that was in all likelihood widely ignored. See "Regimentsbefehl," Anlage 16 in Meyer-Detring, *137. Infanteriedivision*, 277.

55. Hossbach, *Infanterie*, 168. See also Gareis, *Kampf*, 201; and Guderian, *Panzer Leader*, 266—67. German frostbite casualties alone during the winter of 1941—1942 exceeded 250,000, while total German losses (killed, wounded, missing, sick) from December 1941—March 1942 amounted to 723,200. See Berthold Mikat, "Die Erfrierungen bei den Soldaten der deutschen Wehrmacht in letzten Weltkrieg," appendix 8 in "Frostbite Problems in the German Army During World War II," by Alfred Toppe, Foreign Military Studies no. MS P-062 (Historical Division, U.S. Army, Europe, 1951), 2, 3; and Mueller-Hillebrand, *137. Infanteriedivision*, 3:171, 206. Seaton estimates total German casualties (including frostbite) at 900,000 for the winter period. However, as not all frostbite casualties were unfit for duty, this figure probably overestimates the actual loss of German effectives. Seaton, *Russo-German War*, 228. So severe was the danger of frostbite that most German units adopted a policy similar to that used in the 12th Infantry Division, according to which no sentry would remain outdoors longer than thirty minutes and all sentries would always be posted either in pairs or within the sight of another sentry. Lemm interview.

56. Quoted in Steiger, *Panzertaktik*, 136.

57. A medical briefing to General Halder on 9 March 1942 reported 10,204 cases of typhus, of which 1,349 had proved fatal. Halder, *War Journal*, 7:281 (entry for 9 March).

58. Baumann, *35. Infanterie-Division*, 135; Chew, *Russians in Winter*, 38. Detailed reports on problems with German equipment (radios, vehicles, etc.) during winter conditions are in "78. Inf. Division Ia/Org. Nr. 243/42. Erfahrungsbericht," dated 9 May 1942, NAM T-78/202/6145688—6145692; "XX.A.K.—Erfahrungen," NAM T-78/202/6145581—6145585; and "197. Inf. Division. Fragebogen," NAM T-78/202/6145742—6145744. One former German officer recounted how, during the night of 24 January 1942 with the outside temperature at -56°C, four out of five machine guns and nearly half of the rifles in his company would not fire. Colonel (Ret.) Arnulf von Garn, Interview with the author, Carlisle Barracks, PA, 21 May 1986.

59. A brief contemporary discussion of the reasons for adopting the strongpoint defense may be found in "Hptm. Haderecker, Kdr. I./Inf. Rgt. 20 (mot). Betr.: Erfahrungsbericht. Stützpunktsystem oder H.K.L.," dated 17 August 1942, NAM T-312/184/7730344—7730345; "10 Inf. Div. (mot) Ia (Anlage zu A.O.K. 4 Ia Nr. 4885/42). Stützpunktartige Verteidigung oder durchlaufende Verteidigungssystem," dated 20 August 1942, NAM T-312/184/7730340—7730341; and "Generalkommando LVI. Pz.Korps. Der Chef des Generalstabes. Stellungnahme zur Frage Stützpunkte oder Widerstandslinie. (Anlage zu A.O.K. 4 Ia Nr. 4885/42)," dated 1 September 1942, NAM T-312/184/7730332—7730333. The first of these documents gives the views of a battalion commander; the second, a division staff officer; and the third, a panzer corps chief of staff. Though each sees the problem from a slightly different perspective, their conclusions are similar to those given in the text.

60. "Oberkommando der Wehrmacht Nr. 442277/41 WFSt/op(H)," dated 26 December 1941, in *KTB/OKW*, 1:1086—87.

61. MS T-28, 189.

62. "A.O.K. 4 Ia Nr. 166/42. Abschrift," dated 23 January 1942, NAM T-78/202/6146773—6146775. That this document received wide circulation is evident in that the copy in the National Archives microfilm collection shows a supplementary document reference number assigned by Army Group Center ("H.Gr. Mitte, Ia Nr. 826/42") and also in that this document was found at the end of the war in a file folder of the Training Branch of the German General Staff. The combat actions on which this document was based—defense of the Roslavl-Yukhnov-Moscow *Rollbahn* supply artery—are briefly described in Schmidt, *Geschichte*, 123—27. In an enlightening aside, Schmidt notes that this *Rollbahn* was the first asphalt-paved road that the 10th Motorized Division had yet encountered in the entire Russian campaign.

63. After-action report of the 35th Infantry Division, attached as an annex to "Generalkommando IX. Armeekorps Ia Nr. 916/42. Betr.: Erfahrungsbericht aus dem Winterkrieg 1941/42," dated 3 July 1942, NAM T-78/202/6145647. This annex is untitled and undated, having only the hand-

written notation "35. Inf. Division" written across the top of the first page. It is identified as "Erfahrungsbericht der 35. I.D." on the coversheet of the IX Corps report cited above, NAM T-78/202/6145611, and hereafter is cited as "Erfahrungsbericht—35. I.D." See also "78. Inf. Division Ia/Org. Nr. 243/42. Erfahrungsbericht," dated 9 May 1942, NAM T-78/202/6145680.

64. "A.O.K. 4 Ia Nr. 166/42. Abschrift," NAM T-78/202/6146773—6146774.

65. MS T-28, 192—93.

66. "A.O.K. 4 Ia Nr. 166/42. Abschrift," NAM T-78/202/6146775.

67. "87. Inf.-Div., Ia Nr. 273/42," dated 9 May 1942, NAM T-78/202/6145707. See also "331. Infanterie Division. Der 1. Generalstabs-Offz. Betr.: Erfahrungsbericht-Widerstandlinie-Stützpunkte," dated 25 August 1942, NAM T-312/184/7730353.

68. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145647.

69. "7. Division Ia/Nr. 0479/42: Betrifft: Beantwortung des Fragebogens des Panzer-A.O.K. 4 über Wintererfahrungen," dated 11 May 1942, NAM T-78/202/6145631, hereafter cited as "7. Division—Wintererfahrungen."

70. MS T-28, 187.

71. Compare, for example, differing priorities of work developed by the 7th Infantry Division, "7. Division—Wintererfahrungen," NAM T-78/202/6145632; the 35th Infantry Division, "Erfahrungsbericht—35 I.D.," NAM T-78/202/6145647; and the 87th Infantry Division, "87. Inf.-Div.," NAM T-78/202/6145706.

72. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145649. See also Paul Schulz, "Position Warfare in Winter 1941—1942 and Experiences," Foreign Military Studies no. MS D-298 (Historical Division, U.S. Army, Europe, 1947), 4—12, hereafter cited as MS D-298.

73. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145650.

74. Willibald Utz, "Experiences of a Mountain Infantry Regiment During the Battle of the Volkhov River (Mar—May 1942)," Foreign Military Studies no. MS D-291 (Historical Division, U.S. Army, Europe, 1947), 20—23, hereafter cited as MS D-291; "A.O.K. 4 Ia Nr. 166/42. Abschrift," NAM T-78/202/6146775; and "Oberst Heine, Kommandeur des Inf. Regt. 449. Betr.: Kampferfahrungen: Stützpunkt oder Widerstandlinie," dated 17 August 1942, NAM T-312/184/7730364.

75. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145649—6145650; Garn interview; and Lemm interview.

76. "87. Inf.-Div.," NAM T-78/202/6145708. See also "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145650; and Fritz Wentzell, "Combat in the East," Foreign Military Studies no. MS B-266 (Historical Division, U.S. Army, Europe, 1952), 44.

77. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145650—6145651; "87. Inf.-Div.," NAM T-78/202/6145708. The 7th Division rigged even its antitank mines with tripwires. See "7. Division—Wintererfahrungen," NAM T-78/202/6145633.

78. Gustav Hoehne, "In Snow and Mud: 31 Days of Attack Under Seydlitz During Early Spring of 1942," Foreign Military Studies no. MS C-034 (Historical Division, U.S. Army, Europe, 1953), 5; Lemm interview. Lemm's 12th Infantry Division participated in the Demyansk fighting, and he recalled that the Soviet units in this sector lacked snowshoes or skis. Forced to wade through waist-deep snow, Russian attackers were shot by defending German troops with an ease that was "truly horrible to watch."

79. "7. Division—Wintererfahrungen," NAM T-78/202/6145632; "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145650; MS D-298, 9; and MS D-285, 32—33.

80. MS D-285, 33. A sketch of this type obstacle is in "197. Inf. Division. Fragebogen," NAM T-78/202/6145754.

81. "7. Division—Wintererfahrungen," NAM T-78/202/6145633.

82. "78. Inf. Division. Erfahrungsbericht," NAM T-78/202/6145683. Other divisions disputed the value of this tactic. The 6th Infantry Division, for example, reckoned that Soviet winter clothing

allowed the Russians to spend nights wherever they pleased, and the telltale smoke of burning villages seemed only to invite Russian artillery fire. Grossmann, *Geschichte*, 93.

83. Grossmann, *Geschichte*, 99.

84. "Lagebericht AOK 6 an OKH/Fremde Heere Ost, v. 27.12.41." quoted in MS P-143b-5, 65-66.

85. Otto Zeltmann, "Closing of the Large Gap in the Front Between Demidov and Velikiye Luki in 1942." Foreign Military Studies no. MS D-231 (Historical Division, U.S. Army, Europe, 1947), 9-12, hereafter cited as MS D-231.

86. "Erfahrungsbericht der 5. Panzer-Division," NAM T-78/202/6145531.

87. "87. Inf. Div.," NAM T-78/202/6145707. See also "7. Division—Wintererfahrungen," NAM T-78/202/6145631; and Oskar Munzel, "Tactical and Technical Specialties of Winter Warfare," Foreign Military Studies no. MS P-089 (Historical Division, U.S. Army, Europe, 1951), 12.

88. Patrolling techniques varied greatly between units. The 7th Division preferred to dispatch its patrols only when absolutely necessary to clarify the enemy situation and considered the half-light of dawn or early evening best suited for reconnaissance work. In contrast, the 78th Division considered daytime patrols useless and sent its scouting parties out mostly at night. Compare "7. Division—Wintererfahrungen," NAM T-78/202/6145634; and "78. Division. Erfahrungsbericht," NAM T-78/202/6145682. See also "IX. Armeekorps. Erfahrungsbericht," NAM T-78/202/6145615.

89. "331. Infanterie Division. Erfahrungsbericht," NAM T-312/184/7730353.

90. "98. Inf. Division Ia. An den Herrn Chef des Generalstabes des Gen.Kdo XII. A.K.," dated 21 August 1942, NAM T-312/184/7730379. The 98th Division preferred a continuous linear-style defensive front and considered strongpoints useful mainly in the depth of the defensive zone.

91. See MS D-231, 2; MS T-28, 75; "XXXIII A.K.," NAM T-312/184/7730356; "263. Infanterie Division," NAM T-312/184/7730365; and "197. Inf. Division. Fragebogen," NAM T-78/202/6145735.

92. See "197. Inf. Division. Fragebogen," NAM T-78/202/6145736; "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145651-6145652; "7. Division—Wintererfahrungen," NAM T-78/202/6145633; "Infanterie-Regiment 487 Kommandeur. Betr.: Kampferfahrung Stützpunkt—Widerstandlinie," dated 21 August 1942, NAM T-312/184/7730347; "Der Chef des Generalstabes der 2. Armee. 2403/42 Betr.: Stützpunkt oder Widerstandlinie," dated 8 September 1942, NAM T-312/1660/000852; and Breithaupt, *Geschichte*, 157.

93. "87. Inf. Div.," NAM T-78/202/6145708.

94. "197. Inf. Division. Fragebogen," NAM T-78/202/6145736.

95. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145651. See also MS D-285, 10-11; "87. Inf. Div.," NAM T-78/202/6145708; "5 Panzer-Division—Erfahrungsbericht," NAM T-78/202/6145532; and "Hptmn. Haderecker—Erfahrungsbericht," NAM T-312/184/7730346.

96. "78. Inf. Division. Erfahrungsbericht," NAM T-78/202/6145681.

97. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145652. See also MS D-285, 31-32.

98. MS D-285, 31.

99. The composition of local reserves, together with general techniques for immediate counter-attack, is discussed in "197. Inf. Division. Fragebogen," NAM T-78/202/6145736; "XX. A.K.—Erfahrungen," NAM T-78/202/6145568-6145569; and "7. Division—Wintererfahrungen," NAM T-78/202/6145633-6145634.

100. Fretter-Pico, *Infanterie*, 66.

101. *Ibid.*, 67. The 97th Light Infantry Division's battles are described briefly on pages 63-67. This unit's remarkable success earned it the following entry in Halder's diary on 15 December: "97th Division has put up a very good fight. Good work, Fretter-Pico!" Halder, *War Journal*, 7:224.

102. Erickson, *Road to Stalingrad*, 269-70.

103. A. Yekomovskiy, "Taktika sovietskoi armii v velikoi otechestvennoi voinye," *Voyenny Vestnik*, April 1967:14.
104. Quoted in A. Ryazanskiy, "Taktika tankovikh voisk v godi velikoi otechestvennoi voinie," *Voyenny Vestnik*, May 1967:18.
105. Yekimovskiy, "Taktika," 14.
106. *Ibid.*, 14.
107. G. K. Zhukov, "Kontrnastupleniye pod Moskvoi," *Voyenno-Istorichesky Zhurnal*, October 1966:77.
108. A case in point is that of the 78th Infantry Division of the IX Corps. After days of heavy fighting against Soviet attacks, the 78th Division learned on 13 December that a heavy Soviet blow had broken the thin strongpoint line of the neighboring 267th Infantry Division. On 14 December, the 78th Division lost all contact with other German forces and discovered that strong Russian elements had taken up blocking positions across the division's rear. Under cover of darkness on the night of 14–15 December, the 78th Division initiated a breakout through the surrounding Soviet ring. Although harassed by Russian tanks and cavalry, the 78th Division successfully picked its way past enemy units and rejoined German forces on the Ruza River on 18 December. The other divisions of the IX Corps had similar experiences. See 78. *Sturm Division*, 123–41; and Bergner, *Schlesische Infanterie*, 133–47.
109. Zhukov, "Kontrnastupleniye," 71–72.
110. Mueller-Hillebrand, *Das Heer*, 3:31.
111. DA Pam 20–261a, 100–101.
112. See Martin Jenner, *Die 216./272. Niedersächsische Infanterie-Division, 1939–1945* (Bad Nauheim: Podzun Verlag, 1964), 47–53.
113. MS D-231, 4.
114. Erickson, *Road to Stalingrad*, 298.
115. *Ibid.*, 302.
116. *Ibid.*, 319–22, 331–32, 352–53.
117. Zhukov, *Vospominaniya*, 355–57; *Istoriya*, 2:325–32. These deep strikes were also supported by sizable airborne forces. General Halder was relieved that these Soviet thrusts lacked sufficient strength to achieve major success. On 2 February 1942, Halder wrote:
- The scenes in this battle behind the front are absolutely grotesque and testify to the degree to which this war has degenerated into a sort of slugging bout which has no resemblance whatever to any form of warfare we have known. An instance in point is the inept commitment of a group of several divisions . . . against the deep flank of Army Group Center. It is ineffectual as an operational measure and will merely serve to pin down some of our forces for a while, without producing any decisive results.
- Halder, *War Journal*, 7:263. The Soviet airborne operations are discussed in David M. Glantz, *The Soviet Airborne Experience*, Research Survey no. 4 (Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, November 1984), 37–56.
118. Halder, *War Journal*, 7:254. The deteriorating situation on the front of Army Group Center is discussed in detail in Reinhardt, *Die Wende*, 245–55.
119. "Führerbefehl an die H.Gr. Mitte vom 15. Januar 1942 zum Rückzug auf die 'Winterstellung,' Gen.St.d.H./Op.Abt.(I) Nr. 420021/42," in *KTB/OKW*, 2:1268–69. The new defensive line authorized by Hitler was essentially the same as that urged by Bock a month earlier.
120. Seaton, *Russo-German War*, 233. See also Hossbach, *Infanterie*, 173; Grossmann, *Geschichte*, 94; and MS T-28, 187.
121. Erickson, *Road to Stalingrad*, 299–300.

122. Zhukov, *Vospominaniya*, 357. On 1 February 1942, Zhukov was named commander of the Western Theater in addition to the Western Front. In this new capacity, he also exercised operational control over the Kalinin and Bryansk Fronts.
123. Yekimovskiy, "Taktika," 14.
124. Zhukov, *Vospominaniya*, 357—58.
125. F. Samsonov, "Artilleriya v hodie voinie," *Voyenny Vestnik*, May 1965:74.
126. Ryazanskiy, "Taktika," 18.
127. Yekimovskiy, "Taktika," 14.
128. *Istoriya*, 2:318; Samsonov, "Artilleriya," 74; Ryazanskiy, "Taktika," 18; and Erickson, *Road to Stalingrad*, 302—3.
129. *Goebbels Diaries*, 132, 135.
130. Seaton, *Battle for Moscow*, 276—80.
131. See, for example, Halder, *War Journal*, 7:260, 266 (entries for 17 January and 7 February).
132. The author was unable to locate the original tasking document. However, several unit after-action reports cite "Oberkommando der 4. Pz. Armee Ia Nr. 1712/42," dated 17 April 1942, as the source of their efforts. See, for example, "78. Division. Erfahrungsbericht," NAM T-78/202/6145679. The 78th Division's report also repeats the specific questions posed by Fourth Panzer Army that guided the unit responses. When completed, these reports were actually forwarded to Third Panzer Army since Fourth Panzer Army's headquarters had, in the meantime, been transferred to the southern portion of the front in preparation for Operation Blau.
133. "XX. A.K.—Erfahrungen," NAM T-78/202/6145569.
134. "IX. Armeekorps—Erfahrungsbericht," NAM T-78/202/6145614.
135. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145653.
136. "OKH/GenStdH. Ausb. Abtlg. (II) Nr. 1550/42. Zusammenstellung von Osterfahrungen über Bekämpfung von Panzerkampfwagen und Angaben über Panzerabwehrwaffen und Munition," dated 19 May 1942, NAM T-312/1283/000203. See also "252. Inf. Division. Erfahrungsbericht über Winterfeldzug 1941/42" (undated), NAM T-78/202/6145759.
137. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145653. This report mentions a Soviet reluctance to advance single tanks very far into German defensive areas, presumably for fear of antitank gunfire or infantry close assault. On the use of heavy flak guns in an antitank role, see "12. Flakdivision (mot.) Führ. Gruppe (Ia) B.B. Nr. 2160/42 Betr.: Flakkampftrupps, Einsatz und Gliederung," dated 11 September 1942, NAM T-312/189/7736198—7736200.
138. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145653. See also "Zusammenstellung von Osterfahrungen," NAM T-312/1283/000204.
139. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145653.
140. "7. Division—Wintererfahrungen," NAM T-78/202/6145634.
141. See "Ia der 34. Division. Betr.: 'Stützpunkt' oder 'Widerstandlinie,'" dated 17 August 1942, NAM T-312/184/7730358; and "10. Inf. Div. (mot)—Stützpunktartige Verteidigung," NAM T-312/184/7730342.
142. See Ogorkiewicz, *Armor*, 215—17; and Guderian, *Panzer Leader*, 276—83.
143. "Armee-Pionier-Führer, Armee-Oberkommando 2. Merkblatt für Panzervernichtungstrupps," dated 10 February 1942, NAM T-312/1660/00941. This brief pamphlet included sketches of newer Soviet tanks, with their vulnerable points highlighted, along with instructions on tactics, equipment, and training for antitank teams.
144. Halder, *War Journal*, 7:261, 263 (entries for 29 January and 2 February). The apparent product of these discussions was a Training Branch circular to German units, "Oberkommando

des Heeres. GenStdH./Ausb. Abt. (II) Nr. 1550/42. Betr.: Kampferfahrungen, Panzerabwehr," dated 19 May 1942, NAM T-312/1283/000199. This circular included "Zusammenstellung von Osterfahrungen" (cited in note 136) as an annex.

145. The full title of the decoration was *Sonderabzeichen für das Niederkämpfen von Panzerkampfwagen durch Einzelkämpfer* (Special Badge for the Single-Handed Destruction of a Tank). This badge was actually a cloth patch worn prominently on the upper right sleeve of the uniform coat. As most other German decorations were worn on the front of the coat, it may be that the particular prominence given this award was a conscious attempt to counteract the "suicidal" aura that surrounded the idea of infantry-versus-tank combat. On 26 May 1942, Hitler also authorized a special campaign medal for all German soldiers who had served in Russia during the winter campaign. This *Medaille Winterschlacht im Osten* (Medal for the Winter Battle in the East) was commonly referred to in the ranks as the "frozen flesh medal." John R. Angolia, *For Führer and Fatherland: Military Awards of the Third Reich* (San Jose, CA: R. James Bender Publishing, 1976), 69, 109.

146. "252. Inf. Division. Erfahrungsbericht," NAM T-78/202/6145757—6145758.

147. "XX. A.K.—Erfahrungen," NAM T-78/202/6145567.

148. The tasking document is cited as "Chef des Generalstabes der Heeres vom 6.8.42" in "2. Armee. Stützpunkt oder widerstandlinie," NAM T-312/1660/00852.

149. "Infanterie-Regiment 488, Ia," dated 18 August 1942, NAM T-312/184/7730391.

150. "Infanterie-Regiment 289, Kommandeur. Betr.: Kampferfahrung," dated 17 August 1942, NAM T-312/184/7730380.

151. "2. Armee. Stützpunkt oder Widerstandlinie," NAM T-312/1660/00853.

152. "331. Infanterie Division. Erfahrungsbericht," NAM T-312/184/7730352.

153. "Infanterie-Regiment 434, Kommandeur," dated 17 August 1942, NAM T-312/184/7730339.

154. "Erfahrungsbericht—35. I.D.," NAM T-78/202/6145648. See also "Erfahrungsbericht der 5. Panzer-Division," NAM T-78/202/6145531.

155. "Hptmn. Haderecker, Erfahrungsbericht," NAM T-312/184/7730345.

156. "XXXXIII. A.K. 'Stützpunkt,'" NAM T-312/184/7730355. See also "Der Chef des Generalstabes des XII. A.K. An den Herrn Chef des Generalstabes der 4. Armee," dated 21 August 1942, NAM T-312/184/7730378.

157. See "Der Chef des Generalstabes des XII. A.K.," NAM T-312/184/7730377.

## Chapter 4

1. The German plan of operations was set forth in Führer Directive 41, dated 5 April 1942. Written in large part by Hitler himself, this document lacks the clarity and conciseness of other such orders drafted by General Staff officers at Hitler's behest. Directive 41 is reproduced in *Blitzkrieg to Defeat: Hitler's War Directives, 1939—1945*, edited by H. R. Trevor-Roper (New York: Holt, Rinehart, and Winston, 1964), 116—21. On the evolution of German strategy for the 1942 campaign, see DA Pam 20—261a, 109—24; and Warlimont, *Inside*, 226—33.

2. DA Pam 20—261a, 116.

3. In 1941, the Soviet Union relied on the Caucasian oil-producing centers of Maikop, Grozny, and Baku for roughly 85 percent of its petroleum. However, oil production facilities in the Urals apparently were being frantically expanded even before Operation Blau began. See Seaton, *Russo-German War*, 266—67.

4. See Halder, *War Journal*, 7:252 (entry for 12 January).

5. "The Construction of a Strategic Defense Line in the East," *Foreign Military Studies* no. MS D-156 (Historical Division, U.S. Army, Europe, 1947), 3—4. The author of this monograph is

unknown but seems to have been a member of Olbricht's staff. Both General Olbricht and General Fromm were conspirators in the unsuccessful 20 July 1944 attempt on Hitler's life. Both were subsequently executed on Hitler's orders.

6. Ibid., 5—9.
7. Ibid., 10.
8. "Oberkommando des Heeres, GenStdH/Op.Abt.(Ia) Nr. 420053/42. Weisung für die Kampfführung im Osten nach Abschluss des Winters," dated 12 February 1942, in *KTB/OKW*, 1:1095.
9. DA Pam 20—261a, 129. Detachments of "fortification engineers" worked on the "fortified areas" off and on for the remainder of the year. See, for example, the report on the operations of various detachments in "General der Pioniere und Festungen. Abt. L (II O) Az. 11 Nr. 1665/42. Einsatz der Fest. Pi.-Dienststellen im Osten," dated 8 December 1942, NAM T-78/343/6300839.
10. Mueller-Hillebrand, *Das Heer*, 3:62; DA Pam 20—261a, 128—29, 130, 135—36. Army Group North, for example, lost 174,330 men (killed, wounded, missing) between the beginning of April and the end of August 1942, receiving in that time only 158,400 total replacements. See Burkhart Mueller-Hillebrand, "Der Feldzug gegen die Sowjetunion im Nordabschnitt der Ostfront (Zweiter Teil: Dezember 1941—Dezember 1942)," *Foreign Military Studies* no. MS P-114a (Historical Division, U.S. Army, Europe, 1954), 314, hereafter cited as MS P-114a.
11. DA Pam 20—261a, 130.
12. Mueller-Hillebrand, *Das Heer*, 3:63. See also Halder, *War Journal*, 7:377 (entry for 18 August) and footnote.
13. Compare Mueller-Hillebrand, *Das Heer*, 3:63; and DA Pam 20—261a, 135—36.
14. Halder, *War Journal*, 7:258 (entry for 24 January); DA Pam 20—261a, 137.
15. Halder, *War Journal*, 7:258 (entry for 24 January). See also Mueller-Hillebrand, *Das Heer*, 3:63; and DA Pam 20—261a, 137.
16. MS D-291, 22.
17. Haupt, *Heeresgruppe Nord*, 123—31. See also Hellmuth Reinhardt, et al., "Selected Army Operations on the Eastern Front (Operational)," *Foreign Military Studies* no. MS P-143a (Historical Division, U.S. Army, Europe [1954]), 265—75.
18. "Generalkommando I. A.K. Abt. Ia Nr. 1819/42. Korpsbefehl Nr. 194 für die Abwehrgliederung des I. A.K.," dated 8 July 1942, NAM T-312/838/9003278. This order cites as a reference the 1938 manual H.Dv. 91 *Der Stellungskrieg* discussed in chapter 1 of this research survey.
19. "Generalkommando I. A.K. Korpsbefehl Nr. 194," NAM T-312/838/9003278, 9003280.
20. "Generalkommando I. A.K. Korpsbefehl Nr. 194," NAM T-312/838/9003279; and "Anlage 2 zu Korpsbefehl Nr. 194/I. A.K.—Ia. Einzelheiten für Artillerie," NAM T-312/838/9003284—9003286.
21. "Generalkommando I. A.K. Korpsbefehl Nr. 194," NAM T-312/838/9003281, 9003282—9003283.
22. "Bericht zur Frontreise des Hptm. Muschner in der Zeit vom 31.7—7.8.42 in den Bereich des AOK 2," dated 9 August 1942, NAM T-78/343/6300935. Though Second Army was subordinate to Army Group B, it actually formed the southern portion of the German defensive front, linking the northern army groups to Army Group B's northern defensive flank along the Don River.
23. See "21. Infanterie-Division Abt. Ia Nr. 835/42. Betr.: Erfahrungen über den Kampf an festen Fronten; hier Abwehr im Sommer," dated 27 November 1942, NAM T-312/838/9003301—9003302; and "Armee-Oberkommando 18 Abt. Ia Nr. 19140/42. Betr.: Erfahrungen über den Kampf an festen Fronten," dated 16 December 1942, NAM T-312/838/9003267—9003268.
24. "Generalkommando I. A.K. Korpsbefehl Nr. 194," NAM T-312/838/9003278.
25. "1. Division Ia Nr. 543/42. Betr.: Erfahrungen über den Kampf an festen Fronten im Sommer," dated 28 November 1942, NAM T-312/838/9003270.

26. See "21. Infanterie-Division. Erfahrungen," NAM T-312/838/9003295; "Fusilier-Regiment 22 Abt. Ia Nr. 203/42. Betr.: Erfahrungen über den Kampf an festen Fronten," dated 14 November 1942, NAM T-312/838/9003363; "58. Inf.-Div. Ia. Erfahrungen über den Kampf an festen Fronten," dated 22 November 1942, NAM T-312/838/9003386; and "A.O.K. 4 Ia Nr. 0134/42 an Heeresgruppe Mitte," dated 21 September 1942, NAM T-312/189/7736481.
27. "121. Inf.-Division Abt. Ia Nr. 600/42. Erfahrungen über den Kampf an festen Fronten (Abwehr im Sommer)," dated 15 November 1942, NAM T-312/838/9003304.
28. "58. Inf.-Div. Ia. Erfahrungen," NAM T-312/838/9003387; "Armee-Oberkommando 18. Erfahrungen," NAM T-312/838/9003259—9003260; and "21. Infanterie-Division. Erfahrungen," NAM T-312/838/9003293.
29. Antitank practices during this period remained essentially unchanged from the techniques suggested in the 1941—42 winter after-action reports discussed in chapter 3 of this research survey. See "12. Flakdivision (mot.) Flakkampftrupps, Einsatz und Gliederung," NAM T-312/189/7736198—7736200; "58. Inf. Div. Erfahrungen," NAM T-312/838/9003387—9003388; "Panzerjägerabteilung 1 Kommandeur Ia Nr. 426/42. Erfahrungen über den Kampf an festen Fronten," dated 16 November 1942, NAM T-312/838/9003377; "A.O.K. 2 Ia Nr. 2366/42. Betr.: Erfahrungsbericht über Panzerabwehrwaffen," dated 4 September 1942; "Armee-Oberkommando 2 Ia Nr. 569/42. Betr.: Panzerabwehr," dated 5 June 1942, NAM T-312/1660/000928—000929; and "Armee-Oberkommando 2 Ia Nr. 2603/42 an Oberkommando Heeresgruppe B," dated 29 September 1942, NAM T-312/1283/000142—000167. This last document is an especially lengthy discussion of Russian armor tactics and German methods as practiced by the German VII Corps during defensive battles around Voronezh in July and August 1942. An analysis of antitank tactics in the winter of 1942—43 during the fighting for Demyansk is in "A.O.K. 16 Ia Nr. 550/43. Abschrift von Abschrift," dated 7 February 1943, NAM T-312/862/9032562—9032565.
30. "Armee-Oberkommando 18. Erfahrungen," NAM T-312/838/9003259; "Fusilier-Regiment 22. Erfahrungen," NAM T-312/838/9003362, 9003363; "21. Infanterie-Division. Erfahrungen," NAM T-312/838/9003293, 9003295; and "58. Inf.-Div. Erfahrungen," NAM T-312/838/9003386—9003387, 9003391.
31. "Oberkommando des Heeres. GenStd.H./Ausb.Abt.(II) Nr. 1550/42. Betr.: Erfahrungen mit der russischen Angriffsweise im Sommer 1942," dated 3 September 1942, NAM T-312/189/7736183—7736184. See also Halder, *War Journal*, 7:388 (entry for 3 September).
32. Halder, *War Journal*, 7:367—73 (entries for 4—11 August).
33. Manstein, *Lost Victories*, 264—67; MS P-114a, 324—27. The 72d Division was detached from Manstein's command to plug yet another hole in the Army Group Center line. See Halder, *War Journal*, 7:374, 382 (entries for 14 and 24 August).
34. Halder, *War Journal*, 7:392 (entry for 10 September) and footnote. The actual order was untitled but was commonly referred to as the Führer Defense Order.
35. "Der Führer. OKH-GenStdH-Op Abt (I) Nr. 11154/42," dated 8 September 1942, NAM T-312/189/7736339, 7736341—7735246, hereafter cited as Führer Defense Order.
36. *Ibid.*, NAM T-312/189/7736339—7736340, 7736346—7736347.
37. *Ibid.*, NAM T-312/189/7736340—7736341.
38. *Ibid.*, NAM T-312/189/7736343.
39. *Ibid.*, NAM T-312/189/7736347—7736348.
40. *Ibid.*, NAM T-312/189/7736348—7736349.
41. See "Der Oberbefehlshaber der Heeresgruppe Mitte Ia Nr. 7420/42," dated 19 September 1942, NAM T-312/189/7736420; and "Oberkommando Heeresgruppe Mitte Ia/Gen.d.Pl.-Nr. 310/42. Betr.: Stützpunktausbau," dated 18 September 1942, NAM T-312/189/7736611. The Führer Defense Order was distributed down to division level and needed little editorial comment by intermediate commanders.
42. See the minutes of 25 September 1942 meeting, "Besprechung am 25.9.42, 10.30 Uhr," NAM T-312/189/7736673. This item, one of the miscellaneous supporting documents in Fourth Army's

War Diary, includes a sketch of notional defensive positions to be built in accordance with the Führer Defense Order, NAM T-312/189/7736583—7736585.

43. "Generalkommando LVI.Pz.Korps Ia Nr. 1381/42. An A.O.K.4," dated 21 September 1942, NAM T-312/189/7736597. See also "General-Kommando XXXXIII.A.K. Abt. Ia Nr. 1622/42. Betr.: Stellungsbau," dated 21 September 1942, NAM T-312/189/7736589—7736591.

44. See "A.O.K. 4 Ia Nr. 5505/42," NAM T-312/189/7736584—7736585.

45. For example, Fourth Army's instructions to its units included the preparation of a second position, built to the same specifications as the forward lines, for emergency occupation in the event of a Soviet breakthrough. Ibid.

46. "A.O.K. 4 Ia Nr. 0134/42. An Heeresgruppe Mitte," dated 21 September 1942, NAM T-312/189/7736479—7736482.

47. See Stein, *Waffen SS*, 10—11, 34—48, 93—102. In addition to volunteers from inside Germany proper, SS officials culled ethnic German communities within occupied territories for *Volksdeutsch* recruits. These non-Reich Germans, and later non-Germanic foreigners as well, were a bountiful source of *Waffen SS* manpower since they were outside the formal administration of the draft apparatus controlled by the Armed Forces High Command. Postwar apologists for the *Waffen SS* have argued that its multinational flavor made it a "prototype NATO army" defending Western culture against Asiatic Bolshevism. In fact, the multinational character of the *Waffen SS* derived more from SS attempts to tap new sources of manpower outside army control than from any crusading zeal on the part of the various groups who fought under SS banners. See Ibid., 250—58, 287—88; and George H. Stein, "The Myth of a European Army," *Wiener Library Bulletin*, 19 (April 1965):21—22.

48. Stein, *Waffen SS*, 203.

49. Manstein, *Lost Victories*, 269; Halder, *War Journal*, 7:366 (entry for 3 August).

50. Manstein, *Lost Victories*, 268. See also Warlimont, *Inside*, 265—66; and Mueller-Hillebrand, *Das Heer*, 3:78—79.

51. Halder, *War Journal*, 7:361 (entry for 27 July) and footnote.

52. "Armee-Oberkommando 4 Abt. IIB Nr. 392/42. Betr.: Kapitulanten-Nachwuchs bei der Infanterie," dated 18 September 1942, NAM T-312/189/7736410—7736413. The memo from the chief of infantry is cited as a reference in this document. On Germany's policies for recruiting and allocating manpower for infantry service, see Hellmuth Reinhardt, et al., "Personnel and Administration Project 2b, Part I (Recruiting for the Armed Forces, Peacetime and Wartime Systems)," *Foreign Military Studies* no. MS P-006 (Historical Division, U.S. Army, Europe, 1948), 28—29.

53. See Halder, *War Journal*, 7:368 (entry for 5 August) and footnote. "A.O.K. 4 Ia Nr. 0134/42. An Heeresgruppe Mitte," NAM T-312/189/7736485, requests increased numbers of volunteer laborers (*Hiwis*) to carry out the construction projects called for by Hitler's Führer Defense Order. See also "Oberkommando des Heeres. Der Chef des Generalstabes des Heeres, Org.Abt. (I) Nr. 5825/42. Grundlegender Befehl Nr. 7 (Organisation)," dated 20 November 1942, NAM T-312/1661/00070800—000709.

54. "Oberkommando des Heeres. Der Chef des Generalstabes des Heeres, Op.Abt. (I) Nr. 11548/42. Grundlegender Befehl Nr. 5 (Frontkämpfer)," dated 29 October 1942, NAM T-312/1660/000726. For a first-person account of a recruiting campaign carried out among German service troops, see Guy Sajer, *The Forgotten Soldier*, translated by Lily Emmet (New York: Harper and Row, 1971), 117—18.

55. Ziemke, *Stalingrad*, 20. Unruh's activities are described in detail in Walter von Unruh, "Combat Staff Unruh," *Foreign Military Studies* no. MS D-370 (Historical Division, U.S. Army, Europe, n.d.).

56. "Der Führer. Führer-Befehl Nr. 1," dated 8 October 1942, NAM T-312/1660/000745—000746.

57. "Oberkommando des Heeres. Der Chef des Generalstabes des Heeres, Org.Abt.(II) Nr. 9900/42. Grundlegender Befehl Nr. 1 (Hebung der Gefechtsstärke)," dated 8 October 1942, NAM T-312/1660/000747—000748.

58. "Grundlegender Befehl Nr. 1," NAM T-312/1660/000748—000749.
59. "Grundlegender Befehl Nr. 5," NAM T-312/1660/000724—000725. The rear support echelons of the German Army seem to have been everyone's favorite whipping boy at this time, and combat officers seldom passed up an opportunity to demand greater sacrifices from the service troops. Zeitler's actions to cause support units to share the burden of combat should be seen in this light, as should those instructions concerning the care of front fighters. General Heinrici, the commander of Fourth Army, took it upon himself to complain to Field Marshal von Kluge about the preferential treatment given rearward personnel in the distribution of food packages. Such high-level jealousy at the eternal "soft life" of the rear echelons connotes both concern for frontline morale and frustration at repeated supply failures. See "Armee-Oberkommando 4 Abt. IIb. Betr.: Urlauberbetreuung," dated 27 September 1942, NAM T-312/189/7736350. Supply units were also mildly flogged in German military propaganda. See Sajer, *Soldier*, 76.
60. "Grundlegender Befehl Nr. 5," NAM T-312/1660/000725—000726.
61. "Grundlegender Befehl Nr. 7," NAM T-312/1660/000705.
62. Quoted in Walter Görlitz, "The Battle for Stalingrad, 1942—1943," in *Decisive Battles of World War II: The German View*, edited by H. A. Jacobsen and J. Rohwer (New York: G. P. Putnam's Sons, 1965), 231.
63. "58. Inf.-Div. Ia Nr. 1148/42. Divisionsbefehl Nr. 2," dated 17 September 1942, NAM T-312/838/9003396.
64. Führer Defense Order, NAM T-312/189/7736340.
65. "Der Führer. OKH/Gen.St.d.H./Op.Abt. (I) Nr. 420817/42. Operationsbefehl Nr. 1," dated 14 October 1942, in *KTB/OKW*, 2:1301—4.
66. *KTB/OKW*, 2:888, 890 (entry for 2 November and additional comments by General Warlimont).
67. In Operations Order 1, Hitler called for an "active defense" (*aktive Verteidigung*) throughout the winter. The "active" measures recommended by Hitler included aggressive patrolling and local spoiling attacks to keep the enemy off balance. Hitler's concept of an active defense in no way implied fluidity for the German defenses themselves.
68. DA Pam 20—291, 11.
69. Freiherr von Ulmenstein, "161st Reconnaissance Battalion (21 Jun 1941—30 Jun 1942) and 132d Bicycle Battalion (17 Oct 1942—17 May 1943): Extracts from War Diaries," Foreign Military Studies no. MS P-093 (Historical Division, U.S. Army, Europe, 1954), 10—11. (The page numbers refer to portions of manuscript dealing with *Radfahrabteilung* 132.) See also "Armee-Oberkommando 2 Ia Nr. 2448/42. Betr.: Vorbereitungen für Gliederung und Umrüstung zum Winterkrieg," dated 19 October 1942, NAM T-312/1660/000736—000738; and "Oberkommando des Heeres Gen.St.d.H./Ausb.Abt. (II) Nr. /42 Verwendung von Panzerkampfwagen und Sturmgeschutzeinheiten im Winter," dated October 1942, NAM T-78/202/6146549—6146551.
70. "Fahrt des Herrn Oberbefehlshabers am 7. November 1942 zum Gen.Kdo. L.A.K. u. 2.SS-Inf. Brig.," NAM T-312/838/9002988.
71. "Fahrt des Herrn Oberbefehlshabers am Mittwoch dem 2.12.42," NAM T-312/838/9002933.
72. "Fahrt des Herrn Oberbefehlshabers am 22. und 12. Dez. 1942 zur 121. Inf. Div., 28. Jag. Div., 24. u. 154. Inf. Div.," NAM T-312/838/9002923, 9002926.
73. The winter defensive fighting in the areas of Army Groups North and Center is covered in detail in Ziemke, *Stalingrad*, 98—117.
74. The battles around Velikiye Luki are described in *Ibid.*, 107—9; and U.S. Department of the Army, Pamphlet no. 20—234, *Operations of Encircled Forces: German Experiences in Russia* (Washington, DC: U.S. Government Printing Office, 1952), 7—14. The disruption of German plans caused by the Soviet attack and the piecemeal German relief attempts are covered in Otto Tiemann, "Closing the 40-km Gap Between Army Group North and Army Group Center (Nov 1942—Mar 1943)," Foreign Military Studies no. MS D-241 (Historical Division, U.S. Army, Europe, 1947), 7—12.

75. MS D-106, 15. A general discussion of Army Group North's combat experiences during this period is "Oberkommando Heeresgruppe Nord Ia Nr. 20/43. Betr.: Erfahrungen und Folgerungen," dated 2 January 1943, NAM T-78/202/6146492-6146507.
76. The Demyansk fighting is described in Ziemke, *Stalingrad*, 112-13; Haupt, *Heeresgruppe Nord*, 149-54; and Friedrich Sixt, "Kriegsjahr 1943," part 3 in MS P-114a, 367-83. Defensive fighting during Operation Büffel is described in Wilhelm Willemer, et al., "Selected Divisional Operations on the Eastern Front (Delaying Action at Sychevka)," Foreign Military Studies no. MS P-143c (Historical Division, U.S. Army, Europe, 1954), 154-63, hereafter cited as MS P-143c; and Bergner, *Schlesische Infanterie*, 188-203.
77. DA Pam 20-261a, 135, 138; Mueller-Hillebrand, *Das Heer*, 3:59-60. For a description of the training problems experienced by German units preparing for Operation Blau, see Felix Steiner, "Tactics of Mobile Units. Operations of the 5th SS Panzergrenadier Division 'Wiking' at Rostov and the Maikop Oilfields (Summer 1942)," Foreign Military Studies no. MS D-248 (Historical Division, U.S. Army, Europe, 1947), 6-8; and Paul Schulz, "Combat in the Caucasus Woods and Mountains During Autumn 1942," Foreign Military Studies no. MS D-254 (Historical Division, U.S. Army, Europe, 1947), 3.
78. DA Pam 20-261a, 138-39; Mueller-Hillebrand, *Das Heer*, 3:60-62.
79. DA Pam 20-261a, 131-32.
80. "Die Gliederung des deutschen Heeres, 12.8.1942," *KTB/OKW*, II2, 1378-80; Mueller-Hillebrand, *Das Heer*, 3:67-68.
81. "Armee-Oberkommando 2 Ia Nr. 1884/42. Betr.: Erfahrungen bei Angriffs-und Abwehrkämpfen 28.6 bis 20.7.42," dated 21 July 1942, NAM T-312/1660/000898-000900.
82. DA Pam 20-261a, 132.
83. See Wilhelm Willemer, "Organization of the Ground for Defense on a Broad Front, as Defended by an Army or Larger Unit," Foreign Military Studies no. MS P-194 (Historical Division, U.S. Army, Europe, 1954), 8-19.
84. "Oberkommando der Heeresgruppe B Ia Nr. 2889/42. Betr.: 'Eingreifgruppen' an ständigen Fronten," dated 6 September 1942, NAM T-312/189/7736226-7736227.
85. Kurt Zeitler, "Stalingrad," in *Fatal Decisions*, edited by Freidin and Richardson, 137-40.
86. *Ibid.*, 142-43.
87. Seaton, *Russo-German War*, 312; Zeitler, "Stalingrad," 147.
88. Helmuth Greiner, "Greiner Diary Notes, 12 Aug 1942-12 Mar 1943," Foreign Military Studies no. MS C-065a (Historical Division, U.S. Army, Europe, 1950), 91-93. Greiner kept the War Diary for the Armed Forces High Command during this period of the war. See also DA Pam 20-291a, 161-62.
89. "Armee-Oberkommando 2 Ia Nr. 1098/42. An Oberkommando Heeresgruppe B," dated 1 October 1942, NAM T-312/1660/000761-0007655.
90. "V.O./OKH bei AOK 6," dated 13 October 1942, NAM T-78/343/6300915-6300919.
91. Seydlitz urged Paulus to disregard Hitler's orders and begin a breakout on his (Paulus') own authority in order to save Sixth Army. Ironically, Hitler suspected that Paulus might try something of the sort and so made Seydlitz-whom the dictator considered absolutely reliable-independently responsible for holding a portion of the pocket's defensive front. This was an affront to Paulus and also a curious reward for the one man who, unknown to Hitler, was most actively lobbying for an unauthorized breakout. Taken prisoner at Stalingrad, Seydlitz became a prominent Soviet collaborator, being one of the spokesmen of the so-called Free Germany Committee that urged Germans to turn against the Nazis. See Seaton, *Russo-German War*, 320; Ziemke, *Stalingrad*, 57-58; and Walter Görnitz, *Paulus and Stalingrad*, translated by R. H. Stevens (New York: Citadel Press, 1963), 211-12.
92. In its attempts to supply Sixth Army by air, the *Luftwaffe* also lost over half of its operational Ju-52 transport aircraft fleet and a large number of valuable instructor pilots. The Stalin-

grad airlift is discussed in detail in Fritz Morzik, *German Air Force Airlift Operations*, USAF Historical Studies no. 167 (Maxwell Air Force Base, AL: USAF Historical Division, Research Studies Institute, Air University, 1961), 179–202. Sixth Army estimated its own daily supply requirements at 550 tons per day. This estimate, based on consumption rates for defensive operations only, included 75 tons of fuel for supply distribution and defensive operations by the panzers and 100 tons of ammunition. These figures did not include any stockpiling for a possible breakout. See Army Group Don message reproduced in Görlitz, *Paulus and Stalingrad*, 275–76.

93. "Vom Tschir zum Mius. Winterabwehrschlacht 1942/43. Die Kämpfe der 3. Rumänischen Armee—ab 27 Dez. Armee-Abteilung Hollidt in der Zeit vom 23. Nov. 1942 bis 28 Febr. 1943. Armee-Oberkommando 6, Juni 1943," NAM T-312/1463/000830—000831. See the detailed description of the improvised units joining in the Chir River defense by Otto von Knobelsdorff, commander of the XLVIII Panzer Corps, in Friedrich Schulz, et al., "Reverses on the Southern Wing (1942—1943); (Annex 5: The XLVIII Panzer Corps in Action Between the Don and Mius River Sectors, 5 December 1942 to 12 February 1943)," *Foreign Military Studies* no. MS T-15 (Historical Division, U.S. Army, Europe, 1947), 252—53, hereafter cited as MS T-15.

94. F. W. von Mellenthin, *Panzer Battles*, translated by H. Betzler (Norman: University of Oklahoma Press, 1956), 178; Heinz Schneider, "Breakthrough Attack by the V Russian Mechanized Corps on the Khir River from 10 to 16 December 1942," Appendix 3, 32, in "Small Unit Tactics—Tactics of Individual Arms (Part II)," by Burkhart Mueller-Hillebrand, *Foreign Military Studies* no. MS P-060f (Historical Division, U.S. Army, Europe, 1951), hereafter cited as MS P-060f. See also MS T-15, 256—57. (General von Knobelsdorff incorrectly identifies the 336th Division as the 338th Division in his account, an error apparently due in part to the similar numbering of certain infantry regiments in this battle.)

95. Mellenthin, *Panzer Battles*, 175.

96. "Vom Tschir zum Mius," NAM T-312/1463/000832—000833. The 7th *Luftwaffe* Field Division disintegrated altogether during the Chir battles. Its survivors were later incorporated into the 384th Infantry Division. See also MS T-15, 257—58.

97. "Vom Tschir zum Mius," NAM T-312/1463/000834. The 7th *Luftwaffe* Field Division was almost completely destroyed in this fighting. One measure of its lack of training was recounted by the commander of the XLVIII Panzer Corps as follows:

The furthest advanced air force infantry battalions had been assigned their respective sectors by their division headquarters. However, the division had quite apparently neglected to inform the battalions sufficiently well on the serious nature of the situation. It had failed to give them detailed instructions and orders on how to effect an undetected night time relief. The battalions therefore drove right into the outpost lines. They rumbled along with their trains, without providing for security on the march, without reconnaissance . . . until they were right in the middle of the Russians where they were duly and promptly wiped out without firing a shot. This was a terrific shock to the division—so terrific, as a matter of fact, that it was for the moment in no shape to be sent into combat as an independent unit.

See MS T-15, 261.

98. MS P-060f, 33.

99. *Ibid.*, 12—13.

100. *Ibid.*, 33.

101. *Ibid.*, 21, 22. Mellenthin, citing Balck as his source, denies that single German tanks were ever left in direct support of infantry during these battles. Quoting Balck, Mellenthin concedes that "many a crisis would not have arisen had the 336th Division possessed a larger number of antitank guns." See Mellenthin, *Panzer Battles*, 183—84. General accounts of the events surrounding the Chir River fighting are in "Vom Tschir zum Mius," NAM T-312/1463/000834—000835; MS T-15, 259—67; Mellenthin, *Panzer Battles*, 172—84; presentation by Colonel David M. Glantz at the 1984 Art of War Symposium, "The Middle Don Operation, 16—28 December 1942," in U.S. Army War College, Center for Land Warfare, *1984 Art of War Symposium: From the Don to the Dnepr—Soviet Offensive Operations, December 1942—August 1943, a Transcript of Proceedings* (Carlisle Barracks, PA: U.S. Army War College, October 1985), 42—49, 51; and comments of

F. W. von Mellenthin, *Ibid.*, 99—118. Mellenthin's symposium comments are nearly a word-for-word recitation of his earlier description in *Panzer Battles*, which is based largely on the XLVIII Panzer Corps' war diary. While providing interesting tactical insights, Mellenthin's accounts generally ignore important contextual material as well as combat actions that might tend to diminish the apparent magnitude of the German successes. For example, he does not mention the loss of the German bridgehead across the Chir River at Surovikino—a major loss under the circumstances since this bridgehead had been key to the German hopes of supporting the Stalingrad relief attack. Similarly, he gives the mistaken impression that the German successes on the Chir River constituted a major defeat for the Soviets when, from the Russian standpoint, the Chir fighting was but a minor hiccup in an otherwise widely successful general offensive. Seen in this light, the German actions on the Chir are more correctly described as a *tactical* success amid a general *operational* defeat.

102. Mellenthin, *Panzer Battles*, quoting Balck, 183—84.
103. MS P-060f, 19; Mellenthin, *Panzer Battles*, 178.
104. Mellenthin, *Panzer Battles*, quoting Balck, 184.
105. *Ibid.*
106. MS P-060f, 34—35.
107. *Ibid.*, 31.
108. The inability of the German panzer divisions to hold terrain was evident not only on the Chir River, but also during the LVII Panzer Corps' attack to relieve Stalingrad. See the discussion at Hitler's headquarters on the need for infantry in the defense on 12 December 1942 in Helmut Heiber, ed., *Hitlers Lagebesprechungen: Die Protokollfragmente seiner militärischen Konferenzen, 1942—1945* (Stuttgart: Deutsche Verlags-Anstalt, 1962), 89.
109. See Clark, *Barbarossa*, 263—64; Mellenthin, *Panzer Battles*, 185—86; and MS T-15, 265. During some of the 11th Panzer Division's successful battles on the Chir, German officers noted that the Soviets were remarkably lax in consolidating their gains, leaving them unnecessarily vulnerable to German counterthrusts. See MS P-060f, 35.
110. Seaton, *Russo-German War*, 328; Morzik, *German Air Force*, 190—91. For a critique of the combat performance of the Italian and Hungarian armies in these battles, see Jurgen Forster, *Stalingrad: Risse im Bündnis 1942/43* (Freiburg: Rombach, 1975), 143—49; and MS T-15, 267—73. On the Romanian forces, see MS T-15, 282—83.
111. See "A.O.K. 2 Ia Nr. 1412/42," dated 1 December 1942, NAM T-312/1660/000694—000695; and "A.O.K. 2 an Ob.Kdo.Hgr.B, Chef des Generalstabes," dated 3 December 1942, NAM T-312/1660/000696—000702. The reporting system established four categories of divisions: category I—very good, category II—good, category III—marginal, and category IV—poor. In its report to Army Group B, Second Army on 3 December listed two of its divisions as being category I, seven category II, three category III (including its only panzer division), and two category IV. Considering that Second Army had done little fighting since late summer, this demonstrates the general erosion that had befallen all of the German armies in the East.
112. Manstein, *Lost Victories*, 384—86.
113. *Ibid.*, 378—79.
114. *Ibid.*, 381. See also Clark, *Barbarossa*, 280—81.
115. Manstein, *Lost Victories*, 386.
116. *Ibid.*, 383—84.
117. *Ibid.*, 373—74. See also the presentation by Colonel David M. Glantz, "The Donbas Operation, 29 January—6 March 1943," in *1984 Art of War Symposium*, 120—60.
118. See Willemer, "Armor in the Aggressive Defense," in MS P-143c, 144.
119. "Vom Tschir zum Mius," NAM T-312/1463/000842; Wilhelm Russwurm, "Employment of a Furlough Detachment for Rear Area Security (Don, Donets, Winter 1942—43)," *Foreign Military Studies* no. MS D-282 (Historical Division, U.S. Army, Europe, 1947), 1—6.

120. Army Detachment Hollidt is a case in point. According to German military terminology, an army detachment (*Armee Abteilung*) was an army-sized force that lacked the full complement of support and service units normal for a field army. This formation was initially built around General Karl Hollidt's XVII Corps and gradually grew to take control of whatever forces could be rallied.

121. Manstein, *Lost Victories*, 380. A few units that transferred to the Eastern Front from France, such as the 7th Panzer Division, also had to endure what the Germans called the "childhood diseases" of combat acclimatization. See MS T-15, 274-75.

122. See Senger und Etterlin, *Neither*, 87, 95, 101. The *Alarmeinheiten*, scraped together from disparate rear-echelon personnel, naturally had no standard organization. As a rule, these units seldom possessed any antitank guns or other heavy infantry weapons. Though *Alarmeinheiten* occasionally performed helpful defensive missions, as a rule their combat value was virtually zero. One former German officer, asked to estimate their effectiveness, remarked that they seldom lasted longer than thirty minutes in combat before disintegrating. General (Ret.) Ferdinand von Senger und Etterlin, Interview with the author, Carlisle Barracks, PA, 2 May 1985; Lieutenant General (Ret.) Gerd Niepold, Interview with the author, Carlisle Barracks, PA, 3 May 1985; Lieutenant General (Ret.) Anton-Detlev von Plato, Interview with the author, Carlisle Barracks, PA, 2 May 1985; Lemm interview. For a general discussion of the problems of *Alarmeinheiten*, see paraphrased translation of Hans Christian Treutsch, "Concerning the Organization of Ad Hoc Combat Groups" in Edward N. Luttwak, *Historical Analysis and Projection for Army 2000*, vol. 1, pt. 10, "The German Army in the Second World War: Urban-Warfare Task Forces (*Kampfgruppen*) and Emergency Ad Hoc Forces (*Alarmeinheiten*)" (Fort Monroe, VA: U.S. Army Training and Doctrine Command, 1 March 1983), 17-26.

123. *Ibid.*, 101.

124. Manstein, *Lost Victories*, 389. For another view of this fighting, see Fretter-Pico, *Infanterie*, 100-103.

125. Senger und Etterlin, *Neither*, 98.

126. See "294 Inf. Division Ia Abschrift: Erfahrungsbericht über den Einsatz von mot. Nachtruppen beim Rückzug zwischen Donez und Mius," XVII Corps coversheet dated 18 March 1943, NAM T-312/1462/000911-000915. Reprinting this report for circulation to other headquarters. Hollidt's new Sixth Army described this expedient motorization as a demonstration that such mobile units could play an important role even in positional warfare (*Stellungskrieg*). See "Oberkommando der 6. Armee Ia Nr. 835/43. Betr.: Erfahrungsbericht," dated 25 March 1943, NAM T-312/1462/000916.

127. MS P-143c, 145-52.

128. *Ibid.*, 151-52.

129. "294 Inf. Division: Erfahrungsbericht," NAM T-312/1462/000912.

130. See the description in "Vom Tschir zum Mius," NAM T-312/1463/000849.

131. *Ibid.*, NAM T-312/1463/000860, 000861.

132. *Ibid.*, NAM T-312/1463/000842.

133. Manstein, *Lost Victories*, 423-28; Seaton, *Russo-German War*, 347-48. Soviet intelligence detected heavy German convoy movements and concentrations of troop trains south of Kharkov but erroneously interpreted these activities as evidence of another major German withdrawal. Instead, Manstein was massing his force for a counterstroke. Manstein's success owed much to this important failure by Soviet intelligence analysts. See Erickson, *Road to Berlin*, 50-51; and Glantz, "Donbas Operation," 160-62.

134. Manstein, *Lost Victories*, 428-37; Mellenthin, *Panzer Battles*, 207-8; and Seaton, *Russo-German War*, 349-50.

135. "Generalkommando XXIV Pz. Korps Abt. Ia Nr. 937/43. Zusammenfassender Bericht über die Tätigkeit des Gen.Kdo.XXIV.Pz.Korps an der Tagenrog-Front in der Zeit vom 9.3.43 bis 15.4.43," dated 3 May 1943, NAM T-312/1462/000933-000938.

136. Hitler visited Manstein's headquarters on 17—19 February 1942. His apparent intention upon arrival was to remove Manstein from command; he ended up reluctantly approving Manstein's counterattack plans. See Ziemke, *Stalingrad*, 91—92; and Manstein, *Lost Victories*, 423—28.
137. "Anlage 3 zum Korpsbefehl für die Neugliederung der Verteidigung vom 18.3.42. Abt. Ia Nr. 378/43. Anweisung für die Kampfführung," NAM T-312/1462/000940; and "Zusammenfassender Bericht—XXIV Pz.Korps," NAM T-312/1462/000935—000936.
138. "H.Gr.Nord Ia Nr. 11721/42 von 20.9.1942," cited as a reference in "Armee-Oberkommando 18. Erfahrungen," NAM T-312/838/9003255.
139. "21. Infanterie-Division. Erfahrungen," NAM T-312/838/9003292.
140. "Armee-Oberkommando 18. Erfahrungen," NAM T-312/838/9003255.
141. "21. Infanterie-Division. Erfahrungen," NAM T-312/838/9003292. See also "121. Inf.-Division. Erfahrungen," NAM T-312/838/9003304; and "1. Division Erfahrungen," NAM T-312/838/9003270.
142. "Fusilier-Regiment 22. Erfahrungen," NAM T-312/838/9003362; and "58. Inf.-Div. Erfahrungen," NAM T-312/838/9003383. See also the comments of General Ortner, commander of the 69th Infantry Division, to General Lindemann during the latter's inspection tour on 2 December 1942, "Fahrt des Herrn Oberbefehlshabern am Mittwoch, dem 2.12.42 zur 69. Inf. Division," NAM T-312/838/9002932.
143. "A.O.K. 4 Ia Nr. 5245/42. Betr.: Erfahrungen bei russischen Angriffen," dated 14 September 1942, NAM T-312/289/7736217.
144. "1. Division. Erfahrungen," NAM T-312/838/9003275.
145. "4. Panzer-Division Kommandeur Nr. 1290/42. Betr.: Panzer-Einsatz in der Verteidigung," dated 30 September 1942, NAM T-78/202/6146563.
146. "Der Oberbefehlshaber der 4. Panzerarmee Ia Nr. 3121/42. Betr.: Panzer-einsatz," dated 21 September 1942, NAM T-78/202/6146563.
147. "A.O.K. 4. Erfahrungen bei russischen Angriffen," NAM T-312/189/7736218.
148. See, for example, "121. Inf.-Division. Erfahrungen," NAM T-312/838/9003306, 9003310; and "58. Inf.-Div. Erfahrungen," NAM T-312/838/9003386—9003387, 9003391.
149. Senger und Etterlin, *Neither*, 95, 98. See also the comments of General von Knobelsdorff in MS T-15, 288, endorsing the concentration of armor and the autonomy of panzer commanders.
150. "4. Panzer-Division Kommandeur. Panzer-Einsatz in der Verteidigung," NAM T-78/202/6146563, 6146565. German tank commanders did not wish to engage small break-ins partly because these did not allow sufficient maneuver space for the panzers to deploy. Consequently, German armor counterattacks against smaller penetrations took on the appearance of frontal attacks regardless of the direction of attack. German commanders were also concerned about the growing tank attrition rates in counterattacks, an indirect tribute to improved Soviet training and combined arms cooperation. See, for example, "Anlage zu A.O.K. 4 Ia Nr. \_\_\_\_\_/42 vom 18.9.42. Oberkommando der Heeresgruppe Mitte Ia Nr. 7216/42," a report on high tank losses during counterattacks around Rzhev in September 1942, NAM T-312/189/7736374—7736375.
151. A draft copy of "Merkblatt für den Einsatz von Panzern im Abwehrkampf," with marginal comments apparently by LVI Panzer Corps, is in NAM T-312/189/7736422—7736431. The interest in tank-infantry cooperation and the defensive use of tanks during this period was apparently stimulated by the announced intention of the Training Branch of the General Staff to publish a definitive manual on these subjects. See, for example, the comments in "Abteilung Feldheer Ref. III Bb. Nr. 404/43. Betr.: Zusammenarbeit zwischen Panzer und Infanterie," dated 30 April 1943, NAM T-78/202/6146475—6146476.
152. "Panzertruppenschule Wünsdorf, Merkblatt über Zusammenwirken zwischen Panzern und Infanterie in der Verteidigung für die mit der Durchführung des Panzereinsatzes verantwortlichen Truppenführer," dated February 1943, NAM T-78/202/6146516—6146521.

153. "Panzertruppenschule (Schule f.Sch.Tr., Wünsdorf). Merkblatt über Zusammenarbeit zwischen Panzern und Infanterie in der Verteidigung (für höhere Kommando-behörden)," dated February 1943, NAM T-78/202/6146522—6146523.

## Chapter 5

1. Manstein's comment is quoted in Liddell Hart, *The Other Side*, 318.
  2. MS P-089, 12.
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