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MAGYAR-OTTONIAN WARFARE

À propos a New Minimalist Interpretation¹

Specialists in the history of early medieval Western Europe traditionally view the Magyars, along with the Vikings and the Muslims, as a very destructive force which helped to undermine the civilizing processes advanced east of the Rhine by the Carolingian empire and its successor kingdoms. Indeed, the Magyars are regarded as exceptionally brutal or as Maximilian Georg Kellner put it in his recent book, they are seen as: »skrupellose Mörder von Frauen, Männern und Kindern«, »habgierige Räuber«, and »Zerstörer von Kirchen und Klöstern«². It is Kellner's thesis that the Magyars, as depicted in contemporary sources prior to their conversion to Christianity, certainly were no worse than other invaders during the later ninth and tenth centuries who killed men, women, and children, greedily plundered whatever they could, and destroyed both churches and monasteries. He emphasizes, however, that after the Magyars were Christianized, contemporaries highlighted and exaggerated the evil that had been done by their pagan ancestors so as to exploit the benefits that conversion to Christianity had wrought.

Central to Kellner's effort is an intention to demonstrate that considerable exaggeration characterizes descriptions of Magyar destructiveness. One may be reminded here of Peter Sawyer's efforts to »whitewash« the reputation of the Vikings³. This attempted exculpation led Wallace-Hadrill to quip: »[S]hould we view the Vikings as little more than groups of long-haired tourists who occasionally roughed up the natives?«⁴ Kellner, in order to make the essential point regarding the putative exaggeration of the Magyars' negative impact on the West, argues that their armies were very small⁵. Thus, logically, one must draw the ineluctable conclusion that the Magyars simply could not have been as dangerous and destructive as medieval reports indicate. As a result of these »faulty« sources, modern scholars, by and large, have been misled in attributing excessive destructiveness to the Magyars during the period in which they were still pagans. In a similar vein, Sawyer argued that

1 My text results from a review of Maximilian Georg KELLNER, *Die Ungarneinfälle im Bild der Quellen bis 1150: Von der »Gens detestanda« zur »Gens ad fidem Christi conversa«* (Studia Hungarica. Schriften des Ungarischen Instituts München, 46), Munich (Ungarisches Institut) 1997, 225 p. Approximately half the text, p. 97–173, deals with »Die militärischen Aspekte der Ungarneinfälle«.

2 Ibid. p. 7.

3 Peter SAWYER, *The Vikings*, London 1962.

4 J. M. WALLACE-HADRILL, *The Vikings in Francia*, in: ID., *Early Medieval History*, Oxford 1975, p. 220.

5 KELLNER p. 112. Karl J. LEYSER, *The Tenth Century in Byzantine-Western Relationships*, in: *Relations between East and West in the Middle Ages*, ed. Derek BAKER, Edinburgh 1973, p. 29–63, and reprinted in ID., *Medieval Germany and Its Neighbours: 900–1250*, London 1982, p. 45, refers to this Magyar army as composed of aristocratic nomads.

the Viking armies were very small as a corollary to his minimalist interpretation of their destructiveness⁶.

Kellner, in order to sustain his position regarding the supposed small armies of the Magyars, quite reasonably finds it necessary to argue that the military forces of *Francia orientalis* also were rather small. This minimalist approach to the army of the Saxon dynasty and to the royal government, itself, fits well with recent efforts by scholars to depict the Carolingians' eastern successors as ruling a primitive polity based upon personal relations rather than on governmental institutions and administrative processes. Indeed, Ottonian efforts at *imitatio imperii* are seen to be dominated by form but lacking in substance. This argument assumes the effective elimination of Romanized Carolingian institutions in *Francia orientalis* and tends to characterize late Roman or Byzantine aspects identifiable in Ottonian culture and government as a façade or perhaps some sort of ›Schauspiel‹⁷. Thus, a true German identity is seen to emerge from the ›echt‹ but primitive values and customs that are believed to dominate a warrior culture as putatively described by Tacitus. The *Germania* is treated as though it were a repository of ›objective reality‹ for ascertaining the contours of ›Germanentum‹, while evidence for continuity from this primitive ›Urzeit‹ is ›discovered‹ in later medieval Norse sagas which, despite perfunctory recognition of their

6 SAWYER, *The Vikings* (as n. 3) p. 8–11; 118–136; note, as well, the rather crude minimalist effort by Horst ZETTEL, *Das Bild der Normannen und der Normanneneinfälle in westfränkischen, ostfränkischen und angelsächsischen Quellen des 8. bis 11. Jahrhunderts*, Munich 1977. See my review of the latter work in: *Speculum* 55 (1980) p. 613–615. Although Sawyer's work does not appear to have been used by Kellner, the latter does include Zettel's far less sophisticated effort in his bibliography.

7 See, for example, Gerd ALTHOFF, *Verwandte, Freunde und Getreue: zum politischen Stellenwert der Gruppenbindungen im frühen Mittelalter*, Darmstadt 1990; Johannes FRIED, *Die Formierung Europas 840–1046*, Munich 1991. More recently, J. FRIED, *The Frankish Kingdoms, 817–911: The East and Middle Kingdoms* (*The New Cambridge History*, 2: C. 700–c. 900, ed. Rosamond McKITTERICK), Cambridge 1995, p. 145, strongly emphasizes that ›the provinces east of the Rhine were peripheral to royal rule‹ in the united Carolingian *regnum* and that ›there was no such thing as a coherent concept of policy‹. See my review article in: *Speculum* 74 (1999) p. 217–220, where Fried's views are criticized in some detail. An exceptionally clear exposition of the minimalist position concerning Ottonian government is found in G. ALTHOFF, *Otto III.*, Darmstadt 1996, p. 19, who writes: ›keine Verwaltung, kaum Institutionen und eine verschwindend geringe Intensität von Schriftlichkeit auf allen Gebieten öffentlichen Lebens‹. Now see the effective critique of a collection of earlier pieces by ALTHOFF, *Spielregeln der Politik im Mittelalter: Kommunikation in Frieden und Fehde*, Darmstadt 1997, by Howard KAMINSKY, in: *Speculum* 75 (1999), p. 687, who points out, among other things, that Althoff's mistranslations of a variety of Latin texts are deployed to demonstrate a lack of governmental power, when, in fact, ›the actual sources, in Latin imply, if anything the opposite‹. (I would like to thank Professor Kaminsky for making a pre-publication copy of his review available to me.) LEYSER, *Tenth Century* (as n. 5) p. 60, makes a typical rhetorical foray into this type of primitivism when he observes ›Widukind's use and adaptation of Roman military terms must not lead one to the conclusion that Otto's forces moved in well-drilled formations‹. What specialist even in Roman military history would assume that simply because a writer of the first century B.C. used the term *legio*, the reader should conclude that the force in question was operating at any particular moment in ›well drilled formations‹? All texts, to be treated in a methodologically sound manner, must be understood in context. Creating myths about Roman reality (see below Kellner's efforts in this regard) in order to primitivize our perception of Ottonian military administration is a rhetorical conceit that has been used far too often to be taken seriously. For a particularly egregious example of constructing ›Germanentum‹ see James C. RUSSELL, *The Germanization of early medieval Christianity. A sociohistorical approach to religious transformation*, New York 1994, and my review in: *Società e storia* 70 (1996) p. 911–913.

literary character and stylistic rigidity, are treated at times as though they were scientifically orchestrated documentary descriptions⁸.

This model of Ottonian primitivism, as supposedly evidenced by the inability of the royal government to mobilize large armies and to maintain such forces in the field, is a necessary pre-condition for Kellner to sustain his view that Magyar armies were very small, i.e., about 300 effectives in order of magnitude on average⁹. Were it to be recognized, however, that the armies mobilized by the Saxon royal administration were large and effective, Kellner understands, these forces would have had little difficulty of disposing of ridiculously small groups of lightly armed Magyar horsemen. Indeed, Kellner would seem to subscribe to a peculiarly Germanist view of medieval military operations that recently has been popularized by Norbert Ohler. In this context, armed forces are small and composed primarily of aristocratic heavy cavalry and private feuds are the norm rather than »real war«¹⁰.

Kellner's assumptions, unsupported either by evidence or argument, that Magyar armies, because they were composed of nomads, could move very rapidly and without noteworthy logistic support while on campaign within the confines of the erstwhile Carolingian empire are completely wrong¹¹. It is clear that Asian horsemen, e.g., Huns, Avars, Magyars, and Mongols, were able to deploy very rapidly over great distances on the Steppes. Each fighting man under such conditions led a string of as many as eight mounts, which were fed eas-

8 Michael ENRIGHT, *Lady with a Mead Cup: Ritual, Prophecy and Lordship in the European Warband from la Tène to the Viking Age*, Dublin 1996, p. 97–98, provides a brief discussion of this method with an attempt to justify its use. For some criticism of this approach see Walter GOFFART, *Two Notes on Germanic Antiquity Today*, in: *Traditio* 50 (1995) p. 9–30; and B. S. BACHRACH, *Anthropology and Early Medieval History: Some Problems*, in: *Cithara* 34 (1994) p. 3–10. However, much more research is needed on this aspect of Germanist historiography which works to the »primitivization« of German history so as to excise alien influence and create an identity that is truly Germanic. Mistranslations of key texts, such as those perpetrated by Althoff, mentioned above, play an important role in these methods of primitivizing the Germanic world.

9 KELLNER p. 123, »... 300 Ungarn ... Dies ist tatsächlich die Größenordnung ...«. This text will be discussed below.

10 Norbert OHLER, *Krieg und Frieden im Mittelalter*, Munich 1997, p. 9–17, where the »Problemstellung« is established. See the classic study of military demography in which the doctrine of small numbers is effectively criticized by Karl Ferdinand WERNER, *Heeresorganisation und Kriegsführung im deutschen Königreich des 10. und 11. Jahrhunderts* (*Settimane di Studio de Centro Italiano sull'alto Medioevo*, 15), Spoleto 1968, p. 791–843, which is not even cited in Ohler's bibliography. See also Leopold AUER, *Formen des Krieges im abendländischen Mittelalter*, in: *Formen des Krieges vom Mittelalter zum »Low-Intensity-Conflict«*, ed. M. RAUCHENSTEINER and E. A. SCHMIDL, Graz, Vienna, Cologne 1991, p. 17–43; Heinrich FICHTENAU, *Lebensordnungen des 10. Jahrhunderts*, 2 vols., Stuttgart 1984, I, p. 544–564. The Inaugural Dissertation by Bruno SCHERFF, *Studien zum Heer der Ottonen und der ersten Salier (919–1056)*, Bonn 1985, provides vast amounts of information from the sources that could provide a basis for grasping the sophistication of the German military in pre-Crusade Europe. However, he chooses to emphasize a certain primitiveness with throwaway lines such as a campaign was: »Planvoll nicht im Sinne heutigen Verständnisses, sondern planvoll im Verständnis des 10. Jahrhunderts ...« (p. 97). After reviewing the treatment of medieval German military history, written during the post-World War II era by German scholars, I have formulated the tentative hypothesis that all of this emphasis on primitivism is a rather transparent way of disowning the more modern and very sophisticated German military tradition as an enduring trait of »national character« originating in earliest times. Or to put it another way: We Germans were not always the type of people who slaughtered hundreds of thousands of men, women, and children in the Thirty Years War, ruled with Blood and Iron in the nineteenth and caused two world wars in the twentieth. Since I have no attachment to notions of national character, this imperative for »whitewashing« the past, I see as totally misplaced.

11 KELLNER p. 120–121, 123–124, 129–132.

ily on the vast expanse of accessible grasslands. Thus, Steppe armies could move long distances very rapidly and make effective surprise attacks with large forces. However, it has long been established that this tactical advantage was lost to mounted Steppe military forces once they moved beyond the Great Hungarian Plain or Alföld. Grazing lands in the West simply were not sufficient to sustain the numbers of horses that were necessary to maintain this type of Steppe tactical deployment. Thus, in the West, erstwhile Steppe horsemen were required to limit themselves to two or three horses with a concomitant diminution of tactical range¹². Kellner, however, appears unaware of the classic studies on the subject of nomad logistics and the changes that were wrought by the objective conditions regarding the availability of fodder that they found in the West¹³.

By arguing for small Ottonian armies, Kellner is forced to confront Karl Ferdinand Werner's magisterial study of early medieval military demography which was published in 1968¹⁴. The latter's ideas and methods, which have been widely accepted and augmented by specialists in medieval military history, including Philippe Contamine, have resulted in a fundamental rejection of the minimalist approach which is represented especially in the recent German historiography that is noted above¹⁵. Indeed, the influence of Hans Delbrück's obsessive minimalism in regard to medieval military demography, in general, and early medieval military demography, in particular, which for so long dominated the field, is now a subject of mere historiographical interest among non-German specialists. Delbrück's work is to be regarded primarily as a chapter in the history of history writing¹⁶.

Kellner's approach to providing a minimalist view of Magyar military strength is advanced on several fronts at once. At first, he appears to accept the views put forth by Werner that Charlemagne could mobilize some 100 000 effectives for offensive military operations in several army groups. However, Kellner fails to make clear that according to Werner approximately 30 000 of these effectives were heavily armed mounted troops. Moreover, Kellner ostensibly would seem to misrepresent Werner's views and erroneously presents this 100 000 figure as the total number of men who could be placed under arms

12 Karl LEYSER, *The Battle on the Lech*, in: *History* 50 (1965) p. 1–25 and reprinted in *Id.*, *Medieval Germany and Its Neighbours: 900–1250*, London 1982, p. 62, calls attention to the fact, noted in the sources, that the Magyars' horses were so tired out in the Lech campaign that their retreat was seriously undermined. This could not have happened if each Magyar horseman were riding with a string of six, seven, or even eight mounts as was the custom on the Steppes.

13 Dennis SINOR, *Horse and Pasture in Inner Asian History*, in: *Oriens extremus* 91 (1972) p. 171–183; John Mason SMITH, *State and Society in Iran*, in: *Iranian Studies, Journal of the Society for Iranian Studies* 11 (1978) p. 57–81; Rudi LINDNER, *Nomadism, Horses and Huns*, in: *Past and Present* 92 (1981) p. 3–19. KELLNER seems unaware of this literature but recognizes (p. 121) that the Byzantines from time to time called attention to the fact that the nomads had problems finding grazing lands for their horses.

14 WERNER p. 791–843.

15 Philippe CONTAMINE, *La Guerre au Moyen Age*, 4th ed., Paris 1994, p. 102–103. See, in addition, two studies of my own: *The Hun Army at the Battle of Chalons (451): An Essay in Military Demography*, in: *Ethnogenese und Überlieferung. Angewandte Methoden der Frühmittelalterforschung*, ed. K. BRUNNER, B. MERTA, Vienna, Munich 1994, p. 59–67; *The Siege of Antioch: A Study in Military Demography*, in: *War in History* 6 (1999) p. 127–146.

16 Hans DELBRÜCK, *Geschichte der Kriegskunst im Rahmen der politischen Geschichte*, 6 vols., Berlin 1900–1936, of which volumes 1, 2 and 3 are of relevance here. These are now available in English translation by Walter J. RENFROE as *History of the Art of War: Within the Framework of Political History*, vols. 1–3, Westport Conn. 1975–1982. For a detailed critique of Delbrück's methods see B. S. BACHRACH, *Early Medieval Military Demography: Some Observations on the Methods of Hans Delbrück*, in: *The Circle of War*, ed. D. KAGAY, Woodbridge, UK 1999, p. 3–20. A good general introduction is Arden BUCHOLZ, *Hans DELBRÜCK, The German military establishment: war images and conflict*, Iowa City 1985.

from the entire empire, including Italy. Werner, however, excludes Italy from his calculations, but most importantly, he argues that the 100 000 effectives, whom he has identified, were those men who could be mobilized for *expeditio* beyond the frontiers of the *pagus* in which they dwelled¹⁷. Kellner would seem to believe that the 100 000 figure adumbrated by Werner also included the *Landwehr*¹⁸. i.e., the »great *fyrð*« as Anglo-Saxon specialists label the local defense forces which were not mobilized for service *in expeditio* beyond the frontiers of the shire¹⁹. In short, it is very likely that throughout Charlemagne's empire there were some five or six million able bodied men in the age cohort between fifteen and fifty-five years of age who could be mobilized within the *pagi* in which they lived purely for the local defense²⁰. Although such levies, during the later ninth century, often were less than effective against highly trained enemy forces, these local forces could, under proper conditions, give a good account of themselves²¹.

Kellner's misunderstanding of Werner's position with regard both to the expeditionary and local defense forces of Charlemagne's empire is compounded when he turns to the Ottonians. Kellner agrees that the generally accepted figure of 20 000 effectives for Otto II's military operations in Italy, which culminated in his humiliating defeat at Cap Colonne in 982, is correct. However, Kellner believes that Otto's 20 000 man army was very close to the total of all »waffenfähige« men whom the Saxon ruler had available to him from his entire empire. He encourages his readers to infer that Germany, as a result of Otto II's efforts, ostensibly was denuded of effective troops. Kellner goes on to argue that this figure of some 20 000 effectives may be assumed to be an accurate estimate for the total available manpower for all offensive operations when Otto I defeated the Magyars at the Lechfeld twenty-seven years earlier²².

Kellner's arithmetic, of necessity, is based upon the unwarranted, inaccurate, but unstated assumption that the great Ottonian »Reich« was much poorer in both manpower and material wealth than the one-third of the *regnum Francorum* that had constituted *Francia orientalis* in the decades following the death of Charlemagne in 814. If the German part of the empire, ruled by the Saxon dynasty during the mid- and later-tenth century, had included

17 WERNER p. 816–822, 828–830.

18 KELLNER p. 113–114.

19 See, for example, the basic work of C. Warren HOLLISTER, *Anglo-Saxon Military Institutions on the Eve of the Conquest*, Oxford 1962, p. 25–37. KELLNER p. 114–115, manages to confuse matters concerning militia service for the local defense with the ever controversial *agrarii milites* but does not seem to know the important study by Edward J. SCHOENFELD, *Anglo-Saxon »Buhrs« and Continental »Burgen«: Early Medieval Fortifications in Constitutional Perspective*, in: *The Haskins Society Journal* 6 (1994) p. 49–66, which casts considerable light on the problem.

20 KELLNER p. 113, estimated the entire realm of Charlemagne to have had a population of some twenty million. Demographic history (see Ansley COALE and Paul DEMENY, *Regional Model Life Tables and Stable Populations*, Princeton 1966), making clear that a population of twenty million under public health and nutritional conditions that obtained in early medieval Europe, likely had some six million men between the ages of fifteen and fifty-five, some six million women between the ages of fifteen and fifty-five, some six million male and female children below the age of fifteen, and some two million men and women over the age of fifty-five.

21 One may compare here Regino of Prüm, *Chronicon*, an. 882, ed. F. KURZE, M.G.H. *Script. rer. Germ. in usum schol.*, Hannover 1870, who focuses on a failed effort by the »Landwehr« to repel a professional military force of invading Vikings by emphasizing the former's lack of discipline. This is yet one more example of Regino's aristocratic bias. By contrast, *Annales de Saint Bertin*, an. 859 (ed. F. GRAT, J. VIELLIARD, S. CLÉMENCET, Paris 1964), provide a good example of local defense forces, raised from among the lower classes, carrying out a successful military action against the Vikings.

22 KELLNER p. 113–114.

only the one-third of the human and material resources of the old Carolingian kingdom that had been allotted to Hludovicus in 843 by the treaty of Verdun, one could naturally expect the Ottonians to be able to mobilize expeditionary forces that numbered in excess of 30 000 fighting men since Charlemagne could muster some 100 000 effectives from the *regnum Francorum* as a whole²³. In addition, since Charlemagne could mobilize some 30 000 heavily armed mounted troops from the undivided *regnum* for offensive military operations, then it is obvious that the Ottonians may be thought to have been able to mobilize at least 10 000 men who were equipped in this manner for similar types of service²⁴.

The kingdom of Otto I, however, was far larger and richer than the *regnum* that Hludovicus, Charlemagne's grandson, had secured as a result of the treaty of Verdun. Indeed, much of *Francia media*, that originally had been Lothair I's share in 843, was under the control of the Saxon dynasty during the tenth century. In addition, it is obvious that neither the Saxon duchy, itself, nor the Bohemian region had been as thoroughly under the control of the Carolingians as it was under the Ottonians²⁵. Thus, it would be reasonable to expect that the number of men, who dwelled in the *regnum* of the Saxon kings and who were eligible in 955 for expeditionary service, was far greater than the number of men who had been eligible for mobilization in that particular one-third of the *regnum Francorum* that had constituted *Francia orientalis* in 843. In addition, Otto had begun to exercise influence in a very serious manner throughout parts of northern Italy by ca. 949 and he clearly asserted his supremacy over the *Regnum Italicum*, perhaps with Byzantine support, no later than August 952²⁶. The Saxon king's position in Italy also gave him access to both human and material resources. Finally, the Ottonian's fungible resources, especially the availability of increased amounts of silver, outstripped those of their Carolingian predecessors in the east²⁷. In short, Kellner seriously underestimates the order of magnitude of the expeditionary forces available to the Saxon king in 955 by at least one-third and probably by fifty percent²⁸. This

23 F. L. GANSHOF, *Zur Entstehungsgeschichte und Bedeutung des Vertrages von Verdun (843)*, in: *Deutsches Archiv* 12 (1956) p. 313–330; translated as: *The genesis and significance of the Treaty of Verdun (843)*, in: ID., *The Carolingians and the Frankish Monarchy*, trans. Janet SONDHEIMER, London 1971, p. 289–302, demonstrated that the treaty of Verdun was based upon the principle that each brother, Lothair, Ludwig, and Charles would get an approximately equal share of the human and material resources of the empire.

24 WERNER p. 128–129.

25 See, for example, August HEIL, *Die politischen Beziehungen zwischen Otto dem Großen und Ludwig IV. von Frankreich (936–954)*, Berlin 1904; Robert HOLTZMANN, *Geschichte der Sächsischen Kaiserzeit (900–1024)*, 3rd ed., Darmstadt 1955, p. 67–152, regarding the expansion of *Francia orientalis*; and Timothy REUTER, *Germany in the Early Middle Ages, 800–1056*, London 1991, whose maps, p. 326–333, make the point quite graphically.

26 Werner OHNSORGE, *Das Zweikaiserproblem im früheren Mittelalter. Die Bedeutung des byzantinischen Reiches für die Entwicklung der Staatsidee in Europa*, Hildesheim 1957, p. 48–50; Rudolf HIESTAND, *Byzanz und das Regnum Italicum im 10. Jahrhundert*, Zürich 1964, p. 196–199; and Martin ARBAGI, *Byzantium, Germany, the Regnum Italicum, and the Magyars in the Tenth Century*, in: *Byzantine Studies/Etudes Byzantines* 6 (1979) 35–48, all emphasize the importance of Byzantium to Otto I's early entry into Italian politics, i.e., more than a decade prior to his taking the imperial title. They differ, however, in regard to various nuances.

27 The basic work remains C. NEUBURG, *Goslars Bergbau bis 1552*, Hannover 1892, but see, as well, Kurt BRÜNING, *Der Bergbau im Harz und im Mansfeldschen*, Hamburg 1926. (I would like to thank Professor Charles Bowlus for these references.) See also two articles in: *The Cambridge Economic History of Europe*, 2, *Trade and Industry in the Middle Ages*, ed. M. M. POSTAN and E. MILLER, 2nd ed., Cambridge 1987; John U. NEF, *Mining and Metallurgy in Medieval Civilization*, p. 698–699; and Peter SPUFFORD, *Coinage and Currency*, p. 805–806.

28 WERNER p. 128–130.

error by Kellner, of course, refers only to the situation prior to Otto I's *renovatio* of the Roman empire in 962. After he became emperor, Otto's control of various military forces in Italy obviously extended well beyond the limits of the *Regnum Italicum*.

Having satisfied himself that the kingdom ruled by Otto the Great in 955 could produce a total of only some 20 000 troops for expeditionary campaigns, at best, Kellner turns his efforts to evaluating the order of magnitude of the royal army at the famous battle of the Lechfeld. Here, Widukind reported that Otto I commanded eight *legiones* that clearly were intended to be composed of 1000 effectives when they were at full strength²⁹. Kellner correctly rejects the effort by Karl Leyser, who treated the 1000 man figure for each *legio* as a topos, because, he avers, there is no compelling evidence that Widukind was employing such a literary device³⁰. Nevertheless, Kellner attacks the accuracy of Widukind's report on the basis of what would appear to be some curious version of comparative source criticism. First, he shows that various writers of the later ninth and tenth centuries used the term *legio* to describe army units that operated in *Francia orientalis*. Then, he goes on to assert, but not prove, that on occasion these same authors also provided highly exaggerated numbers for the military forces about which they wrote. Having adduced these »facts«, Kellner would have his readers conclude that because Widukind also used the term *legio*, his numbers in regard to the order of magnitude of Otto's army at the Lechfeld must also be exaggerated and thus cannot be trusted³¹.

It is clear that Kellner's effort, noted above, is methodologically unsound on at least five major counts: 1. Widukind cannot be held responsible for the inaccuracies that appeared in the works of his contemporaries and his account certainly cannot be judged at fault because of the putative terminological abuse of those who wrote in his wake; 2. no proof is adduced to show that Widukind was influenced by an inaccurate use of the term *legio* by previous authors or by the exaggerated numbers that some authors assert with regard to the particular case under consideration here; 3. no effort was made by Kellner to do a systematic and exhaustive study of Widukind's use of the term *legio*³²; 4. no systematic attempt was undertaken to examine the Saxon historian's general treatment of military demography³³; and 5. it is necessary in the study of military history that each number under consideration be evaluated in a systematic manner by the canons of »Sachkritik« and Kellner did not do this for Widukind's report with regard to the size of the royal army at the Lechfeld³⁴.

Kellner also adduces a second argument to undermine Widukind's report. This attack is fundamentally rhetorical and is based upon the technique of adducing an impossible inter-

29 Widukind, *Rerum gest. Saxon.* bk. 3, ch. 44, ed. Paul HIRSCH, in: M.G.H., *Script. rer. German.* in usum schol., Hannover 1935.

30 KELLNER p. 119. Cf. LEYSER, *The Battle* (as n. 12) p. 59, whose argument is treated below.

31 KELLNER p. 118.

32 For a discussion of the methodology for such terminological studies and its application see two works of my own: *Early Medieval Fortifications in the »West« of France: a technical vocabulary*, in: *Technology and Culture* 16 (1975) p. 531–569; *Fortifications and Military Tactics*, in: *ibid.* 20 (1979) p. 531–549.

33 It is of interest here that LEYSER, *The Battle* (as n. 12) p. 58–59, calls attention approvingly, i.e., believes that they are accurate reports, to some rather small numbers for military forces that are mentioned by Widukind but then he refuses even to consider the possibility that units of 1000 effectives were put in the field by Otto I at the Lech. It is this kind of blind obsession with small numbers that would appear to have encouraged the observation by WERNER p. 813–814: »Bevor wir versuchen, diese Auffassung einer Kritik zu unterziehen, darf, gegenüber jeder Annahme einer etwas höheren Truppenstärke, daran erinnert werden, daß der kritische Historiker sich nicht dadurch auszeichnet, daß er möglichst niedrige Zahlen angibt oder vermutet, sondern dadurch, daß er mit seinen Annahmen der Wahrheit nahe kommt und das auch beweisen kann«.

34 Regarding Delbrück on »Sachkritik« see BACHRACH, *Military Demography* (as n. 16) p. 3–20.

pretation contrary to fact and then refuting it. In contemporary English usage this is known as creating a »paper tiger«. Thus, Kellner writes: »We may in no way consider Widukind's *legio* to be a military unit with personnel up to the strength of a classical Roman legion during the Augustan era when units were composed of between 5300 and 6000 men«³⁵. One must ask in all seriousness, what reasonable person, either in the tenth century or now, would have assumed that Widukind's frame of reference for the strength of a *legio* in 955 was the late Roman republic or the early Roman empire when the legion averaged somewhere around 6000 effectives in order of magnitude? Such an assumption is absurd, *prima facie*, because Widukind gives troops strengths for the *legiones* at the Lechfeld at 1000 men per unit³⁶. Indeed, when initially mobilized, the Bohemian *legio* is explicitly indicated to have been composed of 1000 »picked soldiers«³⁷.

By these seriously flawed methods, Kellner would appear to assume that he has discredited Widukind's report. Thus, in light of the »comparative« argument and »paper tiger«-rhetoric, discussed above, Kellner takes the position that any number for the strength of the Ottonian *legio*, that he might suggest, can be substituted for the figures that were provided by Widukind. This is done despite the fact that Widukind was a contemporary of the events he describes and that it is widely recognized that he was, in general, very well informed concerning the events under consideration³⁸. Finally, Kellner follows a totally unsupported assertion made by Karl Leyser and assumes that each of Otto's *legiones* should be considered to have been a mere 500 men in effective strength or perhaps even weaker³⁹.

Leyser, in support of his minimalist conclusions that ultimately are accepted by Kellner, wonders whether Widukind's interest in units of 1000 men may perhaps have been stimulated by his knowledge of the »ancient divisions of Germanic peoples or the Old Testament«⁴⁰. Leyser is not saying here that there was continuity in military organization from

35 KELLNER p. 117.

36 Widukind (as n. 29) bk. 3, ch. 44.

37 Ibid. LEYSER, The Battle (as n. 12) p. 53, 56–58, 60, 61, 63, insists upon considering the *milites* discussed by Widukind as »knights« rather than as soldiers. This is a gross anachronism for in the mid-tenth century when there was no »knightly class«, i.e., »Ritterstand«, in the German *regnum* or even in *Francia occidentalis*. See B. S. BACHRACH, The *Milites* and the Millennium, in: The Haskins Society Journal 6 (1995) p. 85–95, where this problem is discussed with the relevant literature.

38 Cf. LEYSER, The Battle (as n. 12) p. 54, who is ambivalent regarding the value of Widukind's account despite the general recognition that »he may have had a good report from one of Otto's sparse Saxon following who had taken part in the fighting«. With regard to the sources for the battle at the Lech, in general, see Lorenz WEINRICH, Tradition und Individualität in den Quellen zur Lechfeldschlacht 955, in: Deutsches Archiv 27 (1971) p. 291–313, where the detailed state of the question is reviewed and regarding Widukind, in particular, see p. 300–308.

39 KELLNER p. 118.

40 LEYSER, The Battle (as n. 12) p. 59. This point is made, as well, by SCHERFF (as n. 10) p. 72. While Leyser gives no indication of the large body of »Quellenkritik« that has been devoted to Widukind's report on the battle at the Lech, Scherff calls attention to the study by WEINRICH, Tradition und Individualität (as n. 38) p. 300–308. However, Scherff would appear to misunderstand the point as WEINRICH writes: »Tradition und Individualität sind also nicht als Antinomien der Historiographie zu verstehen« (p. 313). Rather, Weinrich continues, it is through understanding how a particular writer deals with the sources that influence his style and ideas that we can ascertain what is »Tradition« and what is »Individualität«. In this context, it is of considerable interest that the military efforts of Judah Maccabeus are found to play a role in the way in which Widukind depicts the German hero at the Lech and his army (WEINRICH p. 303). However, Judah is described as mobilizing an army of 6000 effectives (2 Maccabees 8. 1–5; 16–19), while Widukind, as we have seen, leads his readers to conclude that Otto I's army was composed of 8000 men. In short, there is an important difference between ascertaining that a particular author has read the work of an earlier historian or other narrative and demonstrating that he used that work in lieu of contemporary fact. Indeed, the

the ›Urzeit‹ to the tenth century or that the Ottonians copied biblical models in reality. Rather, he is suggesting that Widukind's numbers were the result of a literary topos. He adduces no specific evidence to sustain this hypothesis regarding the operation of topoi on this point and, as noted above, Kellner had already rejected Leyser's suggestion that topoi were at issue even though ultimately he accepted the numerical estimates that the latter suggested.

Two points need clarification here. First, it should be noted that all scholars, whether maximalists or minimalists, would appear to recognize that the Ottonian kings used a decimal base for the organization of their forces, e.g., whether the *legio* mentioned by Widukind is seen to be composed »on paper« of 300, 500, or 1000 effectives. Both Leyser and Kellner fail to take cognizance, however, of the fact that the use of the decimal base for the organization of military units also flourished among the Saxons' Byzantine contemporaries. Thus, one need not make vague and unsubstantiated allusions to putative topoi, dredged up from the problematic sources that purport to provide information regarding the German ›Urzeit‹ or by reference to the Hebrew Bible in Latin translation, when a model from which to copy both literarily and, more importantly, materially was available from the Ottonian's Byzantine neighbors. Indeed, the numerical base for a model unit in the Byzantine army was, »on paper«, 1000 men⁴¹.

In this context, it is of considerable importance that the Saxon kings and many of the great magnates of the east Frankish *regnum* had frequent contacts with the Byzantines both in Italy and in Constantinople, itself⁴². Indeed, Otto I's brother, Duke Henry, negotiated with the Byzantines to have his daughter, Hadwig, marry Romanus II, the heir to the imperial throne. In preparation for her marriage, she was taught the Greek language by teachers who had been sent to Germany from the imperial court at Constantinople⁴³. Moreover, at the lower levels of society there were very frequent travelers from the German kingdom to all parts of the Byzantine empire⁴⁴. Closer to home, Germans, were, of course, active in Italy where the East Roman military played a major role during the later ninth and early tenth centuries⁴⁵. In 948, the very knowledgeable diplomat, Liutprand of Cremona, who

case regarding Judah Maccabeus, discussed above, demonstrates *prima facie* the victory of Widukind's ›Individualität‹ over what may perhaps be considered ›Tradition‹.

- 41 Warren T. TREADGOLD, Notes on the Numbers and Organization of the Ninth-Century Byzantine Army, in: Greek, Roman, and Byzantine Studies 21 (1980) p. 269–288.
- 42 Regarding official Byzantine contacts with Otto I see T. C. LOUNGHIS, Les ambassades byzantines en Occident depuis la fondation des états barbares jusqu'aux Croisades (407–1096), Athens 1980, p. 476–477. More generally, see Werner OHNSORGE, Sachsen und Byzanz, in: Niedersächsisches Jahrbuch für Landesgeschichte 27 (1955) p. 1–44 (reprinted in ID., Abendland und Byzanz: Gesammelte Aufsätze zur Geschichte der byzantinisch-abendländischen Beziehungen und des Kaisertums, Darmstadt 1958, p. 508–553); LEYSER, Tenth Century (as n. 5) p. 103–137; ARBAGI (as n. 26) p. 35–48; Jonathan SHEPARD, Aspects of Byzantine Attitudes and Policy toward the West in the Tenth and Eleventh Centuries, in: Byzantium and the West c. 850–c. 1200, ed. J. D. HOWARD-JOHNSTON, Amsterdam 1988, p. 67–118; and Robert FOLZ, L'Interprétation de l'empire ottonien, in: Occident et Orient au X^e siècle. Actes du IX^e congrès de la Société des Historiens médiévistes de l'Enseignement Supérieur Publique. Dijon, 2–4 juin 1978, Paris 1979, p. 5–30.
- 43 Krijnie N. CIGGAAR, Western Travelers to Constantinople: The West and Byzantium, 962–1204: Cultural and Political Relations, Leiden 1996, p. 207–208.
- 44 SHEPARD (as n. 42) p. 92–93; Karl J. LEYSER, Ends and means in Liudprand of Cremona, in: Byzantium and the West (as n. 42) p. 121; and CIGGAAR (as n. 43) p. 205–208.
- 45 See, for example, Vera von FALKENHAUSEN, Untersuchungen über die byzantinische Herrschaft in Süditalien vom 9. bis ins 11. Jahrhundert, Wiesbaden 1964. Of no little importance as an indicator of German interest in late Roman military matters is Widukind's portrayal of Otto I as »emperor« following the battle at the Lech in 955 within the framework of the acclamation by the army of a

had served as the chancellor of the Italian king, Berengar II, and was exceptionally well informed regarding Byzantine activities in Italy, joined the palace staff of Otto I⁴⁶. Although examples can be multiplied, it is clear that Otto I and his advisers had ample opportunity to learn about matters such as Byzantine military organization and, if so motivated, they were well positioned to copy that which they thought to be of some value.

This hypothesis regarding possible Byzantine influence on Ottonian military organization might easily be dismissed as an opportunistic reading of the sources if it were based only on the fact that the Germans had extensive firsthand knowledge of the Byzantines and that the two systems of military organization, Ottonian and imperial, shared some similarities. However, it is well known that the Ottonians, like their Carolingian predecessors, were certainly very interested if not obsessive about *imitatio imperii*⁴⁷. This was not a matter confined merely to adapting forms of classical and/or Byzantine ceremony and the use of antique technical terminology. Indeed, it is clear that intellectuals, who were raised and educated north of the Alps, worked diligently toward placing a »Roman« patina on German behavior. Yet, the casting of German institutions in an imperial manner included considerably more than the mere copying of rituals and using Latin terms. Rather, it embraced a plethora of material realities that ran the gamut from marriage alliances to trade, art, and architecture⁴⁸.

Any conclusions regarding the order of magnitude of the army mobilized by Otto I to oppose the Magyars on the Lechfeld, must emphasize that the Saxon *regnum* was much larger and richer than the kingdom of *Francia orientalis* which had been established by the treaty of Verdun in 843. Thus, Otto I and his successors possessed both the human and material resources to mobilize expeditionary forces well in excess of 30 000 fighting men, i.e., a mere third or so of the number that had been available to Charlemagne who ruled the entire *regnum Francorum*. In this context, a force of some 8000 expeditionary troops, which had been organized into eight *legiones*, and engaged at the Lechfeld under the command of King Otto I, as reported by Widukind, must be considered, in effect, to be a »minimalist« calculation. Indeed, this force of some 8000 effectives would have amounted, at most, to approximately one quarter of the entire manpower pool of military personnel who were constitutionally available to the Saxon king for offensive military operations *in expeditio* beyond the borders of their home *pagi*⁴⁹. In this context, one of Delbrück's few enduring

victorious general. Regarding this phenomenon see Edmund STENGEL, *Widukind von Corvey und das Kaisertum Ottos des Grossen*, in: ID., *Abhandlungen und Untersuchungen zur Geschichte des Kaisergedankens*, Cologne 1965, p. 56–91.

46 Jon N. SUTHERLAND, *Liudprand of Cremona, Bishop, Diplomat, Historian. Studies of the Man and his Age*, Spoleto 1988, p. 3–43.

47 For background see Michael McCORMICK, *Byzantium's Role in the formation of Early Medieval civilization: Approaches and Problems*, in: *Illinois Classical Studies* 12 (1987) p. 207–220; and ID., *Eternal Victory. Triumphal Rulership in late Antiquity, Byzantium and the early Medieval West*, Cambridge 1986. Cf. W. OHNSORGE, *Byzanz und das Abendland im 9. und 10. Jahrhundert: Zur Entwicklung des Kaiserbegriffes und der Staatsideologie*, in: *Saeculum* 5 (1954) p. 194–220 and reprinted in ID., *Abendland und Byzanz* (as n. 42) p. 508–553; ID., *Sachsen und Byzanz*, p. 522–526; and FOLZ (as n. 42) p. 5–30.

48 OHNSORGE, *Sachsen und Byzanz* (as n. 42) p. 508–553; LEYSER, *Tenth Century* (as n. 5) p. 103–137; SHEPARD (as n. 42) p. 67–118; and CIGGAAR (as n. 43) p. 201–244.

49 As noted above, the treaty of Verdun in 843 allotted approximately one-third of the human and material resources of the *regnum Francorum* to Hludovicus. This, in rough terms, amounted to having available more than 30 000 able bodied men who were eligible, in constitutional perspective, for expeditionary military service. The Ottonians, however, ruled more people and controlled greater material resources than were available to the Carolingian kings of *Francia orientalis*. Thus, the 8000 figure, noted above, would have constituted less than a quarter of the men available to

generalizations, i.e., chroniclers for the home side tend to provide an undercount of their own forces in order to heighten the glory of their heroes, cannot be dismissed out of hand⁵⁰.

It is clear that Widukind's report regarding the order of magnitude of Otto's army in 955 should be accepted and the force that he commanded must be estimated to have been about 8000 effectives at the least. This was the consensus among German historians until rather recently⁵¹. Indeed, even Delbrück, who was obsessive in arguing for small numbers, accepted a figure of between 7000–8000 as the order of magnitude for Otto's army⁵². In light of the size of Otto's force, therefore, we must give serious consideration to large numbers rather than to small ones when estimating the order of magnitude of the Magyar army during the campaign of 955⁵³. Kellner, however, after concluding that Otto's army could not have numbered more than 4000 effectives, estimates that the Magyar forces should be put at about 5000 effectives⁵⁴.

Otto I in 955 for expeditionary service even if the Saxon king's *regnum* had been merely identical to Hludovicus' kingdom. See WERNER p. 828–830. It is important to emphasize that even if Otto I's entire army at the Lechfeld had been composed of heavily armed mounted troops, and this is contrary to fact (see below), a force of well in excess of 10 000 such men were available on a constitutional basis for mobilization to the German king from the eastern *regnum* as a whole. As noted earlier, Charlemagne had been able to mobilize some 30 000 heavily armed mounted troops prior to his death in 814 and the east Frankish kingdom under Otto I was larger, more populous, and richer in 955 than the eastern one-third of the Frankish kingdom had been under Charlemagne or his grandson Ludowicus in 843. DELBRÜCK (as n. 16) vol. 3, p. 116 (Hist., vol. 3, p. 119), asserted that the entire army under Otto I's command at the battle on the Lech was a mounted force of heavily armed fighting men. Although this is not supported by any source, it seems to have had a considerable afterlife. See, for example, the totally unwarranted effort by KELLNER p. 119, to tie the troop strength indicated in the often discussed *Indiculus* (*Indiculus loricorum*, in: *Jahrbücher des deutschen Reiches unter Otto II. und Otto III.*, 1, ed. Karl UHLIRZ, Leipzig 1902, p. 248), concerning which Werner has shown that in excess of 2000 heavily armed mounted troops were to be sent as »reinforcements« (*ad supplementum*), to Otto in 982. See Thietmar, *Chronicon* bk. 3, ch. 20, ed. Robert HOLTZMANN, M.G.H., *Script. rer. Germ.*, n.s. 9, Berlin 1935 with the figures for Otto I's army at the Lechfeld. SCHERFF (as n. 10) p. 70, is ensnared in this problem, as well. For a detailed discussion of the *Indiculus* see WERNER p. 823–828. KELLNER p. 115–116, argues that the lag time between Otto II's order in the autumn of 981 for reinforcements to be sent to Italy as indicated by the *Indiculus* and the arrival of these forces in the early summer of 982 was the result of administrative primitiveness. Kellner does not seem to realize that Otto planned to go on the offensive in 982 not in the late autumn or early winter of 981. Thus, Otto wanted these troops available in the summer of 982 not the fall of 981. The time lag between the summons and the mobilization was planned and not the result of governmental inefficiency.

50 See my discussion of Delbrück's methods in *Military Demography* (as n. 16) p. 3–20.

51 LEYSER, *The Battle* (as n. 12) p. 59 n. 67, provides a lengthy list of scholarly works which illustrates this consensus among German historians who, by and large, accept Widukind's numbers for the order of magnitude of Otto's army. SCHERFF (as n. 10) p. 70, provides a short review of the literature but provides an unwarranted focus upon mounted troops and thus confuses the matter even further.

52 DELBRÜCK (as n. 16) vol. 3, p. 113 (Hist. vol. 3, p. 116). Regarding Delbrück's obsession with small numbers see BACHRACH, *Military Demography* (as n. 16) p. 3–20.

53 True to his view that the home side traditionally exaggerated the size of the enemy force, DELBRÜCK (as n. 16) vol. 3, p. 113 (Hist., vol. 3, p. 116), asserted that the Magyar army was smaller than Otto's army. This assertion, however, has not found favor with modern scholars. Unlike Kellner, who does not believe that Otto I could muster large armies, LEYSER, *The Battle* (as n. 12) p. 59, believed that Otto I mustered an army for the invasion of the French kingdom in 946 that was much larger than the army which the king commanded at the Lechfeld.

54 KELLNER p. 121.

If one were to follow Kellner's »logic«, i.e., that the Magyar army was twenty percent larger than Otto's army, then the invading force should be estimated to have numbered some 10 000 effectives.

In order, however, to provide a sound basis for any estimate of the size of the Magyar army, we must recognize that »logic«, alone, is insufficient. First, it must be noted that despite considerable controversy regarding the exact site of the battle of the Lechfeld, many of the basic facts concerning this bloody encounter, itself, are not at issue⁵⁵. For example, it is clear that the battle was fought with undoubted ferocity and lasted a long time. The obvious difficulties that were encountered by Otto's forces in gaining victory strongly suggest that there was unlikely to be a great discrepancy between the sizes of the two forces. In addition, the willingness of the Magyars not only to engage Otto's troops, rather than to withdraw without meeting the enemy in the field, but, in fact, to take the offensive in the first phase of the battle, may also affirm the conclusion that the invading enemy army was of considerable size relative to the order of magnitude of the royal army. The first phase of the battle included an attempted envelopment of the royal army by the Magyar force and such a tactic is not generally executed by a numerically inferior force⁵⁶. Indeed, the Magyar commander is reported by an eye witness to have thought that his army had a reasonably good chance to win a battle in the field against the German king's forces⁵⁷.

The final phase of the battle is generally considered by modern scholars to have been a rout in which the Magyars fled the field in disorder when attacked by the vanguard of Otto's army⁵⁸. However, it is rather more likely that the Magyars were attempting to execute the »feigned retreat« tactic, for which the peoples of the Steppes were justly famous.

55 There have been many reconstructions of the Battle of the Lechfeld and these are highly controversial. However, the information concerning the basic actions, as described below, of the Magyar army are not at issue. See, for example, Hans E. EINSLE, *Die Ungarnschlacht im Jahre 955 auf dem Lechfeld*, Augsburg 1979, in addition to LEYSER, *The Battle* (as n. 12) p. 59–67, with the plethora of scholarly literature cited there. See most recently, SCHERFF (as n. 10) p. 50–97, and, of course, KELLNER p. 161–173.

56 KELLNER p. 169–170, discusses the circling or envelopment tactic used by the Magyars at the Lechfeld to attack the rear of the royal army. However, he does not seem to grasp the implications regarding the size of the Magyar army in consequence of the execution of this tactic which, not incidentally, was successful initially.

57 Concerning the confidence of the Magyar commander in regard to the ability of his forces to defeat Otto I's army see Gerhards *Vita Uodalrici*, 12 ed. Georg WAITZ, M.G.H. *Scriptores*, Hannover 1841, 4; and see, as well, Gerhard von Augsburg, *Vita Sancti Uodalrici*, ed. and transl. Walter BERSCHIN, Heidelberg 1993. It is important to emphasize two facts regarding the plausibility of Gerhard's account in this context. First, it is clear from Gerhard's report that the Magyar commander held a council when he decided to break off the siege of Augsburg on the morning of 10 August so that his forces could take the offensive in the field against Otto's army. Gerhard indicates that during this gathering, the Magyar commander expressed his *ratio* regarding the good chance that they had to defeat the Germans. Secondly, the Magyar commander was captured and later executed. There certainly was time for Otto's men to interrogate this leader and many of his officers who also were captured. In addition, as will be seen below, the Magyar commander had spent a considerable amount of time at Constantinople and had at one time permitted himself to be converted to Christianity. Thus, it is very likely that there was some common language through which information regarding the Magyar commander's thoughts prior to the campaign and the battle, itself, could have been provided to the Germans. Cf. DELBRÜCK (as n. 16) vol. 3, p. 114 (*Hist.*, vol. 3, p. 117), who, consistent with the tradition of maintaining a notion of early Germanic primitivism, ridicules the idea that Otto I arranged to have his elite prisoners interrogated before ordering them executed.

58 LEYSER, *The Battle* (as n. 12) p. 61–62; who is followed by KELLNER p. 170–171.

This tactic was very rapidly adopted in the West⁵⁹. Indeed, the Magyars had used the feigned retreat tactic successfully in 910 against a Carolingian army commanded by Louis the Child⁶⁰. I would suggest that rather than being routed in the second phase of the battle at the Lech, the Magyar army attempted to execute a feigned retreat but failed to carry it out successfully because Otto I and his officers had learned the proper manner in which to respond to this tactic and thus nullified its effectiveness.

The German sources are all in agreement that the Magyar army was very large⁶¹. However, this view of the enemy cannot be divorced from the putative efforts by chroniclers for the home side to magnify the glory of Otto's victory by exaggerating the size of the Magyar army that he defeated⁶². Nevertheless, the observation by one eye witness, Gerhard of Augsburg, that this force was larger than any Magyar army that previously had invaded Germany may well have some independent value⁶³. Indeed, there is widespread agreement that on at least two other occasions, i.e., 937 and 954, the Magyars sent exceptionally large armies into the West⁶⁴. Finally, it is to be noted that the Magyars frequently had carried out successful military operations in the southern parts of the German kingdom. These operations may well have provided local observers, such as Gerhard of Augsburg, with a legitimate basis for comparisons with the army that invaded the region in 955⁶⁵.

It is important to emphasize that the Magyar army, which invaded the Ottonian *regnum* during the summer of 955, was not merely engaged in a raid in force for the purpose of carrying out the indiscriminate killing of men, women, and children, greedily plundering the region, and destroying both churches and monasteries. Whatever may be said about previous Magyar military operations in the West, the army in 955 had as its primary goal the capture of the fortress city of Augsburg. Indeed, the Magyars brought various types of siege engines (*diversa ... instrumenta*) with them for that purpose⁶⁶. Parenthetically, it is important to emphasize, in this context, that the various peoples of Pannonia, who lived under Magyar domination, had been very well acquainted with sophisticated siege equipment from the later sixth century onward⁶⁷. A partial explanation for a Magyar change in strategy

59 For the background and adoption of this tactic in the West see B. S. BACHRACH, The Feigned Retreat at Hastings, in: *Medieval Studies* 33 (1971) p. 344–347.

60 KELLNER p. 133–134.

61 These are listed by KELLNER p. 121–122. The observation by LEYSER, The Battle (as n. 12) p. 57–58, that the Hungarian armies always seemed much more numerous than they were because of their swarming tactics may be of some value in regard to the problems encountered in the estimation of the order of magnitude of a Magyar mounted force on a large battle field. However, as will be seen below, putative miscalculations in the size of an enemy force that might perhaps result from the use of this »swarming« tactic are irrelevant in the discussion of the size of a force that is engaged in a siege or in storming of the walls of a fortress. The capacity of the Magyar army to encircle the walls of Augsburg and to attack the fortifications on all sides at the same time with siege engines is in no way related to the »swarming tactics« on the battlefield, mentioned above.

62 LEYSER, The Battle (as n. 12) p. 57–58; and KELLNER p. 121–122, both appreciate the tradition highlighted by Delbrück regarding the exaggeration of enemy numbers by home side »reporters«.

63 Gerhardi Vita Uodalrici, 12. KELLNER p. 41, discusses the bias of this hagiographical work while LEYSER, The Battle (as n. 12) p. 54–55, has high praise for Gerhard and credits his observations regarding the very large size of the Magyar army at Augsburg in 955.

64 LEYSER, The Battle (as n. 12) p. 50–51.

65 KELLNER, *passim*, provides information regarding various Magyar attacks. Of particular interest are the campaigns in 910, p. 132–134 and for 926, p. 138–139, respectively. For a fuller treatment of the Magyar invasions of Germany during the 950s see Gina FASOLI, *La incursione Ungare in Europa nel secolo X*, Florence 1945, p. 185–212.

66 Gerhardi Vita Uodalrici, 12.

67 Speros VRYONIS Jr., The Evolution of Slavic Society and the Slavic Invasions in Greece: The First Major Slavic Attack on Thessaloniki, A.D. 597, in: *Hesperia* 50 (1981) p. 378–390, deals with the

may be found in the fact that their old raiding tactics had been rather unsuccessful during the decade or so prior to the invasion of 955. It would appear even to have been the case that various German military operations had carried the offensive into Magyar territory during this period⁶⁸.

Bulksu, the commander of the Magyar army at Augsburg in the summer of 955, moreover, does not appear to have been a traditional but unsophisticated Steppe leader whose goal was the maintenance of annual raids for plunder. He had visited Constantinople with a substantial part of his military household and apparently spent some considerable time in the capital of the Byzantine empire. Indeed, he had resided at Constantinople long enough to have received instruction in the Christian religion and is reported to have undergone conversion through baptism. Bulksu was even awarded the honor of *patricius* by the Byzantine emperor. The latter would appear to have seen the Magyar leader as a potential ally. Once having returned to his people from the Byzantine court, however, Bulksu was intent upon altering the military situation of the Magyars in relation to the German kingdom that had obtained since the late 940s⁶⁹. Thus, as will be seen below, Bulksu focused his primary effort in the summer of 955 on the conquest of Augsburg. He mustered an army that not only was large enough to storm the walls of the city from all directions but also to engage a royal relief force should Otto I be successful in mobilizing an army for this purpose⁷⁰.

process by which the peoples of Pannonia obtained their siege machines; Jim BRADBURY, *The Medieval Siege*, Woodbridge, UK, 1992, p. 10–11, 16, 19, 29, 54–55, treats both Avar and Magyar sieges, and see W. T. S. TARVER, *The Traction Trebuchet: A Reconstruction of an Early Medieval Siege Engine*, *Technology and Culture* 36 (1995) p. 144–145, regarding the sophisticated equipment available to the peoples of Pannonia. Cf. LEYSER, *The Battle* (as n. 12) p. 56, who, apparently unaware of the lengthy tradition available in Pannonia to the new rulers, observed: »The Hungarians ... approached with siege-engines, a sign that they were trying to learn from their enemies.«

68 LEYSER, *The Battle* (as n. 12) p. 48–51; and KELLNER p. 155–160.

69 Regarding Bulksu and various spellings of his name see C. A. MACARTENY, *The Magyars in the Ninth Century*, 1st ed. 1930; 2nd ed. Cambridge 1968, p. 114–116; and the discussion by ARBAGI (as n. 26) p. 45. Cf. LEYSER, *The Battle* (as n. 12) p. 50–51, who appears unaware of Macarteny's work.

70 Bulksu would appear to have been intent upon inaugurating a new era of Magyar »Landnahme« with its initial focus on the southeastern part of the German kingdom. More particularly, he intended to conquer the fortified city of Augsburg and he prepared very well for this operation by bringing siege engines with him. The battle of the Lechfeld was, in fact, an event that was contingent and was brought about by Otto I's ability to mobilize a major army in a timely fashion for the purpose of relieving the siege of Augsburg. Cf. LEYSER, *The Battle* (as n. 12) p. 50–51, who ignores the contingent nature of the battle at the Lech and sees Bulksu as intending to win a big victory over the Germans in the field so that the Magyars could reinstitute a successful regime of raiding. LEYSER (p. 48) would seem to evidence an *idée fixe* that the Magyars were not at all interested in territorial conquest and bases this view on the »fact« that they »never attempted the wholesale conquest or occupation of the older settlements in the German stem-duchies«. Clearly, the Magyars were not averse either to the idea conquest or to its implementation. Had either been the case, the initial »Landnahme« in Pannonia, itself, would never have taken place. LEYSER's contention (p. 47) »raiders did not conquer« either is arrant nonsense or hyperbolic circularity. REUTER (as n. 25) p. 161–162, is so enthralled by Leyser's view on this matter that he does not even mention the investment of Augsburg or the immense preparations that were so obviously necessary for Bulksu to bring a siege train to the West. Rather, Reuter takes the situation that developed after the battle at the Lech and Otto I's decisive victory as representative of matters prior to the battle. Thus, REUTER (p. 162) unconvincingly concludes: »the Magyars had long before the battle on the Lech ceased to be a serious threat to western Europe ... «.

During the later Roman empire, Augsburg had remained a great fortress city with massive stone walls that boasted a defensive perimeter of some 2800 meters⁷¹. The area within the walls of this imperial city is estimated to have been the home of between 10 000 and 15 000 men, women, and children⁷². During the early Carolingian era, the defended area seems to have undergone considerable shrinkage. In addition, the region immediately around the cathedral church likely was provided with fortifications, i.e., this constituted a citadel or *arx* within the greater walled area of the city itself⁷³. By ca. 955, when Augsburg was besieged by the Magyars, the perimeter defenses had been reduced by approximately fifty percent in relation to its size during the later empire, to a circuit wall of about 1400 meters⁷⁴. The reduction of the original circuit was executed by building a slightly convex shaped wall, some 750 meters in length, to connect with the southwestern and southeastern parts of the old Roman wall. This new early medieval wall, by which the original defended perimeter was reduced, followed a line that latter was to evolve into a thoroughfare which today bears the obvious post-medieval name »Jesuitengasse«⁷⁵. It seems likely that this early medieval wall was built partly in stone, perhaps not even to a height comparable to the traditional ten meter elevation of late Roman urban walls, and partly in wood⁷⁶. The new wall does not seem to have been provided originally with towers⁷⁷. But it is likely that these were in the process of being built or, at least, under construction at the time when the city was laid under siege by the Magyars in August 955⁷⁸.

As noted above, during the early Middle Ages, the combination of a substantial section of the old Roman walls and the new early medieval wall resulted in the reduction of Augsburg's defensive perimeter from 2800 meters to approximately 1400 meters. It is likely that the reduced defensive perimeter was planned and executed on a rational basis. The new

71 Carlrichard BRÜHL, *Palatium und Civitas. Studien zur Profan-topographie spätantiker Civitates vom 3. bis zum 13. Jahrhundert*, vol. 2: Germanien, Cologne and Vienna 1990, p. 202–203. These walls were of early imperial origin but, unlike many defensive perimeters this one did not undergo a massive reduction during the later empire (p. 211).

72 Ibid. p. 202.

73 Ibid. p. 211.

74 Ibid. p. 212, where putative maxima and minima are given for the post-imperial walls as between 900 meters and 1400 meters. However, a careful examination of Brühl's plan IX in consonance with the account of the siege, see below, makes it very clear that the 1400 meter perimeter defensive wall was at issue during the siege of 955.

75 Ibid. plan IX, where this wall is marked in a dashed green line.

76 Gerhardi Vita Uodalrici, 3 (as n. 57, p. 390, lines 34–35), describes these walls at the time of Bishop Ulrich's accession to the episcopal office as *ineptis valliculis et lignis putridis*. However, it is clear that the prelate strengthened what he had found. Indeed, Bishop Ulrich had access to the services of professional architects. These master builders were capable of doing very complicated work such as the reconstruction of the cathedral church at Augsburg which had been burned. Cathedral church building was a much more sophisticated task than the building or repair of urban defensive walls (ch. 3, p. 387, line 34).

77 Gerhardi Vita Uodalrici, 12 (as n. 57, p. 401, line 18), indicates that the walls were *sine turribus*.

78 Gerhardi Vita Uodalrici, 12 (as n. 57, p. 401, lines 33–34), indicates that during the night following the first Magyar assault on the walls of the city, Bishop Ulrich set his men to work building »block houses« of a sort on the walls and repairing the walls, themselves (*domos belli in circuitu civitatis ... tota nocte eas aedificare, et vallos ... renovare praecepit*). It seems quite likely that with regard both to the building of the *domos belli* and the repair of the walls, Gerhard is telescoping a considerable period of time into a single night. From the perspective of »Sachkritik«, it is clear that the building of block houses was not to be done in a single night. Indeed, it would seem that considerable building was underway during Ulrich's episcopate and this included the building of walls (ch. 3 [as n. 57] p. 390, lines 33–34).

building project undoubtedly was commanded by the ruling authority which also obviously had to have had access both to the material and human resources that were needed to realize the effort. City walls, as understood in the early medieval West, undoubtedly were built for military purposes in consonance with the strategic doctrine that had been inherited from the later Roman empire⁷⁹. The early medieval wall of Augsburg was in no way an effort to demonstrate the non-military importance of the city or the prominence of its bishop through the deployment of what in modern times sociologists have come to consider »conspicuous consumption«⁸⁰.

From a rational perspective, the reduction of the defensive perimeter of Augsburg undoubtedly was carried out roughly in proportion to the reduction in the size of the population that was living within the walls of the city and in its more or less immediate environs. In short, the reduction of the defensive perimeter had to take place in a manner that was not inconsistent with the number of able bodied males, who were available on a regular basis, to serve in the ›Landwehr‹ for the defense of the walls. The force delegated to defend the walls had to be available on a consistent basis since an enemy attack might come at any time. This requirement for permanent local availability necessarily excluded from consideration as members of the regular defense force all those men who might be called away from the local area for military purposes, i.e., the part-time militia men, who were eligible for expeditionary service and the *milites* in military households (*obsequia*) of the lay and ecclesiastical magnates⁸¹. Indeed, there would be no point in going to great expense to provide a defensive perimeter that was too large for the local levies to defend should the select levies and the *milites* of the bishop's *obsequium* be on campaign. In light of the technology of the time, a 1400 meter circuit wall required for its defense on a regular basis approximately 1200 able bodied men⁸².

The ›Landwehr‹, which Gerhard of Augsburg appears to take note of on one occasion as the *phalanx populi*⁸³, was composed in numerical terms primarily of locals who, as seen above, were of an economic status that made them ineligible for regular expeditionary service. The number of men eligible for military service of various kinds in the Augsburg region very obviously exceeded the 1200 local militia men already discussed. Bishop Ulrich,

79 Concerning early medieval city walls see B. S. BACHRACH, Imperial walled cities in the West: an examination of their early medieval *Nachleben*, in: *City Walls: The Urban Enceinte in Global Perspective*, ed. James D. TRACY, Cambridge 2000.

80 The reader should be reminded here as Gerhardi Vita Uodalrici, 3 (as n. 57, p. 390, lines 34–35), makes clear, there was nothing stately or impressive about the early medieval walls of Augsburg. For an example of the misuse of sociological concepts such as »conspicuous consumption« with regard to the late antique and early medieval periods see the methodologically flawed work by Guy HALSALL, *Settlement and Social Organization: The Merovingian Region of Metz*, Cambridge 1995.

81 Early medieval military organization was tri-partite in nature: (1) impecunious local levies (e.g. the analogue of the Anglo-Saxon great *fyrð*), (2) part-time militia men eligible for expeditionary service (e.g. the analogue of the Anglo-Saxon select *fyrð*) and (3) the military households (*obsequia*) of the magnates and king. See two articles by B. S. BACHRACH, *Medieval Military Historiography*, in: *Companion to History*, ed. Michael BENTLEY, London 1997, p. 203–220; and: *On Roman Ramparts, 300–1300*, in: *The Cambridge Illustrated History of Warfare: The Triumph of the West*, ed. G. PARKER, Cambridge 1995, p. 64–91. For German readers, see B. S. BACHRACH and Charles BOWLUS, »Heerwesen«, in: *Reallexikon der germanischen Altertumskunde*, 2. Aufl., 14, 2000, p. 122–136.

82 See B. S. BACHRACH and Rutherford ARIS, *Military Technology and Garrison Organization: Some Observations on Anglo-Saxon Military Thinking in Light of the Burghal Hidage*, in: *Technology and Culture* 31 (1990) p. 1–17, where it is made clear that one able bodied man was required to defend each 4.125 feet of wall.

83 Gerhardi Vita Uodalrici, 10 (as n. 57, p. 399, line 49).

for example, had a personal military household, i.e. a *militia episcopalis*⁸⁴. This force seems to have been composed largely of professional soldiers, *milites*, who are referred to as *milites episcopi*⁸⁵. They went on lengthy military campaigns⁸⁶. Therefore, they could not be counted upon to be available for the defense of the city on a regular basis. In addition, *vassalli* of various magnates, including the bishop, dwelled within the city of Augsburg and in its environs. Some of these men held military lands as *beneficia* so that they could support themselves as professional soldiers⁸⁷.

It is clear that when Bishop Ulrich of Augsburg orchestrated the defense of his city during early August 955, he probably had in excess of two thousand able bodied men to help in this effort since he mobilized his *milites* and *vassalli* for the defense. Indeed, contrary to the traditional tendency of the home side source to undercount the order of magnitude of his hero's army so as to enhance his glory and in this case God's hand in victory, Gerhard indicates that Ulrich had a *multitudo* of *milites* under his direct command⁸⁸. The author's aristocratic bias ruled out any serious discussion of the lower class local levies in his account of the successful defense of the city by the bishops and his *optimates milites*. Indeed, Gerhard appears uninterested in recognizing the role of soldiers of lesser quality, i.e. *milites* who were not *optimates*, and local militia men in the defense of the city⁸⁹.

By contrast with the argument put forth above, Kellner concludes: »unter Aufbietung aller Reserven aus dem Umland (ist) aber von maximal 500 Verteidigern in der Stadt Augsburg auszugehen«⁹⁰. Indeed, the episcopal *obsequium* alone was composed of several hundred heavily armed mounted troops, the *multitudo* of *milites optimates*, mentioned above, not to mention *milites* who were not *optimates* and thus perhaps lightly armed⁹¹. From a military perspective as seen through the demands imposed by ›Sachkritik‹, 500 men, as indicated above, could not possibly have defended a 1400 meter defensive perimeter that was under attack from all sides with siege engines as was the case at Augsburg in August 955. Indeed, from a demographic perspective, for Kellner's estimate of a mere 500 ›Verteidigern‹ to be accurate, the entire city of Augsburg and its ›Umland‹ would on the basis of demographic realities have had a population of less than 2000 men, women, and children. By con-

84 Ibid. ch. 3 (p. 389, lines 31–33).

85 Ibid. ch. 12 (p. 401, line 25).

86 Ibid. ch. 10 (p. 399, lines 3–7).

87 See, for example, Gerhardi Vita Uodalrici, 3 (as n. 57, p. 389, lines 5–6); ch. 3 (p. 390, line 19); and ch. 5 (p. 393, line 30–37). Regarding military lands see B. S. BACHRACH, Military Lands in Historical Perspective, in: The Haskins Society Journal 9 (2000), forthcoming.

88 Gerhardi Vita Uodalrici, 12 (as n. 57, p. 401, line 19).

89 Ibid. ch. 12 (p. 401, line 19).

90 KELLNER p. 121.

91 Ibid. p. 121, concludes that Bishop Ulrich of Augsburg in 955 had at most 100 heavily armed fighting men at his disposal. He bases this argument upon the belief that Bishop Henry I of Augsburg had available to him only 100 *loricati* in 981. This conclusion, however, is based upon a serious misunderstanding of the *Indiculus loricatorum* (as n. 49, p. 248), which indicates that the *episcopus Augustae civitatis* is to lead 100 heavily armed mounted troops to Italy for the campaigning season of 982 at the order of Otto II. However, as made clear above, these 100 *loricati* were reinforcements that were to be led to Italy not the total force of heavily armed mounted troops that was available to the bishop. Indeed, Henry had sent a contingent in 980 when Otto II advanced to the south and it is very unlikely that even in 982 when the additional 100 *loricati* went off to Italy that the bishop no longer had any heavily armed mounted troops available to him who had remained in the region of Augsburg. See WERNER p. 825–826, regarding the matter of total forces and reinforcements.

trast, it is clear that the city and its immediate environs may be seen to have had a total population that likely was considerably in excess 6000 men, women, and children⁹².

Under the conditions described above, for the Magyars to have presented a credible threat to storm the walls of Augsburg they needed a numerical advantage over the defenders which at a bare minimum was 4:1⁹³. Thus, a force of some 8000 Magyar effectives were required in order to operate the siege engines and storm the walls on foot. It is important to note, in this context, that large numbers of lightly armed horsemen sitting on their mounts, the normal Magyar form of deployment, obviously could not be in the forefront of any effort to storm the fortifications at Augsburg or to launch the *lapides* and *iacula* from their *diversa instrumenta* which are noted in an eyewitness account of the siege⁹⁴. Some of the

92 A figure of 1200 able bodied men, all of whom were not constitutionally eligible for expeditionary service and thus were always available for the local defense, results in a general population of 4000 men, women, and children. This aggregate figure is based upon the structure of the population as understood in terms of historical demography (COALE and DEMENY, *Regional Model Life Tables*, as n. 20). An estimate which puts the population for the city of Augsburg and its environs in ca. 955 at somewhat in excess of 6000 is consistent with the order of magnitude in the reduction of the defensive perimeter wall and the surface space that it encompassed when compared with these data during the imperial era (BRÜHL, as n. 71, vol. 2, p. 202). In addition to those people who lived within the urban walls of Augsburg ca. 955, there would seem to have been at least two populated neighborhoods outside the walls. One such »parish« appears to have been located in the environs of the church of St. Afra, about 1000 meters south of the Roman wall. A second area of settlement seems to have been about 200 meters north-northeast of the Roman wall. In this latter area, Bishop Ulrich completed the construction of the church of St. Stephen in 968. It is very likely that the church of St. Stephen was built because settlement in this area had grown so large during the decade or so following the victory of 955 that it was no longer convenient to have all of these people attend the cathedral for the sustenance of their religious life (cf. BRÜHL, vol. 2, p. 212). Finally, see, for example, Gerhards Vita Uodalrici, 5 (as n. 57, p. 393, lines 30–37), who indicates that there were several villages in the area of Augsburg during this period, as well.

93 BACHRACH and ARIS (as n. 83) p. 1–17, for the minimum 4:1 ratio of attackers to defenders which is based upon the levels of available military technology and the effectiveness of these weapons. Cf. KELLNER p. 122, who, without citing any evidence, clearly misconstrues the situation concerning a medieval siege and the matter of the ratio of attacking forces to the defense forces behind the walls of the city when he asserts: »Bereits seit römischen Zeiten, und auch noch heute (my italics), gilt unverändert die militärische Binsenweisheit, daß bei einer lokalen Offensive, sollte für diese eine Aussicht auf Erfolg bestehen, ein Kräfteverhältnis von mindestens 3:1, besser 4:1, zugunsten des Angreifers angestrebt werden sollte«. Today (»heute«) there are no real analogues to defending and storming fortress cities which were normal military operations during the Middle Ages.

94 Gerhards Vita Uodalrici, 12 (as n. 57, p. 401, line 31), refers to various missiles that fell around the bishop during the enemy attack. However, no mention is made of *sagittae* in this context which should be expected to have been the missile of choice for the Magyars. Cf. KELLNER p. 139–141, who treats the Magyars' siege operations and essentially denies that there were capable of maintaining a regular effort for the investment of a walled city. Thus, he tries to discredit or explain away the numerous contemporary and even eye witness sources that describe the Magyars engaged in siege warfare. Rather, he affirms the inaccurate notion that »Reitervolk« cannot master the »Methoden der Poliorketik« or sustain a »regelrechte Belagerung«. As noted above, the people of the Pannonian region were very knowledgeable in regard to »Belagerungsmaschinen« and that even earlier both the Huns and the Visigoths mastered the techniques of siege warfare. Regarding these two latter groups see several articles by B. S. BACHRACH, *Some Observations on the »Goths« at War*, in: *Francia* 19/1 (1992) p. 205–214; *Grand Strategy in the Germanic Kingdoms: Recruitment of the Rank and File*, in: *L'Armée romaine et les barbares du III^e au VII^e siècle*, ed. F. VALLET and M. KAZANSKI, Paris 1993, p. 55–63; *The Education of the »officer corps« in the Fifth and Sixth Centuries*, in: *La noblesse romaine et les chefs barbares du III^e au VIII^e siècle*, ed. F. VALLET, M. KAZANSKI, Paris 1995, p. 7–13.

Magyar archers, while remaining mounted, undoubtedly were capable of shooting barrages of arrows at the defenders who were manning the walls. This tactic would enable soldiers of the Magyar army, who were advancing on foot, to storm the defenses, to set up the long scaling ladders that they were carrying, and to engage the men of Augsburg in hand to hand combat atop the walls of the city⁹⁵. In short, the Magyars in 955 would appear to have been capable of what the Avars, an earlier Steppe nomad people acculturated in the Pannonian region, could do, as noted above, during the later sixth century and for many centuries thereafter. The demands of ›Sachkritik‹ in regard to storming the walls of the city of Augsburg provides the basis for concluding that the Magyar force was of the same order of magnitude as the royal army under Otto I's command that relieved the siege of the city and perhaps somewhat larger.

Kellner, following, in part, the minimalist arguments put forth earlier by Leyser, underestimated the size both of Otto's army and the force commanded by Bulksu by a factor of fifty percent or more. In addition, Kellner also seriously underestimated the order of magnitude of a putatively average Magyar invasion force when he wrote: »... 300 Ungarn ... [d]ies ist tatsächlich die Größenordnung ... «⁹⁶. In fact, Kellner bases this curious generalization on a single account that is provided by Liutprand of Cremona regarding a Magyar force of three hundred men who in 934 captured 500 Byzantines while campaigning in the region of Thessalonika and took these Greeks as prisoners back to Hungry with them⁹⁷. Kellner recognizes that Liutprand was not an objective reporter (»Doch ausgerechnet ein Autor, der nicht gerade durch seine Objektivität zu Berühmtheit gelangte ... «). But, nevertheless, he takes the position: »... vermag uns hier eine Zahl an die Hand zu geben, die einen hohen Realitätsgehalt für sich beanspruchen darf ... «⁹⁸.

Obviously, a single account authored by an admittedly biased reporter is very thin »evidence« upon which to base the type of broad ranging generalization indulged by Kellner with regard to the average size of Magyar invasion forces. However, the situation is even worse as this account was intended by Liutprand to be a satiric jab at the Greeks and not an objective account of Hungarian military demography much less of their normal troop strength. The use of the number 300 for a unit of soldiers in the world of medieval Christian number symbolism stands for the Greek letter Tau and by extension to the Holy Cross. The Holy Cross, in its turn, is the symbol of Christ in this system of *gemetria*. Thus, a military unit of 300 is seen in certain contexts to mean that the group was God's force or God's protection⁹⁹.

Liutprand's use of this holy Christian symbol to illuminate the reader's understanding of a band of pagan Magyar soldiers, who gained a victory over the Byzantines and carried Greek prisoners off to Hungry, obviously has a biting satiric intent. Liutprand's satire in this context is, of course, consistent with his well known anti-Greek bias or perhaps more accurately his lack of ›Objektivität‹ when discussing the Byzantines. He is, in effect, saying that God is on the side of these evil pagans in the context of their struggles against the

95 The nature of siege warfare in the Middle Ages remained constant. See the basic study by Bradbury, and B. S. BACHRACH, *Medieval Siege Warfare: A Reconnaissance*, in: *The Journal of Military History* 58 (1994) p. 119–133.

96 KELLNER p. 123.

97 Liutprand, *Relatio de legatione Constantinopolitana*, 45, ed. Joseph BECKER, in: *M.G.H. Script. rer. Germ. in usum schol.*, Hannover 1915.

98 KELLNER p. 123.

99 Vincent HOOPER, *Medieval Number Symbolism*, New York 1938, p. 75–76; and the discussion of this problem in regard to units of 300 men by B. S. BACHRACH, *On the Origins of William the Conqueror's Horse Transports*, in: *Technology and Culture* 26 (1985) p. 526–527 n. 49.

Greeks who by implication, therefore, are even worse than the Magyars. Thus, God protects the Magyars in their conflicts with the Byzantines. Here Kellner, because of his *a priori* commitment to small numbers, falls into the trap of accepting a symbolic number as a real number for troop strength because it fits his preconception of a minimalist approach to early medieval military demography.

In the study of medieval military history, it is necessary to investigate every number provided in the sources that is relevant to the problem at hand. The reflexive tendency to accept those numbers that fit one's world view and to reject those that do not is simply poor historical method and, as noted above, Werner slashingly criticized this ›Tendenz‹. The new minimalist theory regarding the armies of the German *regnum* and their Magyar adversaries espoused by Kellner, under the apparent influence of Leyser, must be rejected as a specie of special pleading that is driven by an effort to project the smallness of military forces as evidence for the primitiveness of the Ottonian government.