

## Military Transformation in the Ottoman Empire and Russia, 1500–1800

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By the early 16th century, the Ottoman Empire had emerged as a major military power in Southeastern Europe and the Middle East. The Ottomans were feared and admired by contemporaneous Europeans from Niccolò Machiavelli to Ivan Peresvetov. The latter regarded the empire of Sultan Mehmed II (r. 1444–46, 1451–81) as a model to be emulated by his own ruler, Ivan IV of Muscovy (r. 1547–84), and indeed Ottoman (and Islamic, Mongol) methods of resource mobilization and warfare were taken into consideration during the military reforms of Ivan III (r. 1462–1505) and Ivan IV. Yet by 1783, the Ottomans had lost the northern Black Sea littoral and the Crimea, an Ottoman client state with a predominantly Muslim population, to the Russians. Writing his advice to Sultan Mahmud I (r. 1730–54) in 1732, Ibrahim Müteferrika, the founder of the first Arabic-letter printing press in the empire and an ardent proponent of Ottoman reforms, cited the military reforms of Peter the Great (r. 1682–1725) as an example worthy of imitation. Ivan Peresvetov's and Ibrahim Müteferrika's contrasting opinions reflect major shifts in Ottoman and Russian military fortunes, changes that await explanation.

Military historians of Central and Eastern Europe have long been obsessed with the European “military revolution” as observed in certain parts of Western Europe and have tried to measure military developments in their regions against those in Western Europe.<sup>1</sup> This article argues that comparing and contrasting Ottoman, Austrian Habsburg, Polish-Lithuanian, and Muscovite/Russian military capabilities, performance, and transformations can be just as fruitful as

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<sup>1</sup> On the “military revolution,” see Clifford J. Rogers, *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe* (Boulder, CO: Westview, 1995), where most basic texts are reproduced and cited.

comparing these empires to those of the leading states of the European military revolution.<sup>2</sup> Comparisons of strategies of recruitment and resource mobilization, as well as of bureaucratic–fiscal developments, help us better understand the divergent paths these empires’ governments took, and thus the nature of their empires. Such comparisons also help us qualify both the military-revolution approach and its more recent critique that uses cultural arguments. Based ultimately on Weberian assumptions that war acted as a catalyst for political and social change, the military-revolution approach views war “as a force driven by its own internal dynamics of technological developments and organizational innovation,” which led to force optimization and thus greater military effectiveness. The cultural argument counters these assumptions with its claim that war ultimately is “culturally determined” and is a product of the cultural context of specific societies. According to this assumption, “the degree to which a technological or organizational innovation is accepted and developed depends upon the cultural context.”<sup>3</sup>

This article is the first attempt at comparing Ottoman and Russian military capabilities from circa 1500 through 1800. My main focus is on military, fiscal, and bureaucratic–institutional transformations and on the changing role of the central government in warring. The article pays special attention to the following questions: How did recruitment strategies and methods of resource mobilization change? Were the changes the result of planned reforms or a response to internal and/or external challenges? What causal connections existed between changes in the composition and effectiveness of the armed forces and changes in the relationship between rulers and their elites? Since these questions will ultimately require a monograph or two, the present article’s aim is to introduce the questions and give preliminary answers to some of them.

The main argument set forth here is that whereas in the patrimonial Ottoman Empire of the 16th century, the sultan and his central government had more control over their empire’s resources and the means of organized violence than their Muscovite counterparts, by the 18th century Istanbul lost its edge over St. Petersburg. Despite its failure in the 1711 Pruth campaign, by the early 18th century Russia had considerably strengthened its military capabilities vis-à-vis the Ottomans due to a series of autocratic military, bureaucratic, and

<sup>2</sup> On Ottoman and Habsburg military developments, see Gábor Ágoston, “Empires and Warfare in East-Central Europe, 1550–1750: The Ottoman–Habsburg Rivalry and Military Transformation,” in *European Warfare, 1350–1750*, ed. Frank Tallent and D. J. B. Trim (Cambridge: Cambridge University Press, 2010), 110–34.

<sup>3</sup> As summarized by David Parrott, “Cultures of Combat in the Ancien Régime: Linear Warfare, Noble Values, and Entrepreneurship,” *International History Review* 27, 3 (2005): 518–33, quotations 519–20.

fiscal policies, some of which were devised and implemented as responses to Tatar and Ottoman threats or introduced as imitations of Ottoman military–bureaucratic practices. In this process, Romanov Russia evolved into an autocratic centralized empire, described by historians as a “well-ordered police state” and a “fiscal–military” state.<sup>4</sup> The Russian central state apparatus became able to extract resources and use military force more independently of local power holders than its counterpart in Istanbul. The Ottoman Empire took a reverse path and evolved into a decentralized, limited monarchy whose history between 1617 and 1730 witnessed seven dethronements out of ten reigns,<sup>5</sup> and where the central government’s control over resources and the means of organized violence was limited by local power brokers and thus considerably diminished compared not just to its rivals but also to its own 16th-century self.

After a brief overview of the historiography and the geopolitical setting, the first main section of the article compares recruitment strategies, as well as the armies’ composition and strength, in the 15th and 16th centuries. It shows how conditional service revenue/land grants (*timar* and *pomest’ e*) in both polities played a crucial role in transforming earlier armies, which had consisted of the rulers’ own retinues as well as the private retinues of the Turkish march lords and service princes, into loyal, unified, semi-permanent armies under the rulers’ command. It also demonstrates the importance of the Janissaries and *strel’ tsy* in further strengthening the sultan’s and the tsar’s position. These parallel military developments also demonstrate the influence of Ottoman military–fiscal models as stimuli for military developments in a vast region from Hungary to Muscovy, and thus question the proposition that war is culturally driven.

The second main section focuses on divergent developments in the 17th and 18th centuries. It demonstrates that from the 17th century on, Muscovy’s military transformation was heavily influenced by its western and northern neighbors. The wars against Sweden (1590–95) and the Polish-Lithuanian Commonwealth (1609–19) exposed the inadequacy of the traditional system based on the *pomest’ e* cavalry. With the help of foreign officers and mercenaries, the government established new-formation infantry (*soldaty*), cavalry (*reitarskii polk*), and side-armed dragoon (*draguny*) regiments. It also gradually phased out the old *pomest’ e* cavalry and integrated them into the new-formation cavalry

<sup>4</sup> Marc Raeff, *The Well-Ordered Police State: Social and Institutional Change through Law in the Germanies and Russia, 1600–1800* (New Haven: Yale University Press, 1983); Janet Hartley, “Russia as a Fiscal–Military State, 1689–1825,” in *The Fiscal–Military State in Eighteenth-Century Europe: Essays in Honour of P. G. M. Dickson*, ed. Christopher Storrs (Farnham, UK: Ashgate, 2009), 125–66.

<sup>5</sup> On the Ottoman Empire as a limited monarchy, see Baki Tezcan, *The Second Ottoman Empire: Political and Social Transformation in the Early Modern World* (Cambridge: Cambridge University Press, 2010).

regiments by the thousands. Meanwhile, musketeers and their sons found employment in the new-formation infantry regiments, whose main body came from peasants through conscription, which after 1658 came close to mass national conscription. The turning point occurred during the Thirteen Years War against the Commonwealth (1654–67), after which the majority of troops served in new-formation regiments.<sup>6</sup> Although this army was only a semi-standing one, mobilized seasonally, it provided a firm base for the standing army that was established and strengthened under Peter I and Catherine II. The process was accompanied by fiscal, organizational, and bureaucratic developments that all pointed toward a standing military.

The 16th-century Ottoman military was also exposed to modern European armies and their tactics in the long war in Hungary (1593–1606) against the Habsburgs, whose forces employed infantry musketeers on a scale comparable to the best armies of Western Europe.<sup>7</sup> Similarly to Moscow, Istanbul also welcomed West European mercenaries. Their employment remained a curiosity, however, and did not affect the composition and tactics of the Ottoman military at all.<sup>8</sup> The response to the challenges of West European tactics remained within the traditional Ottoman military culture. It was also influenced by the availability of large numbers of freelance infantrymen, a consequence of the economic and social transformations that the Ottoman Empire witnessed in the second part of the 16th century, partly due to population growth and the monetization of the economy. To counterbalance Habsburg superiority in firepower, the Ottomans increased the numbers of the existing Janissary corps and enlisted other arms-bearing infantrymen from among the subject population (called *levend*, *sekban*, *sarıca*, *tüfenkendaz*). Neither method, however, brought the desired result. To the contrary, the measures introduced by Istanbul weakened the government's ability to raise and provide for troops and left it dependent on local power brokers and notables in troop mobilization and war financing.

<sup>6</sup> V. Chernov, *Vooruzhennye sily russkogo gosudarstva v XV–XVII vv. s obrazovaniia tsentralizovannogo gosudarstva do reform pri Petre I* (Moscow: Voennoe izdatel'stvo Ministerstva oborony Soiuzna SSR, 1954), 133–98; Richard Hellie, *Enserfment and Military Change in Muscovy* (Chicago: University of Chicago Press, 1971), 198–201; Carol Belkin Stevens, *Russia's Wars of Emergence, 1460–1730* (Harlow, UK: Pearson Longman, 2007), 160–68.

<sup>7</sup> On this, see József Kelenik, "The Military Revolution in Hungary," in *Ottomans, Hungarians, and Habsburgs in Central Europe: The Military Confines in the Era of Ottoman Conquest*, ed. Géza Dávid and Pál Fodor (Leiden: Brill, 2000), 117–59.

<sup>8</sup> Caroline Finkel, "French Mercenaries in the Habsburg–Ottoman War of 1593–1606," *Bulletin of the School of Oriental and African Studies* 55, 3 (1992): 451–71; Péter Sahin-Tóth, "À propos d'un article de C. F. Finkel: Quelques notations supplémentaires concernant les mercenaires de Pápa," *Turcica* 26 (1994): 249–60.

## Note on Historiography

Comparative study of the two empires is a fairly recent development. While pertinent remarks of general studies are useful, more detailed comparisons in the context of specialized studies offer greater potential insights.<sup>9</sup> This is especially true for military history, given the importance of warfare in state formation in the two empires, as illustrated by the old characterization of the Russian Empire as a “garrison state” and the Ottoman Empire “as a near-perfect military state”—although copious new literature has seriously challenged these suppositions and opened new avenues in both Russian and Ottoman military studies.<sup>10</sup> Historians working on Russian, Polish-Lithuanian, Black Sea, and Ottoman warfare have made valuable observations.<sup>11</sup> Because few scholars are proficient in the necessary languages and historiographies and owing to the often strikingly different historiographic approaches and traditions, however, comparisons are not easy. In addition, there is a great disparity in the volume and sophistication of Ottoman and Russian military studies. Whereas there are many excellent monographs and specialized studies in English (not to mention the rich Russian-language literature) on the Russian military and the related bureaucratic and fiscal institutions, Ottoman military history is a relatively new field.<sup>12</sup> Ottomanist historians also lack the impressive source publications that Russian historians produced from the latter part of the 19th century onward, and the general histories available to

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<sup>9</sup> For useful general studies see, for example, D. C. B. Lieven, *Empire: The Russian Empire and Its Rivals* (New Haven: Yale University Press, 2001); Karen Barkey, *Empire of Difference: The Ottomans in Comparative Perspective* (Cambridge: Cambridge University Press, 2008); Virginia H. Aksan, “Locating the Ottomans among Early Modern Empires,” in her *Ottomans and Europeans: Contacts and Conflicts* (Istanbul: Isis, 2004), 81–110.

<sup>10</sup> On the phrase “garrison state” and its critique, see Janet M. Hartley, *Russia, 1762–1825: Military Power, the State, and the People* (Westport, CT: Praeger, 2008), 209. Regarding the idea that the Ottoman Empire was “a near-perfect military state,” see Peter Sugar, “A Near-Perfect Military Society: The Ottoman Empire,” in *War: A Historical, Political, and Social Study*, ed. L. L. Farrar (Santa Barbara, CA: ABC-CLIO, 1978), 95–104. For a more complex picture of Ottoman military capabilities, see Rhoads Murphey, *Ottoman Warfare, 1500–1700* (New Brunswick, NJ: Rutgers University Press, 1999); Gábor Ágoston, *Guns for the Sultan: Military Power and the Weapons Industry in the Ottoman Empire* (Cambridge: Cambridge University Press, 2005); and Virginia H. Aksan, *Ottoman Wars 1700–1870: An Empire Besieged* (Harlow, UK: Pearson Longman, 2007).

<sup>11</sup> Robert I. Frost, *The Northern Wars: War, State, and Society in Northeastern Europe, 1558–1721* (Harlow, UK: Longman, 2000); Brian L. Davies, *Warfare, State, and Society on the Black Sea Steppe: 1500–1700* (London: Routledge, 2007); Stevens, *Russia's Wars of Emergence*; Aksan, *Ottoman Wars*.

<sup>12</sup> See Virginia Aksan, “Ottoman Military Matters,” *Journal of Early Modern History* 6, 1 (2002): 52–62; Kahraman Şakul, “Osmanlı Askeri Tarihi Üzerine Bir Literatür Değerlendirilmesi,” *Türkiye Araştırmaları Literatür Dergisi* 1, 2 (2003): 529–71.

them pale in comparison to, say, Solov'ev's monumental *Istoriia Rossii*.<sup>13</sup> Russian historians, who have authored dozens of volumes on their most important monarchs, statesmen, generals, and bureaucrats, are often puzzled that there exist only a handful of—often outdated—monographs about even the most celebrated Ottoman sultans,<sup>14</sup> and almost none about grand viziers, let alone modern prosopographical studies about members of the military–bureaucratic elite in the 16th through 18th centuries.<sup>15</sup> We also need more comparative histories of Russo–Ottoman wars. The marked improvements in the availability of Ottoman archival and manuscript sources, the recent flourishing of source publications, and the formation of a “critical mass” of Ottoman military historians both in Turkey and abroad make the time ripe for more detailed comparative studies.

Both contemporaneous Ottoman thinkers and later historians sought explanations for the weakening of Ottoman military capabilities and their defeats at the hands of their two neighboring opponents, Habsburg Austria and Romanov Russia, in the corruption of “classical” Ottoman institutions of the so-called “golden age” (c. 1450–1550). In this way, a paradigm of “Ottoman decline” was created. Eurocentric and Orientalist scholarship further blamed the putative “cultural and technological conservatism” of Islam as well as a “military despotism” that “militated against the borrowing of western techniques and against native inventiveness.”<sup>16</sup> The power of this reasoning is exemplified by

<sup>13</sup> Sergei Mikhailovich Solov'ev, *Istoriia Rossii s drevneishikh vremen*, 29 vols. (St. Petersburg: Obshchestvennaia pol'za, 1894–95), and reprints; English trans. *History of Russia* (Gulf Breeze, FL: Academic International Press, 1976–)

<sup>14</sup> To give just two striking examples regarding the two best-known Ottoman sultans, Mehmed II, the conqueror of Byzantine Constantinople, and Süleyman the Magnificent (1520–66). Franz Babinger's *Mehmed der Eroberer und seine Zeit: Weltensürmer einer Zeitenwende* (Munich: F. Bruckmann, 1953) was published without notes and has serious problems, including plagiarism: see Colin Heywood, “Mehmed II and the Historians: The Reception of Babinger's *Mehmed der Eroberer* during Half a Century,” *Turcica* 40 (2008): 295–344. The English edition—*Mehmed the Conqueror and His Time* (Princeton, NJ: Princeton University Press, 1978)—was published with important changes and notes by William C. Hickman as editor. André Clot, *Soliman le Magnifique* (Paris: Fayard, 1983) (English ed. *Suleiman the Magnificent: The Man, His Life, His Epoch*, trans. Matthew J. Reiss [London: Saqi Books, 1992]) presents the sultan and his empire mainly through Western eyes and perpetuates an image of a Süleymanic “golden age” that was followed by “Three Centuries of Decline and Fall” (the title of the book's last chapter).

<sup>15</sup> Some exceptions are Radovan Samardžić, *Mehmed Sokolović* (Belgrade: Srpska književna zadruha, 1971); Cornell H. Fleischer, *Bureaucrat and Intellectual in the Ottoman Empire: The Historian Mustafa Âli (1541–1600)* (Princeton, NJ: Princeton University Press, 1986); Virginia H. Aksan, *An Ottoman Statesman in War and Peace: Ahmed Resmi Efendi, 1700–1783* (Leiden: Brill, 1995); and Jane Hathaway, *Beshir Agha: Chief Eunuch of the Ottoman Imperial Harem* (London: Oneworld Publications, 2005).

<sup>16</sup> Paul M. Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000* (New York: Random House, 1987), 12; E. L. Jones, *The European Miracle:*

a recent pamphlet by Bernard Lewis, written before 9/11 but published afterwards, which maintains that the failure of “Islamic war departments” (whatever he meant by this) to keep pace with the “West” was due largely to the inherent conservatism of Islam.<sup>17</sup>

Recent Ottomanist scholarship, inspired by such diverse disciplines as economic and military history, frontier studies, literary criticism, and sociology, to name but a few, has questioned the traditional “rise—golden age—decline—modernization” periodization, along with almost all the major arguments of the traditional decline schools, and has declared the decline paradigm a myth.<sup>18</sup> This new scholarship emphasizes “transformation” instead of decline with regard to institutions and argues for the flexibility and vitality of the economy and society in the 17th and 18th centuries. Economic and military historians have shown the remarkable resurgence of the Ottoman Empire in the 17th century and argued that the economy and war industry did not substantially decline until about the mid- to late 18th century.<sup>19</sup> Building on the research of the Turkish economic historian Mehmet Genç regarding the lifelong tax farms (*malikane*), historians of the Arab and Anatolian provinces have shown how this fiscal instrument, along with other techniques employed by the government, helped Istanbul to tie provincial notables to the center.<sup>20</sup> Others have argued that by co-opting rebels and local strongmen into its ruling elite, the Ottoman government

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*Environments, Economies, and Geopolitics in the History of Europe and Asia* (Cambridge: Cambridge University Press, 1987), 181.

<sup>17</sup> Bernard Lewis, *What Went Wrong? Western Impact and Middle Eastern Response* (Oxford: Oxford University Press, 2002).

<sup>18</sup> Douglas A. Howard, “Ottoman Historiography and the Literature of ‘Decline’ of the Sixteenth and Seventeenth Centuries,” *Journal of Asian History* 22, 1 (1988): 52–77; Howard, “Genre and Myth in the Ottoman Advice for Kings Literature,” in *The Early Modern Ottomans: Remapping the Empire*, ed. Virginia H. Aksan and Daniel Goffman (Cambridge: Cambridge University Press, 2007), 137–66; Cemal Kafadar, “The Question of Ottoman Decline,” *Harvard Middle Eastern and Islamic Review* 4, 1–2 (1997–98): 30–75; Jane Hathaway, “Problems of Periodization in Ottoman History: The Fifteenth through the Eighteenth Centuries,” *Turkish Studies Association Bulletin* 20, 2 (1996): 25–31; Linda Darling, “Another Look at Periodization in Ottoman History,” *Turkish Studies Association Bulletin* 26, 2 (2002): 19–28; Suraiya Faroqhi, *Approaching Ottoman History: An Introduction to the Sources* (Cambridge: Cambridge University Press, 1999), 149–56.

<sup>19</sup> Linda T. Darling, *Revenue-Raising and Legitimacy: Tax Collection and Finance Administration in the Ottoman Empire, 1560–1660* (Leiden: Brill, 1996); Şevket Pamuk, *A Monetary History of the Ottoman Empire* (New York: Cambridge University Press, 2000); Mehmet Genç, *Osmanlı İmparatorluğunda Devlet ve Ekonomi* (Istanbul: Ötüken, 2000), which contains many of the author’s seminal articles written between 1975 and 1998; Murphey, *Ottoman Warfare*; Jonathan Grant, “Rethinking the Ottoman ‘Decline’: Military Technology Diffusion in the Ottoman Empire, Fifteenth to Eighteenth Centuries,” *Journal of World History* 10, 1 (1999): 179–201; Ağoston, *Guns for the Sultan*; Aksan, *Ottoman Wars*.

<sup>20</sup> Dina Rizk Khoury, *State and Provincial Society in the Ottoman Empire: Mosul, 1540–1834* (Cambridge: Cambridge University Press, 1997); Jane Hathaway, *The Politics of Households in*

became stronger rather than weaker in the 17th century, and that this path was an alternative means of state building.<sup>21</sup> One recent monograph offers a new alternative to the old narrative of “golden age—decline—modernization” by viewing the era between 1580 and 1826 as an experiment in building a socioeconomic and political system characterized by “limited government.”<sup>22</sup> However, none of these revisionist studies have been able to explain satisfactorily the military decline of the Ottoman Empire in the 18th century vis-à-vis Istanbul’s two main rivals, Habsburg Austria and Russia. The present article attempts to do just that, by comparing and contrasting Ottoman and Russian military developments from the 16th through the late 18th centuries.

### The Geopolitical Setting

The main theater of confrontation between the Ottoman Empire and Russia was the Black Sea region, which had become an “Ottoman lake” between the conquest of Constantinople in 1453 and the 1480s, when the Ottomans captured the Danube delta. The conquest in 1475 of the Genoese towns of Caffa and Tana (Azak/Azov) in the Crimea and at the mouth of the Don, respectively, and the fact that the Crimean Tatars became Istanbul’s vassals (1478), proved crucial in the Ottomans’ Black Sea and Eastern/Central European strategy until the end of the 1768–74 Russo-Ottoman war and the Russian annexation of the Crimea in 1783.<sup>23</sup> Until the 1560s, however, Ottomans and Muscovites did not engage in direct military conflict against one another, and the era was characterized by conflicts via proxies, in which the Crimean Tatars and the Don Cossacks played the main roles.

The second phase commenced with Moscow’s conquest of Kazan (1552) and Astrakhan (1554–56) and lasted until the 1670s. The Ottoman response to the Muscovite conquests in the 1550s was the failed 1569 Astrakhan campaign and the Don–Volga canal project. With it, Grand Vizier Sokollu Mehmed Pasha hoped to dislodge the Russians from Astrakhan and the Lower Volga, and—by

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*Ottoman Egypt: The Rise of the Qazdağlıs* (New York: Cambridge University Press, 1997); Ariel Salzmann, *Tocqueville in the Ottoman Empire: Rival Paths to the Modern State* (Leiden: Brill, 2004).

<sup>21</sup> Karen Barkey, *Bandits and Bureaucrats: The Ottoman Route to State Centralization* (Ithaca, NY: Cornell University Press, 1994); Barkey, *Empire of Difference*.

<sup>22</sup> Tezcan, *The Second Ottoman Empire*.

<sup>23</sup> Halil İnalçık, “The Question of the Closing of the Black Sea under the Ottomans,” *Arxeion Pontou* 33 (1979): 74–110; Dariusz Kolodziejczyk, “Inner Lake or Frontier? The Ottoman Black Sea in the Sixteenth and Seventeenth Centuries,” in *Enjeux politiques, économiques et militaires en Mer Noire (XIVe–XXIe siècles): Études à la mémoire de Mahail Guboglu*, ed. F. Bilici, I. Candea, and A. Popescu (Braïla: Musée de Braïla, 2007), 125–39.



transporting the Ottoman Black Sea fleet onto the Caspian Sea—attack Safavid Persia from the north and conquer the province of Shirwan.<sup>24</sup>

The era also witnessed recurring Zaporozhian and Don Cossack naval raids against Ottoman towns in the Crimea, the Rumelian shores of the Black Sea (1606–16), and the Anatolian coast. This further complicated the relationships among the Ottomans, the Polish-Lithuanian Commonwealth, and Muscovy, which were supposed to restrain the Zaporozhian and Don Cossacks. Cossacks even entered the Bosphorus and ravaged the outskirts of the imperial capital, Istanbul. Between 1574 and 1634, Akkerman, at the mouth of the Dniester River, suffered no fewer than 14 raids. Kefe (Caffa), the center of Ottoman administration in the Crimea, was sacked in 1616. Sinop was raided in 1614, as was Trabzon on numerous occasions in the 1610s, followed by more serious attacks in the 1620s. The Cossacks even captured Azak, at the mouth of the Don, in 1637, and it was not until five years later, in 1642, that the Ottomans recovered it.<sup>25</sup>

To defend their ports and commercial shipping against such raids, the Ottomans strengthened several of their fortifications along the northern rim of their Black Sea frontier. Muscovy also fortified its defenses against Tatar raids. In the 1550s and 1600s, Ivan IV strengthened the ancient *cherta* through Tula and constructed a second one to the south from Putivl', but it was not until the mid-17th century that the new Belgorod defense line (built and fortified between 1635 and 1653), with its 17,000 men in 1636, substantially reduced the frequency of Tatar raids.<sup>26</sup>

The third period started with the 1677–81 Russo-Ottoman war over Chyhyryn, and witnessed several further wars between the empires (1686–1700, 1710–11, 1735–39, 1768–74; 1787–91). Of these, the 1768–74 war marked a turning point, with the resounding Russian victory proving that power relations had changed fundamentally. For the most part, Russia fought the war on Ottoman territory. It occupied the Romanian principalities of Moldavia and Wallachia as well as the Crimean Khanate. In 1770, the Russian Baltic fleet

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<sup>24</sup> Davies, *Warfare, State, and Society*, esp. chaps. 1–3; Halil İnalcık, “The Origins of the Ottoman–Russian Rivalry and the Don–Volga Canal,” *Annales de l'Université d'Ankara* 1 (1947): 47–110; Akdes Nimet Kurat, *Türkiye ve İdil boyu; 1569 Astarhan seferi, Ten-İdil kanalı ve XVI–XVII. yüzyıl Osmanlı-Rus münasebetleri* (Ankara: Ankara Üniversitesi Basımevi, 1966).

<sup>25</sup> Victor Ostapchuk, “The Human Landscape of the Ottoman Black Sea in the Face of the Cossack Naval Raids,” in *The Ottomans and the Sea*, ed. Kate Fleet, in *Oriente Moderno* 29 (81), 1 (2001): 44–50; Ostapchuk and Svitlana Bilyayeva, “The Ottoman Northern Black Sea Frontier at Akkerman Fortress: The View from a Historical and Archeological Project,” in *The Frontiers of the Ottoman World*, ed. A. C. S. Peacock (Oxford: Oxford University Press, 2009), 151.

<sup>26</sup> Hellie, *Enserfment*, 174–79; Davies, *Warfare, State and Society*, 59–95; Stevens, *Russia's Wars of Emergence*, 133–38.

annihilated the Ottoman navy at Çeşme in the Aegean Sea. In the peace treaty of Küçük Kaynarca, the Ottomans ceded to Russia part of their former Black Sea lands as well as Kerch, which guarded the channel between the Black and Azov seas. The Crimea became independent, only to be annexed by Russia in 1783.<sup>27</sup>

### Parallel Paths: The 15th and 16th Centuries

**Conditional Service Land/Revenue Grants and Provincial Cavalry.** Between the 15th and the 17th centuries, the Ottoman army was one of the best-organized, -paid, and -supplied in the world. The bulk of the army consisted of the provincial cavalry forces, known as *timarlı sipahis* (timariot) after the military fiefs (*timar*) through which Istanbul compensated them for their service. In return for the right to collect revenues from his assigned fiefs, the Ottoman provincial cavalryman had to provide his own arms (short sword, bows), armor (helmet and chain mail), and horse and report for military service along with his armed retainers (*cebelü*) when called upon by the sultan. The number of armed retainers whom the provincial cavalryman had to keep, arm, and bring with him on campaigns increased in proportion to the income from his fief. To keep track of the number of fief-holding cavalrymen and their obligations, the Ottomans used various types of land survey registers, perhaps as early as the reign of Bayezid I (r. 1389–1402). During campaigns, muster rolls were checked against these registers to determine if all the cavalrymen had reported for duty and brought the required retainers and equipment. If a cavalryman failed to report or bring the required number of retainers, he lost his military fief, which then was assigned to someone else. The *timar* fiefs and related bureaucratic surveillance system provided the Ottoman sultans in the late 15th and 16th centuries with a provincial cavalry 50,000 strong, while relieving the central bureaucracy of the burden of raising revenue and paying military salaries.<sup>28</sup> When not on active duty, the timariot provincial cavalry, led by the district and provincial governors (sing. *sancakbeyi* and *beylerbeyi*, respectively), also proved instrumental for maintaining law and order in the provinces. These governors supervised and headed both the military and the provincial administration and, at least in the 16th century, were rotated every three years or so. In this and many other respects they resembled the *namestniki* in Muscovy, although the latter, unlike their Ottoman

<sup>27</sup> For these wars, see Aksan, *Ottoman Wars*.

<sup>28</sup> The 1527 treasury account listed 27,868 timariots, who could mobilize some 23,000 retainers, according to Gyula Káldy-Nagy, "The First Centuries of the Ottoman Military Organization," *Acta Orientalia Academiae Scientiarum Hungaricae* 31 (1977): 161–62. Murphey, who uses the same source, estimates the potential strength of the timariot cavalry at 99,261 and that of the mobilizable forces at 50,000–80,000 men (*Ottoman Warfare*, 36–43).

counterparts, held supreme judicial authority in addition to their administrative and military responsibilities.

It has been suggested that the concept of the *pomest'e* conditional-service landholding or military fief in Muscovy was borrowed from the Ottoman *timar* system, and some point to Peresvetov's 1547 treatise, which encouraged imitation of Ottoman methods of resource mobilization. George Vernadsky argued that the original model for both the *pomest'e* and the *timar* was the Byzantine *pronoia* conditional land grant. However, others have contested his explanation.<sup>29</sup> Donald Ostrowski has suggested that the *pomest'e* system was modeled on the *iqta* system—a well-known system in the Islamic world by which military commanders were allowed temporarily to collect taxes from assigned lands to maintain themselves and their troops—that could have reached Muscovy via the Tatars of the Kipchak steppes, and that “the entire military and cavalry system of Muscovy was based directly on the Mongol system, including tactics, strategies, formations, weapons, and materiel.”<sup>30</sup> His contention seems problematic, however, for the *iqta* was “a virtually nonexistent institution in Mongol Iran” and “it does not appear in the sources ... relating to the Golden Horde.”<sup>31</sup>

The first known grant of a *pomest'e* fief is recorded in 1482, but it seems that the service obligation appeared only much later, in 1523, as suggested by Janet Martin.<sup>32</sup> The 1556 Ordinance on Service stipulated service obligations by requiring every holder of a *pomest'e* to provide a fully equipped mounted cavalryman for every 100 populated *chetverti* of land.<sup>33</sup> Bestowed by the grand prince of Muscovy for faithful service, the *pomest'e* could be inherited only on

<sup>29</sup> George Vernadsky, “On Some Parallel Trends in Russian and Turkish History,” in *Transactions of the Connecticut Academy of Arts and Sciences* 26 (July 1945), 33–34; Sergei Nefedov, “Reformy Ivana III i Ivana IV: Osmanskoe vliianie,” *Voprosy istorii*, no. 11 (2002): 31; Vincent E. Hammond, *State Service in Sixteenth-Century Novgorod: The First Century of the Pomestie System* (Lanham, MD: University Press of America, 2009), 2–3. Regarding the similarities between the *pronoia* and the *timar*, see, most recently, Colin Imber, *The Ottoman Empire, 1300–1650: The Structure of Power*, 2nd ed. (New York: Palgrave, 2009), 182–83.

<sup>30</sup> Donald Ostrowski, “The Mongol Origins of Muscovite Political Institutions,” *Slavic Review* 49, 4 (1990): 525–42, quotation 535. See also Ostrowski, *Muscovy and the Mongols: Cross-Cultural Influences on the Steppe Frontier, 1304–1589* (Cambridge: Cambridge University Press, 1998), esp. 48–50; Brian Davies, “Foundations of Muscovite Military Power, 1453–1613,” in *The Military History of Tsarist Russia*, ed. Frederick W. Kagan and Robin D. S. Higham (New York: Palgrave, 2002); and Nefedov, “Reformy.”

<sup>31</sup> See Reuven Amitai's review of Ostrowski's book in *Speculum* 77, 2 (2002): 615–18; and Amitai, “Turco-Mongolian Nomads and the Iqta System in the Islamic Middle East,” in *Nomads in the Sedentary World*, ed. Anatoly M. Khazanov and André Wink (Richmond, UK: Curzon, 2001), 152–71, esp. 157.

<sup>32</sup> Stevens, *Russia's Wars of Emergence*, 62 n. 23.

<sup>33</sup> Hellie, *Enserfment*, 37–38.

condition that an heir of the deceased *pomeshchik* was able to continue providing military service. If the *pomeshchik* could not meet this condition, the fief, like the Ottoman *timar*, reverted to the ruler and could be used to reward others who excelled in their service. Unlike hereditary estates (sing. *votchina*), the *pomest'ie* landholding could not be sold or mortgaged. Its aim was clearly to limit the ruler's dependence on service princes and their private armies—just as the *timar* decreased the sultan's dependence on the Turkish aristocracy, who in the early years of the Ottoman principality had provided the bulk of the cavalry—by creating military servitors directly dependent on, and answerable to, the ruler. Although not a standing army, this was a ready military force that the ruler could mobilize relatively quickly if needed.<sup>34</sup>

Comparisons between Ivan IV's 1556 Decree on Service and the relevant Ottoman law codes (*kanunname*), as well as detailed studies of the *pomest'ia* and *timars* (including their regional and temporal variations) and the various registers through which the Ottomans and Muscovites mapped the available fiefs and recorded cavalrymen and their obligations, would shed light on the similarities and differences between the systems. Whether or not the *timar* served as an inspiration or model for the *pomest'ie*, their military implications were similar: both created a semi-standing force that was paid by, and loyal to, the monarch.

Historians have suggested widely varying numbers as to the size of the cavalry forces supported by *pomest'ie* land grants. Hellie suggests that the *pomest'ie* middle service class was about 25,000 strong between 1550 and 1650, which is close to the size of the *timariot sipahis* (23,000) in the 1520s.<sup>35</sup> If one includes retainers, however, the estimates diverge widely. Nefedov claims that Ivan IV could maintain a cavalry force of 100,000,<sup>36</sup> whereas others put the number of the *pomestnaia konnitsa* at 75,000 (S. M. Seredonin), 50,000 (A. V. Chernov), or 35,000 (E. A. Razin). In his recent study, A. N. Lobin finds that in most campaigns of the 1510s–30s, probably not more than 10,000–12,000 cavalry reported, and that even the largest campaigns mobilized only up to 20,000 people.<sup>37</sup> Others estimate the troops under Ivan IV at 17,500 and suggest that he could mobilize only 18,000 *pomeshchiki* in 1563 and 10,500 cavalrymen

<sup>34</sup> Donald Ostrowski, "The Growth of Muscovy (1462–1553)," in *The Cambridge History of Russia, 1: From Early Rus' to 1689*, ed. Maureen Perrie (Cambridge: Cambridge University Press, 2006), 230–31, and the literature cited there. Regarding regional variations in the obligations of *pomeshchiki*, see Janet Martin, "Peculiarities of the Pomest'ie System: A Comparison of Novgorod and Tver' in the Mid-Sixteenth Century," in *Muscovy: Peculiarities of Its Development*, ed. Gyula Szvák (Budapest: Magyar Rendszerintézet, 2003), 76–87. See also Hammond, *State Service*.

<sup>35</sup> Hellie, *Enserfment*, 24.

<sup>36</sup> Nefedov, "Reformy," 31.

<sup>37</sup> A. N. Lobin, "K voprosu o chislennosti vooruzhennykh sil rossiiskogo gosudarstva v 16 v.," *Studia Slavica et Balcanica Petropolitana*, no. 1–2 (5/6) (2009): 45–75, where he also cites the

in 1579—considerably fewer than the sultans' provincial cavalry forces.<sup>38</sup> This is hardly surprising, given that Muscovy was only one of the regional powers, whereas the Ottomans were a major empire that challenged and was challenged by the Spanish and Austrian Habsburgs and the Safavids.

**Infantry, Firearms, and Siegecraft.** In addition to provincial cavalry remunerated through the *timar* land grants, the Ottoman sultans also established standing armies, beginning well before their European and Asian rivals. The Janissaries, established under Murad I (r. 1362–89) and recruited through the child levy or *devşirme* system, numbered 5,000 in the mid-15th century and reached about 10,000 men by the end of Mehmed II's reign. They remained around 10,000–12,000 strong until the early 17th century.

Infantry archers (*azabs*) were also a significant force from the second half of the 14th century on. They constituted a kind of peasant militia of originally unmarried lads who were fit for war and were levied from, and equipped, by the taxpaying subjects (*reaya*). Although their number was significant in the 15th century (20,000 at the conquest of Constantinople in 1453, and 40,000 in the battle of Otluk Beli/Tercan in 1473 against Uzun Hasan of Akkoyunlu), the elite Janissaries gradually took over their role in the army, relegating them to naval and garrison duties.<sup>39</sup>

The bulk of the Ottoman army used swords and bows. The Ottomans adopted firearms in the second half of the 14th century, probably in the 1380s or somewhat earlier, although the earliest references to their introduction remain in dispute. By the 1390s, the Ottoman government employed on a permanent basis gunners who manufactured and handled firearms, remunerating them through military fiefs (timariot *topçus*). The Ottomans employed salaried gunners or *topçus* beginning in the reign of Murad II (r. 1421–44, 1444–51); armorers (*cebecis*) perhaps from the mid-15th century; gun-carriage drivers (*top arabacıları*) from the second half of the 15th century; and bombardiers (*humbaracıs*) from the late 15th century. Gunners, armorers, and gun-carriage drivers formed an integral part of the sultan's standing army and are listed in the treasury accounts. Numbering 348 men in 1514, the size of the corps of gunners doubled by 1527 (695 men) and showed steady increase over the rest of the century: 1,204 men in 1567 and 2,827 in 1598.<sup>40</sup> The latter figure, however, reflected the need for

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figures of previous scholarship mentioned above (see 46–47); see also the debate in *ibid.*, 76–149. I thank Dr. Lobin for giving me a copy of his article and the debate.

<sup>38</sup> Hellie, *Enserfment*, 267; Davies, "Foundations," 27–28.

<sup>39</sup> Káldy-Nagy, "First Centuries," 163–67; Murphey, *Ottoman Warfare*, 43–44.

<sup>40</sup> Ágoston, *Guns for the Sultan*, 28–30.

gunners during the Habsburg–Ottoman war of 1593–1606 in Hungary, which was dominated by sieges.

Initially the Janissaries were equipped with bows, crossbows, and javelins. In the first half of the 15th century, they began to use matchlock arquebuses, although the first references to the Ottomans' use of *tüfek* or hand firearms of the arquebus type (1394, 1402, 1421, 1430, 1440, 1442) are disputable. Most historians agree that in the 1443–44 wars against the Hungarians and at the second battle of Kosovo (1448) the Ottomans used *tüfek*, which were either arquebuses or small cannons.<sup>41</sup> The fact that fortress inventories of the mid-15th century listed *tüfek*s alongside cannons (*top*) suggests that by this time the *tüfek* had evolved into handheld firearms of the arquebus type.<sup>42</sup> Murad III (r. 1574–95) equipped the Janissaries with the more advanced matchlock musket. The Ottomans were known for their expertise in siege warfare, and Ottoman gunners reduced even the modernized European forts in Hungary with astonishing effectiveness.

The first known reference to firearms in Muscovy dates from 1382, when Moscow's defenders fired small cannon (*tiufiak*) at Tokhtamysh's forces. The word *tiufiak* comes from *tüfek* (also *tüfenk*, *tüfeng*), the Turkish word for firearm, and testifies to the role that the Ottomans and Tatars played in the diffusion of gunpowder technology in Eastern Europe. It is likely, however, that most early firearms reached Muscovy from the Livonian Order and Lithuania.<sup>43</sup> Whereas gunpowder played a crucial role in the Ottomans' conquest of Constantinople in 1453, it was yet insignificant in the cavalry-based Russian army in the mid-15th century. Under Ivan III, however, gunpowder weapons and new fortifications became more important, partly due to the tsar's personal interest in military technology, in which he mirrored his Ottoman contemporary, Mehmed II. Ivan III established a cannon foundry in Moscow, and Muscovy had a separate artillery corps by the 1520s—that is, some three generations after the Ottomans had created theirs. The fact that the 1560s saw the production of heavy siege guns can be attributed at least in part to Ottoman influences. Around the same time (1520s), the use of horse-drawn gun carriages made it possible for the tsar to transport smaller cannons to the theaters of war and use them in open battles. It is estimated that in 1576 Russia had some 2,000 artillery pieces, and the

<sup>41</sup> Feridun Emecen, *Osmanlı Klasik Çağında Savaş* (Istanbul: Timaş, 2010), 34.

<sup>42</sup> In 1455, for instance, there were 148 *tüfek*s along with 4,000 bullets in Üsküp (Skopje), whereas the castle of Novoberda had 55 *tüfek*s. See *ibid.*, 35–36.

<sup>43</sup> Davies, "Foundations," 17; see also Thomas Esper, "Military Self-Sufficiency and Weapons Technology in Muscovite Russia," *Slavic Review* 28, 2 (1969): 187–88, for the debates among Russian historians as to the appearance of early firearms in Muscovy.

number had increased to 3,500 by the end of the century.<sup>44</sup> This was dwarfed, nevertheless, by the numbers available to the Ottomans, whose main cannon foundry in Istanbul was producing on average more than 200 cannons annually in the 1510s and 1520s. With 15 to 20 foundries operating in the provinces, the Ottomans could manufacture 400–500 artillery pieces annually in the 16th century.<sup>45</sup>

In the 1480s and in the early 16th century, Muscovy also used arquebusiers (*pishchal'niki*). The evolution of *pishchal'* from small-caliber cannons into shoulder arms paralleled that of the West European arquebus and Ottoman *tüfek*.<sup>46</sup> The number and tactical importance of Muscovite arquebusiers, however, cannot be compared to that of the Janissaries, whose firepower proved deadly by the early 16th century as victories against the Safavids (1514), Mamluks (1516–17), and Hungarians (1526) demonstrated. Peresvetov also recognized Muscovy's weakness in this regard and proposed the creation of a 20,000-strong infantry palace guard equipped with firearms and organized decimally like the Janissaries. In the summer of 1550, Ivan IV established a 3,000-strong palace infantry guard of Select Musketeers (*vybornye strel'tsy*). Paid by the treasury, they received 4 rubles per year—that is, only about 30 to 40 percent of what their Janissary counterparts earned.<sup>47</sup> *Strel'tsy* corps were also formed in other towns, and their total number was comparable to that of the Janissaries by the 1560s, for the tsar was able to mobilize some 12,000 of them in 1563. By the end of the century, there were 7,000 to 10,000 Moscow *strel'tsy* (about 2,000 of them mounted), and their number in the provinces reached some 20,000–25,000 men scattered throughout the realm.<sup>48</sup> They resembled the Janissaries in their tactics, too, for like the Janissaries (but unlike musketeers in Western Europe) they did not use pikes to defend themselves. The Janissaries were firing their weapons row-by-row from the early 16th century. It seems, however, that both the Janissaries and the *strel'tsy* started to use volley fire of the West European type only in the 1590s.<sup>49</sup> In battles the *strel'tsy* relied on a Hungarian-style *Wagenburg*, the *guliai gorod* or prefabricated “moving fort,” and rarely engaged in pitched battles. The

<sup>44</sup> Hellie, *Enserfment*, 152–57.

<sup>45</sup> My estimates are based on data published in Ágoston, *Guns for the Sultan*, 180–82.

<sup>46</sup> On *pishchal'niki* and the evolution of *pishchal'*; see Hellie, *Enserfment*, 153, 160; and Esper, “Military Self-Sufficiency.”

<sup>47</sup> Nefedov, “Reformy,” 42.

<sup>48</sup> Hellie, *Enserfment*, 162; Stevens, *Russia's Wars of Emergence*, 88.

<sup>49</sup> Ágoston, *Guns for the Sultan*, 24; Günhan Börekçi, “A Contribution to the Military Revolution Debate: The Janissaries' Use of Volley Fire during the Long Ottoman–Habsburg War of 1593–1606 and the Problem of Origins,” *Acta Orientalia Academiae Scientiarum Hungaricae* 59, 4 (2006): 407–38.

Ottomans had been using their respective *tabur*, that is, their version of the Hungarian *Wagenburg*, from the mid-1440s.<sup>50</sup>

**Navies.** The Ottomans possessed a small navy as early as 1374, and under Mehmed II and Bayezid II (1481–1512) they acquired the common naval technology of the Mediterranean, adopting the oared galley as their principal vessel.<sup>51</sup> The size of the Ottoman navy was already impressive under Mehmed II, who employed 145 ships of various types to blockade Constantinople in 1453, and 380 galleys in his naval expeditions against the Genoese-administered Crimean port town of Caffa in 1475. During the 1499–1503 Ottoman–Venetian war, Bayezid II considerably strengthened the navy, ordering the construction of no fewer than 250 galleys in late 1500 alone. The reorganization of the Ottoman navy under Bayezid II transformed the originally land-based empire into a formidable naval power, although in the long run the Ottoman navy proved no match for the Portuguese in the Indian Ocean.<sup>52</sup> In the eastern Mediterranean and the Black Sea, in contrast, the Ottomans controlled the maritime lines of communication, although Cossack longboats presented serious challenges, especially in the 1610s and 1620s, to the Ottoman ports.

For Muscovy, the conquest of Kazan (1552) and Astrakhan (1556) led to the expansion of trade on the Volga River and the Caspian Sea, and as a result both inland navigation and the construction of boats capable of sailing the open seas increased. Some 500 boats sailed the Volga twice a year between Nizhnii Novgorod and Astrakhan, protected by *strel'tsy* and cannons.<sup>53</sup> It was not until Peter the Great, however, that the Russian naval presence on the Black Sea littoral became significant.

**Resources and Military Strength.** As for the military strength of Muscovy and the Ottoman Empire: some Soviet-era historians claimed that Muscovy could mobilize a force of 150,000–200,000 men at the beginning of the 16th century

<sup>50</sup> Ágoston, *Guns for the Sultan*, 18–19.

<sup>51</sup> Kate Fleet, “Early Turkish Naval Activities,” in her *The Ottomans and the Sea*, 133; Colin Imber, “The Navy of Süleyman the Magnificent,” in his *Studies in Ottoman History and Law* (Istanbul: Isis, 1996), 1–69; and Imber, *Ottoman Empire*, 295–323.

<sup>52</sup> John Francis Guilmartin, *Gunpowder and Galleys: Changing Technology and Mediterranean Warfare at Sea in the Sixteenth Century* (New York: Cambridge University Press, 1974), 11–15; Salih Özbaran, *The Ottoman Response to European Expansion: Studies on Ottoman–Portuguese Relations in the Indian Ocean and Ottoman Administration in the Arab Lands during the Sixteenth Century* (Istanbul: Isis, 1994); Giancarlo Casale, *The Ottoman Age of Exploration* (Oxford: Oxford University Press, 2010).

<sup>53</sup> Edward J. Phillips, *The Founding of Russia's Navy: Peter the Great and the Azov Fleet, 1688–1714* (Westport, CT: Greenwood, 1995), 7–8.



and perhaps as many as 300,000 by the end of the century.<sup>54</sup> According to more recent research, however, Muscovy could mobilize some 35,000 men in the mid-15th century, and about 100,000 by the first part of the 16th century.<sup>55</sup> For the campaigns of 1563, 1577, and 1578, the Muscovite government mobilized 30,991, 32,325, and 36,625 troops, respectively.<sup>56</sup> While the potential strength of the Ottoman army exceeded 100,000 men, in actuality the mobilized troops for major sultan-led campaigns were usually in the neighborhood of 60,000–70,000 soldiers, which was still twice the size of the Muscovite forces mobilized for campaigns.<sup>57</sup>

The 16th century witnessed territorial expansion in both polities. Estimates regarding the size of Muscovy are contradictory and vary from 37,000 to 430,000 square kilometers in 1462, from 110,000 to 2.8 million square kilometers in 1533, and from 195,000 to 5.4 million square kilometers at the end of the 16th century, when the Ottomans controlled some 2.5 million square kilometers. The estimate of 15.28 million square kilometers for late 17th-century Russia seems especially exaggerated and must include large unpopulated areas.<sup>58</sup> In terms of taxable population, the Ottomans still had the advantage. The Ottoman Empire sustained a population of 12–13 million in the 1520s, which may have risen to at least 22 million by the end of the century; some estimates go as high as 35 million.<sup>59</sup> Estimates for Muscovy in the late 17th century have ranged between 6.5 and 16 million; more recent studies place it at 5–7 million at the end of the 16th century, and 7–10.5 million at the end of the 17th century.<sup>60</sup> If we accept

<sup>54</sup> See, for instance, Chernov, *Vooruzhennnye sily*, 33, who mentions contemporary estimates that ranged from 150,000 to 350,000 men and claims that the “Russian government could then gather up to 200,000 cavalry and infantry soldiers.” See also M. M. Krom, “O chislennosti russkogo voiska v pervoi polovine XVI v.,” in *Rossiiskoe gosudarstvo v XIV–XVII vv.: Sbornik statei, posviashchennyi 75-letiiu so dnia rozhdeniia Iu. G. Alekseeva*, ed. A. P. Pavlov and A. G. Man’kov (St. Petersburg: Dmitrii Bulanin, 2002), 67.

<sup>55</sup> Davies, “Foundations,” 17; Krom, “O chislennosti,” 79. See also the article by Lobin and the following discussion in *Studia Slavica et Balcanica Petropolitana*, no. 1–2 (5–6) (2009): 45–150.

<sup>56</sup> Dianne L. Smith, “Muscovite Logistics, 1462–1598,” *Slavonic and East European Review* 71, 1 (1993): 38–39.

<sup>57</sup> Káldy-Nagy, “First Centuries,” passim; Murphey, *Ottoman Warfare*, 35–49.

<sup>58</sup> See Hellie, *Enserfment*, 21, 281; and Donald Edgar Pitcher, *An Historical Geography of the Ottoman Empire from Earliest Times to the End of the Sixteenth Century* (Leiden: Brill, 1973), 134.

<sup>59</sup> Halil İnalcık and Donald Quataert, eds., *An Economic and Social History of the Ottoman Empire, 1300–1914* (Cambridge: Cambridge University Press, 1994), 29.

<sup>60</sup> Ia. E. Vodarskii, *Naselenie Rossii v kontse XVII–nachale XVIII veka* (Moscow: Nauka, 1977), 19 (for earlier estimates) and 192 (for 1678). The 7 million for the late 16th century and the 10.5 million for the late 17th century are given by Vodarskii and Hellie and cited by Brian Davies in *Cambridge History of Russia*, 1:486; the 5 million estimate for 1613 and the 9 to 10 million for 1689 is given by Richard Hellie, in *ibid.*, 546. David Moon reckons 9 million inhabitants for 1678 (citing Vodarskii’s 1977 book), whereas William C. Fuller gives “less than 7 million” for the

15.5–15.6 million for 1719, based on the first *reviziia* (1718–19), 10 million inhabitants for the late 17th century sound plausible.<sup>61</sup>

Although the Ottoman Empire in the 15th century was stronger and had a more centralized, disciplined army, better logistics, and more stable financing, Muscovy considerably strengthened its military capabilities from the mid-16th century onward. It accomplished this in part by emulating its Ottoman rival but also by adopting Western weaponry and tactics, because it had to fight against Western-style armies, too.

## Diverging Paths: The 17th and 18th Centuries

**Army Growth and Military–Fiscal Reforms in Russia.** In the 17th and 18th centuries, the Russian armed forces grew steadily, and their composition, tactics, and weaponry demonstrated slow adoption and adaptation of Western methods of warfare. The army increased from 92,000 men in 1630 to 164,000 in 1680, plus as many as 50,000 Ukrainian Cossacks.<sup>62</sup> In the 18th century, the army grew further, reaching close to 500,000 by the end of the century, at least on paper (Figure 1).

It should be remembered that these are often inflated paper figures; the actual numbers were smaller. Similarly, the discrepancies between figures relating to the same years reveal the problems of sources and estimates, as do figures regarding close dates (1762 and 1765), although the latter could also be explained by the natural fluctuation in the size of the armed forces. These paper figures do not account for desertion and the tendency to report more soldiers than were present in reality. Even so, by the mid-18th century the Russian armed forces outnumbered those of the Ottoman Empire. This was largely due to different recruitment methods.

Russia, which maintained Europe's largest standing army on revenues that were one-fifth of those of France, relied on conscription of serfs and nobles. In theory, all male Russians were subject to the draft. In 1705, Peter replaced the impromptu levies with a new system of recruiting that, with modifications, would endure until 1874. Twenty peasant households had to provide one

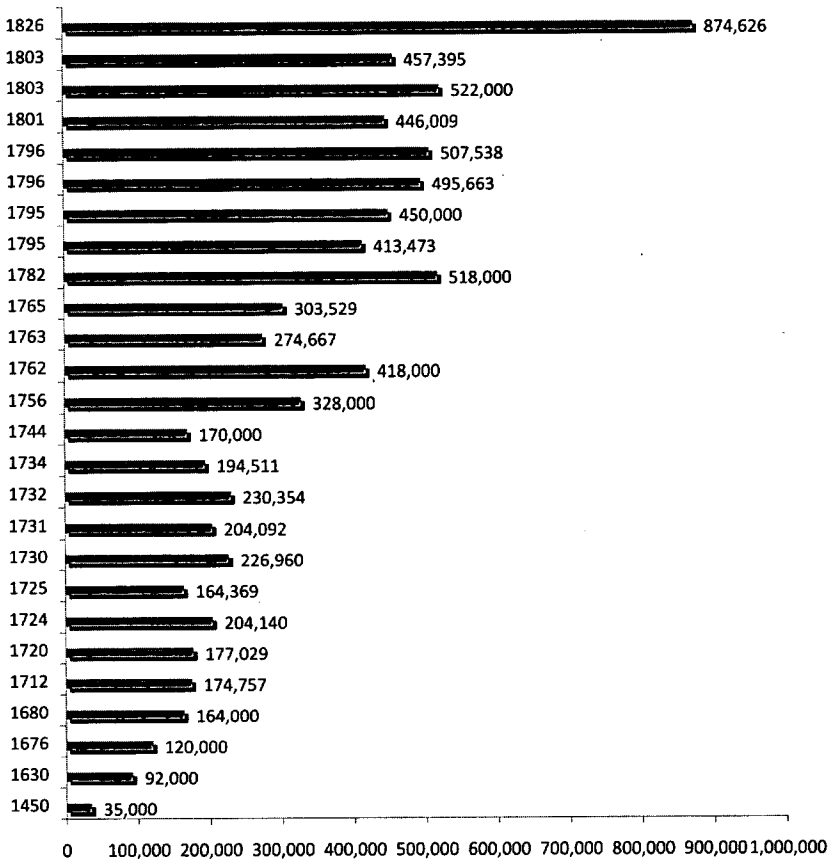
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late 17th century; see Dominic Lieven, ed., *The Cambridge History of Russia, 2: Imperial Russia, 1689–1917* (Cambridge: Cambridge University Press, 2006), 374, 530.

<sup>61</sup> Most estimates are based on V. M. Kabuzan, *Narodonaselenie Rossii v XVIII–pervoi polovine XIX v. (po materialam revizii)* (Moscow: Izdatel'stvo Akademii nauk SSSR, 1963), 164 (where he reckons 7,789,000 “male souls” and 15,578,000 inhabitants); see also Arcadius Kahan and Richard Hellie, *The Plow, the Hammer, and the Knout: An Economic History of Eighteenth-Century Russia* (Chicago: University of Chicago Press, 1985), 8 (where he gives 7,791,063 “male souls,” which, assuming equal distribution of sexes, would give 15,582,126 inhabitants).

<sup>62</sup> Paul Bushkovitch, “The Romanov Transformation, 1613–1725,” in *Military History of Tsarist Russia*, 34–35.

Figure 1. Paper Strength of the Russian Army



Sources: Kahan and Hellie, *Plow*, 369; L. G. Beskrovnyi, *Russkaia armii i flot v XVIII veke: Ocherki* (Moscow: Voennoe izdatel'stvo, 1958), 58, 330; Walter M. Pintner, "The Burden of Defense in Imperial Russia, 1725–1914," *Russian Review* 43, 3 (1984): 253; Bushkovich, "Romanov Transformation," 34–33; John L. H. Keep, *Soldiers of the Tsar: Army and Society in Russia, 1462–1874* (Oxford: Clarendon, 1985), 136–38 (1711, 1720, 1724, all include garrison troops); Davies, "The State of the Russian Army under Münnich (1730–1740): A Reassessment," paper presented at the 42nd Annual Convention of the Association for Slavic, East European, and Eurasian Studies, 18–21 November 2010, Los Angeles, California (1730, 1732, including garrison troops); Hartley, *Russia, 1762–1825*, 8. The figure for 1756 also includes 43,000 irregulars; see Fuller, *Strategy*, 96.

20-year-old recruit. Service for the conscripts was for life until 1793, when it was reduced to 25 years (although probably with little effect on the population, for few draftees were still alive or in good health after 25 years).<sup>63</sup> In the course of

<sup>63</sup> Fuller, *Strategy*, 45–46.

the century (1701–99), approximately 2,361,000 men were conscripted, which gives 23,850 per year on average. Yearly averages, however, varied greatly under the various tsars: 15,219 under Peter I in 1701–24, years that included the war with Sweden; 27,987 under Anne, whose reign coincided with the war against the Ottomans (1735–39); 20,535 under Elizabeth, whose reign coincided with the Seven Years War; 32,025 under Catherine II, whose reign witnessed two long wars against the Ottomans (1768–74 and 1787–91); and 54,639 in 1797–98 under Paul I. Adding to these figures some 1.5 million casualties during the century, Kahan compared the number of draftees to the male population of draft age. His percentages of yearly military drafts are 0.54 percent under Peter I and Elizabeth, 0.91 percent under Anne, and 0.67 percent under Catherine II. The burden was such that many tried to avoid service. Self-mutilation, escaping the call-ups, and hiding were all common.<sup>64</sup> Attrition was very high, due to death, starvation, and desertion. One estimate claims that some 345,000 men were mustered into Peter's army between 1700 and 1725, and about 250,000 were missing at his death.<sup>65</sup>

In addition to army growth, the change in the composition of the Russian armed forces, especially in the 17th century, was even more important. As mentioned, the wars against the Polish-Lithuanian Commonwealth and Sweden exposed the weaknesses of the traditional military system based on the *pomest' e* cavalry. In 1630, during the preparation for the so-called Smolensk War (1632–34) fought with the Commonwealth, out of 27,000 *pomeshchiki* only 15,850 hereditary servicemen were found fit for field service. Muscovite monarchs thus hired foreign officers and mercenaries and with their help and under their command established new-formation infantry, cavalry, and dragoon regiments. About half of the 34,000 Muscovite troops sent against Smolensk were in these new-formation regiments. Since these new regiments were expensive, after the war the government disbanded them and sent the mercenaries back to their home countries. The reforms, however, continued during the renewed conflict with the Commonwealth in the Thirteen Years War (1654–67), when the pool of unemployed foreign mercenaries was especially rich in Western and Central Europe after the Thirty Years War (1618–48). The patterns were similar to what had occurred in the 1630s, except that this time the reforms had lasting effects. The government tried to either phase out the *pomest' e* cavalymen or integrate them into the new-formation cavalry regiments. The battles of the Thirteen Years War also depleted the ranks of the middle-service-class cavalry. In the

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<sup>64</sup> Kahan and Hellie, *Plow*, 10–12; Pintner, “Burden of Defense,” 251; Keep reckons with 2,271,571 conscripted men between 1705 and 1801 (Keep, *Soldiers*, 145 n. 5).

<sup>65</sup> Fuller, *Strategy*, 46.

otherwise ill-conceived Crimean campaign of 1687, the state could mobilize an army of 112,902 men, according to the *razriad* list, later joined by some 50,000 Ukrainian Cossacks under Hetman Samoilovich. Of the Russian regular troops, 66.9 percent were new-formation infantry and cavalry, whereas musketeers and gentry cavalry accounted for 10 and 7.7 percent, respectively. The infantry to cavalry ratio was 53.7 to 46.3, which demonstrated the increased importance of infantry. In the second Crimean campaign of 1689, new-formation infantry, with the support of some 350 cannon of the artillery, successfully thwarted Tatar cavalry charges and protected the cavalry. The *strel'tsy*, meanwhile, found refuge in the now tactically obsolete *guliai gorod*.<sup>66</sup>

Although the number of *strel'tsy* increased from 33,775 in 1632 to more than 50,000 in 1681, their military value declined drastically. Only 5–10 percent of the Moscow musketeers participated in campaigns, and the government used them mainly for policing and law-enforcement duties: they helped provincial governors suppress peasants or force them to report for military service; guarded commerce on the Volga against Tatar, Kalmyk, and Cossack raids; performed prison guard duty; and served as firemen. Aware of their waning military and social importance, the *strel'tsy* joined anti-government uprisings. Following the Razin uprising (1666–71), the government reduced their numbers. Some were integrated into the new formations, especially the elite palace guard. Peter the Great liquidated the remaining musketeers in 1698, after their last major uprising.<sup>67</sup>

Lack of specialization and rapid regimental turnover remained a characteristic feature of the troops. Between 1699 and 1725, some 272 new regular regiments of foot soldiers were formed, yet the army had only about 90 such regiments in the 1720s. Ottoman and Tatar threats led to the establishment of garrison troops (in 1711) and the first and second *landmilitarii* in 1713 and 1723–24, respectively. The light cavalry dragoons were a flexible and mobile force, well suited to war in the sparsely populated territories of Eastern Europe. The need for such regiments led to the broadening of the recruitment pool, which in turn resulted in social mixing and a social reconfiguration of the Petrine cavalry. These characteristics also suggest a trajectory of military development that

<sup>66</sup> Hellie, *Enserfment*, 167–74, 198–201; Richard Hellie, “Warfare, Changing Military Technology, and the Evolution of Muscovite Society,” in *Tools of War: Instruments, Ideas, and Institutions of Warfare, 1445–1871*, ed. John A. Lynn (Urbana: University of Illinois Press, 1990), 85–94; Bushkovitch, “Romanov Transformation,” 34–35; E. A. Razin, *A hadművészet története, 3: A háború kézműipari korszakának hadművészete (XVI–XVII. század)* (Budapest: Zrínyi Katonai Kiadó, 1964), 239–50; Stevens, *Russia's Wars of Emergence*, 125–32, 151–68; Davies, *Warfare, State, and Society*, 179–81.

<sup>67</sup> Hellie, *Enserfment*, 202–7. Meanwhile, the number of provincial *strel'tsy* remained at its previous level of 30,000 men (*ibid.*).

was increasingly independent of the West European military evolution that had so deeply impressed the monarch himself. The regimental turnover enhanced military cohesiveness but blurred social distinctions. As the cavalry became part of the mass army, it lost its former social exclusivity and hence attractiveness for status-conscious noble servicemen. The nobles instead redirected their ambitions into the officer corps, which—with its distinctive ethos, lifestyle, and culture of expertise—took the place of service in the cavalry as a source of high social status.<sup>68</sup>

The Table of Ranks (1722)—a result of monarchical intentions, military needs, and political maneuvering by the nobility—regularized service to the Crown and the corresponding social status. The table established grades from the lowest (14) to the highest (1) at court, the civil administration and the military, as well as equivalences among them. The military's importance was reflected by the fact that any officer in the army (grade 14 and higher) qualified for nobility, while those serving at court and in the bureaucracy had to advance up to grade 8 to qualify. By linking upward social mobility to royal patronage and to military and bureaucratic service rendered to the state, the Table of Ranks tied the nobility to the Crown and made it subservient.<sup>69</sup>

Paying for the ever-growing number of troops and financing the protracted wars of the 18th century required broadening the tax base. The myriad *ad hoc* taxes (some 280 in 1600)<sup>70</sup> and the old tax system, which had been based on peasant households (*dvor*) since 1678, were not able to keep up with increasing military expenditures. Landlords concealed their peasants, while the latter combined their households to reduce the tax burden. As a consequence, a survey in 1710 found 20 percent fewer households than the last census in 1678. Peter aimed to remedy the situation with the introduction of the poll tax, levied on all male heads or “souls” of his realms. The first census or revision (*reviziia*) in 1719–24 found 7.8 million male souls liable to pay the tax. The state collected the first poll tax in 1724, at a rate of 74 kopecks per male “soul,” and it was calculated that 47 peasants could thus maintain an infantryman for a year, whereas the annual tax revenue from 57 peasants could pay for a cavalryman and his horse.<sup>71</sup> The number of male souls liable to the poll tax increased steadily in the

<sup>68</sup> Carol B. Stevens, “Evaluating Peter’s Army: The Impact of Internal Organization,” in *The Military and Society in Russia, 1450–1917*, ed. Eric Lohr and Marshall Poe (Leiden: Brill, 2002), 147–71.

<sup>69</sup> Stevens, *Russia’s Wars of Emergence*, 278–82; see also E. V. Anisimov, *The Reforms of Peter the Great: Progress through Coercion in Russia* (Armonk, NY: M. E. Sharpe, 1993).

<sup>70</sup> Hartley, “Russia as a Fiscal–Military State,” 129.

<sup>71</sup> Lindsey Hughes (*Russia in the Age of Peter the Great* [New Haven: Yale University Press, 1998], 138) gives only 5.5 million souls. The 7.8 million figure is given in Kahan and Hellie, *Plow*, 8.

18th century: to 9.1 million in 1744, then to 11.58 million in 1762, to 14.2 million in 1782, and finally to 18.6 million in 1795.<sup>72</sup> This provided a much more stable (and larger) tax base for Russia than what existed in the contemporary Ottoman Empire.

**The Ottoman Way: Toward a Decentralized Military.** As mentioned above, the Ottoman state witnessed a reverse trend, where local notables or *ayan* became virtually independent forces with independent armies and support bases. Meanwhile, the traditional military forces were undergoing major transformations. Like the Russians, the Ottomans also changed the composition of their armies, in part as a response to improved Habsburg battlefield firepower and tactics. However, these changes—most notably the growth of the Janissary army and the recruitment of seasonal *levend*-infantry armed with shoulder weapons—had many negative effects on the army, state finances, and society at large. Ottoman readjustment strategies led to military decentralization and weakened Istanbul's control over its armed forces and resources while augmenting its dependence on provincial elites and provincial military forces in warmaking efforts.<sup>73</sup>

On paper, the combined strength of the Ottoman standing and garrison forces fluctuated between 130,000 and 160,000 men in the 1690s and early 1700s, as shown in Table 1. To them we should add those garrison soldiers who were remunerated not directly from the treasury but from *ocaklıks*—that is, revenue sources allocated by the treasury to cover certain expenses, such as soldiers' pay. In 1747, there were 55,943 local troops (*neferat-i yerlüyan*) remunerated from *ocaklıks*.<sup>74</sup> Despite these increases, by the 1760s the Ottomans were no match for the Russians as far as army strength was concerned. In 1761–62, Ottoman central troops numbered 55,731 men, with an additional 141,116 men in the garrisons. Of the latter, 55,721 were Janissaries, armorers, artilleryists, and gun-carriage drivers of the Porte serving in the empire's forts. The remaining 85,395 were local infantry and cavalry garrison troops (*neferat-i yerlüyan-i piyade ve suvari-i kila ve palangaha*).<sup>75</sup>

Of the central standing troops, the sultan's one-time elite infantry—the famed Janissaries—continued to play a central role, despite the decline in their fighting capabilities (Figure 2).

<sup>72</sup> Kahan and Hellie, *Plow*, 8.

<sup>73</sup> See, for example, Mustafa Cezar, *Osmanlı Tarihinde Levendler* (Istanbul: Çelikkilt Matbaası, 1965); and Halil İnalcık, "Military and Fiscal Transformation in the Ottoman Empire, 1600–1700," *Archivum Ottomanicum* 6 (1980): 283–337.

<sup>74</sup> Mehmet Genç and Erol Özvar, eds., *Osmanlı Maliyesi Kurumları ve Bütçeler*, 2 vols. (Istanbul: Osmanlı Bankası Arşiv ve Araştırma Merkezi, 2006), 2:338.

<sup>75</sup> Data are from the 1761–62 treasury balance sheets; see *ibid.*, 2:370–414, esp. 372–79.

Table 1: Paper Strength of Ottoman Central and Garrison Troops

Year	Central Troops	Garrison Troops	Total
1652-53			82,976
1654			77,796
1661-62			75,967
1666-67	66,693		
1669-70	61,554	14,379	75,933
1670-71	49,455		
1687-88	58,974		
1690-91	69,249		
1691-92	72,965	59,988	132,953
1692-93	70,079	56,052	126,131
1694-95	114,017	59,094	173,111
1696-97	99,563	58,847	158,410
1698-99	96,646	63,600	159,946
1700-1	66,647	66,701	133,348
1701-2	63,817	69,710	133,527
1703-4	74,333	70,000	144,333
1704-5	87,626	71,424	159,050
1710-11	67,962	68,001	135,963
1712	57,591		
1723-24	57,305		
1727-28	53,162		
1728-29	60,637		
1729-30	115,535		
1730-31	113,406		
1748	83,675		
1761-62	55,731	141,116	196,847

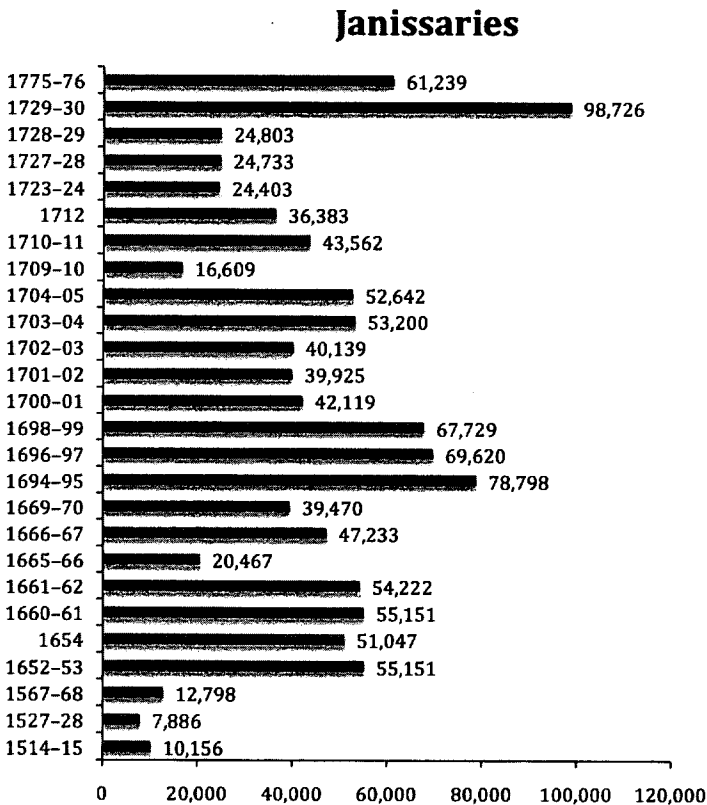
Source: Data are taken from the imperial treasury balance sheets or budgets published by Erol Özvar in his "Osmanlı Devletinin bütçe harcamaları (1509-1788)," in Genç and Özvar, *Osmanlı Maliyesi*, 1:232-33.

Paper figures are misleading, however, since only a fraction of the paid Janissaries were in fact mobilized for campaigns. Others were deployed in frontier garrisons, with strategically important forts having Janissary garrisons of 1,000 to 4,000 men. In general, some 30-60 percent of the total number of Janissaries were on frontier duty in the 1650s and the 1710s. While Janissaries serving in garrisons close to the theater of war were often mobilized, those stationed in distant forts could not participate in campaigns (Figure 3).

Not all the Janissaries stationed in Istanbul were mobilized for campaigns either. Many were guards (*korucu*) or pensioners (*mütakaid*). Older Janissaries unfit for active service were designated as *korucus* and left behind to guard the Janissary barracks. Other *korucus* joined the marching armies but did not fight; rather, they were responsible for guarding their fighting peers' tents. According to a 17th-century source, in the first quarter of the century the number of those who managed to obtain *korucu* and *mütakaid* status was more than 7,000, although



Figure 2: Paper Strength of the Janissaries

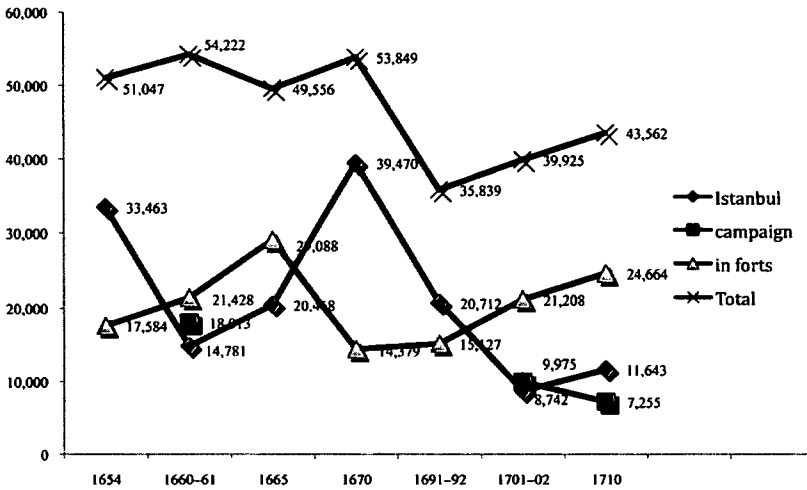


fewer than 1,000 of these were actually so old as to be unfit for service.<sup>76</sup> The *mütেকaids* were retired Janissaries with no military obligations. From the time of Selim II (r. 1566–74) onward, their pensions were paid from the Imperial Treasury. The Ottoman treasury account books as well as the Janissaries' own pay registers listed both *korucus* and *mütেকaids* along with ordinary Janissaries fit for military service, and this accounting practice further distorts our perception of the effective strength of the corps. In 1654, for instance, 10,665 (31 percent) of the 33,463 Janissaries stationed in Istanbul were *korucus* and *mütেকaids*, and in 1701 the figures were 9,621 (22 percent) out of 43,562.<sup>77</sup> Consequently, only a fraction of the Janissaries joined the campaigns. In 1598, only about half of

<sup>76</sup> İsmail Hakkı Uzunçarşılı, *Osmanlı Devleti Teşkilatından Kapukulu Ocakları*, 1: *Acemi Ocağı ve Yeniçeri Ocağı*, 2nd ed. (Ankara: Türk Tarih Kurumu Basımevi, 1984), 378–81.

<sup>77</sup> Genç and Özvar, *Osmanlı Maliyesi*, 2:112, 287.

Figure 3: Janissaries in Istanbul, on Campaign, and in Forts



*Source:* Data are from the treasury balance sheets. For the years 1654, 1691, 1701–2, and 1710, see Genç and Özvar, *Osmanlı Maliyesi*, 2:112–13, 224, 249, 287 (the figure for the Istanbul Janissaries in 1691 also contains those serving in Belgrade, Nish, and Vidin). For the years 1660, 1665, and 1670, see Ömer Lütfi Barkan, *Osmanlı Devletinin Sosyal ve Ekonomik Tarihi: Teşvikler-Makaleler*, ed. Hüseyin Özdeğer, 2 vols. (Istanbul: İstanbul Üniversitesi İktisat Fakültesi, 2000), 2:844, 750.

the 35,000 Janissaries fought in Hungary.<sup>78</sup> The share of combatant Janissaries declined further in subsequent centuries: in 1660–61, only 33 percent (18,013 men) of the Janissaries listed in the accounting registers participated in military campaigns; in 1697, about 30 percent (21,000); in 1701, 25 percent (9,975); and in 1710, 17 percent (7,255).<sup>79</sup> The ratios of mobilized to total troops are similar if one looks at the standing army as a whole. In 1710, for instance, during the Russo-Ottoman war of 1710–11, out of 52,337 total standing infantry (Janissaries, gunners, gun-carriage drivers, armorers, and their pensioners), only 10,378 men—fewer than 20 percent—took part in the campaign.<sup>80</sup>

Furthermore, those Janissaries who actually did participate in campaigns performed poorly. The increased demand for troops required widening the pool

<sup>78</sup> Tezcan, *The Second Ottoman Empire*, 178.

<sup>79</sup> For 1660–61, see Barkan, *Osmanlı Devletinin Sosyal ve Ekonomik Tarihi*, 2:844; for 1697, see İstanbul, Başbakanlık Osmanlı Arşivi, Maliyeden Müdevver Defterleri 2731, p. 187; for 1701 and 1710, see Genç and Özvar, *Osmanlı Maliyesi*, 2:249, 287.

<sup>80</sup> Genç and Özvar, *Osmanlı Maliyesi*, 2:288, and pages cited above.

of recruitment to include Turks and other Muslim-born subjects, who had previously been barred from the sultan's elite corps. Since the ranks were filled from within the corps, the old recruitment system of child levies had lapsed by the second half of the 17th century, taking with it the discipline of the corps. The gradual increase in the number of Janissaries put an additional burden on the treasury, which faced recurring deficits from the early 1590s on. To ease this burden on the treasury, beginning in the 17th century the Janissaries were increasingly paid from the *timars* and allowed to engage in trade and craftsmanship. By the late 17th century, Janissary service had been radically transformed and many Janissaries had become craftsmen and shopowners, like their *strel'tsy* counterparts in 17th-century Muscovy. They married and settled in towns, established relationships with the civilian population, and were generally more interested in providing for their families than fighting the enemy. Similarly to the *strel'tsy*, they jealously guarded their privileges and fiercely opposed all military reforms aimed at undermining their status. By this time the Janissaries had evolved into a powerful social caste and political pressure group. They allied themselves with the religious establishment (*ulema*) and the guilds to guard their privileges and limit the power of the sultan and his government.<sup>81</sup> Since the latter, unlike Peter the Great with his new-formation regiments, had no alternative military force with which to defeat the Janissaries, it continued to tolerate their dismal performance and relied increasingly on the private armies of provincial governors and local notables.

The increase in the number of Janissaries was also related to the deterioration of the *timar* system and the provincial cavalry, whose military ineffectiveness was laid bare by the wars against the Habsburgs. Like its middle-service *pomest'e* counterpart in Muscovy, the timariot *sipahi* cavalry declined in military importance, and its number in campaigns dropped accordingly. One reason was—again, similar to the Russian *pomeshchiki*—that ever fewer *sipahi* could outfit themselves and their retainers from their assigned revenue sources, whose real value gradually decreased. By the late 16th century, impoverished *sipahis* showed little desire to report for service during campaigns.<sup>82</sup> At times, the government confiscated the prebends of those who failed to report for campaign. The revenues from confiscated *timar* lands were then administered through tax farms,

<sup>81</sup> Virginia H. Aksan, "Whatever Happened to the Janissaries? Mobilization for the 1768–1774 Russo-Ottoman War," in her *Ottomans and Europeans*, 223–38; Cemal Kafadar, "Janissaries and Other Riffraff of Ottoman Istanbul: Rebels without a Cause?" in *Identity and Identity Formation in the Ottoman World: A Volume of Essays in Honor of Norman Itzkowitz*, ed. Baki Tezcan and Karl K. Barbir (Madison: Center for Turkish Studies at the University of Wisconsin, 2007), 113–34.

<sup>82</sup> Regarding the problems of mobilizing *timar*-holding *sipahis* for the Hungarian war of 1593–1606, see Caroline Finkel, *The Administration of Warfare: The Ottoman Military Campaigns in Hungary, 1593–1606* (Vienna: VWGÖ, 1988), 51.

not least to raise extra cash for the salaries of the central salaried troops. As the government had no power to command the service of the timar-holding *sipahis*, it allowed them to pay a compensatory fee (*bedel*) in lieu of their campaign duty or to send a substitute. By the middle of the 17th century, the compensatory fee in lieu of military service had become an accepted practice. The process was accompanied by the lapse of the “classical” system of provincial administration and revenue management, which ended around the 1610s.<sup>83</sup>

By the end of the 17th century, only a small portion of the timariot army could actually be mobilized. Their place was taken by the private forces of governors and local strongmen, known as *kapu halkı*, or “troops of the gate.” For instance, traditional timariot cavalry forces (*eyalet askeri*) comprised only 11.62 percent of the 86,884 troops mobilized for the 1697–98 Hungarian campaign. At the same time, the household troops of governors (*kapu halkı*) and non-timariot provincial troops together accounted for more than 32 percent of the mobilized army, thus forming the second-largest group after the salaried central army, which represented almost 43 percent. It was only with the help of such private and provincial troops that the Ottomans could still mobilize an army whose infantry-to-cavalry ratio (57:43) was comparable to that of Istanbul’s Habsburg and Romanov rivals.<sup>84</sup> The large share of infantry in the mobilized army also shows that when needed, the Ottomans were able to alter the composition of their troops to match their Central European rivals, and it cautions against generalizations about a supposedly cavalry-heavy Ottoman army in which half or even two-thirds of the troops were cavalry.<sup>85</sup> Istanbul had difficulties in mobilizing the timar-holding *sipahis* in the 18th century, too. Some 14,800 *sipahis* failed to report for military service in 1715–16, during the wars against Venice and Austria. Desertion was also a major problem. Before the army reached the Morea, the theater of the war against Venice in 1715, some 57,000 provincial troops attempted to leave the marching army.<sup>86</sup>

<sup>83</sup> İ. Metin Kunt, *The Sultan’s Servants: The Transformation of Ottoman Provincial Government, 1550–1650* (New York: Columbia University Press, 1983), 88; Finkel, *Administration of Warfare*, 256–57; Mehmet Yaşar Ertaş, *Sultanın ordusu: Mora fethi örneği 1714–1716* (Istanbul: Yeditepe, 2007), 224–32; Pál Fodor, *Válallkozásra kényszerítve: Az oszmán pénzügyigazgatás és hatalmi elit változásai a 16–17. század fordulóján* (Budapest: MTA Történettudományi Intézete, 2006), 157–61, 305.

<sup>84</sup> Géza Dávid and Pál Fodor, “Changes in the Structure and Strength of the Timariot Army from the Early Sixteenth to the End of the Seventeenth Century,” *Eurasian Studies Yearbook* 4, 2 (2005): 177, 188.

<sup>85</sup> Murphey, *Ottoman Warfare*, 36, where he seems to repeat David Chandler’s similar claims. See also Dávid and Fodor, “Changes,” 178.

<sup>86</sup> Ertaş, *Sultanın ordusu*, 231.

The increase in the number of salaried troops (and bureaucrats) was only partly driven by the exigencies of war and by the decline of the timar-holding cavalry. War created a need for more soldiers, which then was seized upon by members of the military to enroll their sons and relatives in the salaried corps. Taxpaying subjects (*reaya*) also found their way into the military, which gave them tax-exempt status and regular salaries, even if the latter were often in arrears. Soldiers of the Porte supplemented their salaries by working as tax farmers and tax collectors. Members of the standing cavalry forces accounted for 78 percent of the collectors of the *cizye* tax (poll tax levied on non-Muslims) in 1570–71; by 1615–16, their share was 90 percent.<sup>87</sup> In the first three years after the introduction in 1695 of the life-tenure tax farm (*malikane*), 682 out of 1,113 tax farms (61 percent) went to members of the military–bureaucratic–religious class (*askeri*); they paid 71 percent of the initial advance payment (*muaccele*), amounting to 46.7 million *akçe*.<sup>88</sup> Ottoman governors, grand viziers, and *serdars* (commanders-in-chief) used their positions to extract large sums from candidates for offices. At the end of the 16th century, for instance, Sinan Pasha accused his rival Ferhad Pasha of accumulating almost 135 million *akçes*, more than the treasury's annual revenues from Anatolia and Rumelia, from appointment fees between 1586 and 1590 as commander-in-chief.<sup>89</sup>

This situation augmented Istanbul's dependence on governors and other provincial strongmen, whose roles also grew as the classical system of provincial administration and revenue management further deteriorated with the disappearance of land surveys in the first decade of the 17th century. This, in turn, seriously curtailed the central government's role in the redistribution of revenues. Revenues were now administered by a gradually expanding body of beneficiaries and provincial elites, and most never made their way to the central treasury. While in the 1520s, the treasury administered some 58 percent of the empire's total revenues, this share had shrunk to 24 percent by the 1660s.<sup>90</sup>

In Russia, the central government's revenues grew steadily during the 18th century, parallel to the increase in the number of male souls, the basis of its direct taxes. Revenues rose from 8.5 million rubles in 1724 to 24.1 million in 1769, to 51.4 million in 1786, and to 74.6 million in 1796.<sup>91</sup> By comparison, in the Ottoman Empire, where the population was stable at about 20–22 million,

<sup>87</sup> Darling, *Revenue-Raising*, 169–70; cited by Tezcan, *Second Ottoman Empire*, 187.

<sup>88</sup> Erol Özvar, *Osmanlı maliyesinde malikâne uygulaması* (Istanbul: Kitabevi, 2003), 60–61.

<sup>89</sup> Tezcan, *Second Ottoman Empire*, 181, 184–90.

<sup>90</sup> Ahmet Tabakoğlu, "XVII ve XVIII yüzyıl Osmanlı bütçeleri," *IÜ İktisat Fakültesi Mecmuası* 41, 1–4 (1985): 401; Fodor, *Válallközársra kényszerítve*, 306.

<sup>91</sup> John P. LeDonne, *Absolutism and Ruling Class: The Formation of the Russian Political Order, 1700–1825* (New York: Oxford University Press, 1991), 278–80.

the revenues of the treasury increased only by 10 percent in the 18th century, despite the introduction of lifelong tax farms through which the government hoped to collect more taxes.<sup>92</sup> Whereas in the middle of the century, the revenues of the two empires were comparable (239 tons of silver in Russia in 1751 versus 214 in the Ottoman Empire in 1748), by 1786 St. Petersburg's revenues were almost seven times greater than those of Istanbul (925 tons of silver versus 136). A decade later, in 1796, Russia's revenues rose to 1,342 tons of silver.<sup>93</sup>

**Administration and Military Academies.** Similar patterns can be observed with regard to the bureaucratization of the two empires. Before the military–fiscal reforms of the 1550s, the decentralized nature of the Muscovite military and the low involvement of the central government in financing the troops did not require a large central bureaucracy. The number of state scribes (*d'iaki*) in the grand prince's scriptorium was only twenty in 1500. The major change came with the centralization of the military–fiscal administration in the 1550s, due to the need to record and administer service land grants and assignments and to keep registers of services and servitors, military reviews, and muster lists. This led to the creation of special financial bureaus, including the Service Land Chancellery (*pomestnyi prikaz*). The establishment of new-formation regiments in the mid-17th century led to the growth and further sophistication of the administrative apparatus and record keeping.<sup>94</sup>

Created by separate orders (*prikazy*), the number of the main executive governmental organs or chancelleries (*prikazy*) increased in the 17th century, as did their staff. There is disagreement in the literature about how many chancelleries

<sup>92</sup> Genç, *Osmanlı İmparatorluğunda Devlet ve Ekonomi*, 27; also cited by M. Şükrü Hanioglu, *A Brief History of the Late Ottoman Empire* (Princeton, NJ: Princeton University Press, 2008), 22.

<sup>93</sup> For Ottoman revenues, see *Osmanlı Maliyesi*, 1:188 (for 1748); and Yavuz Cezar, *Osmanlı Maliyesinde Bunalım ve Değişim Dönemi: XVIII. yy'dan Tanzimat'a Mali Tarih* (Istanbul: Alan Yayıncılık, 1986), 92 (for 1786). Calculations are approximate and based on the following silver contents: rubles 1751: 20.74 grams; 1786 and 1796: 18 grams (according to Boris Mironov and Peter Lindert). See International Institute of Social History, "Datafiles of Historical Prices and Wages" ([www.iisg.nl/hpw/data.php#russia](http://www.iisg.nl/hpw/data.php#russia), accessed 21 January 2011). Akçe 1748: 0.13 grams, and kuruş 1786: 9.4 grams. See Pamuk, *A Monetary History*, 163; and Süleyman Özmucur and Şevket Pamuk, "Real Wages and Standards of Living in the Ottoman Empire, 1489–1919," *Journal of Economic History* 62, 2 (2002): 301. See also Kıvanç Karaman and Şevket Pamuk, "Ottoman State Finances in European Comparative Perspective, 1500–1914," *Journal of Economic History* 70, 3 (2010): 593–629, whose data presented in graphs seem to be different from the ones given above.

<sup>94</sup> Peter Brown, "Muscovite Government Bureaus," *Russian History/Histoire russe* 10, 3 (1983): 269–330; Brown, "The Military Chancellery: Aspects of Control during the Thirteen Years' War," *Russian History/Histoire russe* 29, 1 (2002): 19–45; Marshall Poe, "The Military Revolution, Administrative Development, and Cultural Change in Early Modern Russia," *Journal of Early Modern History* 2, 3 (1998): 247–73, esp. 257–62.

existed, for most were short-lived, established to undertake specific tasks—often related to warfare—and allowed to lapse after they fulfilled their mission.<sup>95</sup> Such a system, as in most patrimonial states, also led to overlapping authorities and responsibilities. In times of war, the number of military-related chancelleries would grow. In 1654, the first year of the Thirteen Years War against the Commonwealth, 21 of the existing 53 chancelleries performed military–fiscal functions.<sup>96</sup> In 1626, Moscow employed 623 chancellery people (*prikaznye liudi*), whose number had risen to 1,558 by 1677 and to 2,739 by 1698. In the 1640s, 837 secretaries (*d'iaki*) and undersecretaries or clerks (*pod'iachie*) worked in the central offices, and another 774 in the provincial administration. Their number had risen to 2,739 and 1,918, respectively, by the 1690s, which gives us a total of 4,657 secretaries and clerks in the central and provincial administrative offices.<sup>97</sup> The noble servitors who headed the *prikazy*, however, lacked proper education and expertise, which was true for most of their non-noble staff, too.

Peter's foreign-policy ambitions and military campaigns required a more efficient administration than the overlapping system of *prikazy* in order to raise the necessary human and economic resources. The Senate, established in 1711, remained the central organ of administration. Between 1718 and 1720, Peter replaced the *prikazy* with nine colleges (*kollegii*) “for the sake of the orderly running of His Majesty's state affairs and the correct allocation and calculation of his revenues and the improvement of useful justice and police [*politsiia*].”<sup>98</sup> Headed by a president chosen by Peter, each of the colleges of Foreign Affairs, War, Navy/Admiralty, Mining, Manufacture, Revenue, State Expenditure, Auditing, Commerce, and Justice had some 10–11 trained officials who made decisions collectively. Various subordinate departments and chancelleries aided each college's day-to-day work. Some colleges were abolished and new ones created in their place, and there remained overlapping responsibilities among colleges and their departments. The new system ended the patrimonial governmental

<sup>95</sup> Works for the 17th century cite numbers as diverse as 35, 50, 77, 96, 106, and 116; see Borivoj Plavsic, “Seventeenth-Century Chanceries and Their Staff,” in *Russian Officialdom: The Bureaucratization of Russian Society from the Seventeenth to the Twentieth Century*, ed. Walter McKenzie Pintner and Don Karl Rowney (Chapel Hill: University of North Carolina Press, 1980), 21 n. 3.

<sup>96</sup> Peter Brown, “Tsar Aleksei Mikhailovich: Muscovite Military Command Style and Legacy to Russian Military History,” in *The Military and Society in Russia, 1450–1917*, 126.

<sup>97</sup> N. F. Demidova, *Sluzhbilaiia biurokratiia v Rossii XVII v. i ee rol' v formirovanii absoliutizma* (Moscow: Nauka, 1987), 23, 37; some of these data are also cited in Marshall Poe, “The Consequences of the Military Revolution in Muscovy: A Comparative Perspective,” *Comparative Studies in Society and History* 38, 4 (1996): 615; See also L. F. Pizar'kova, *Gosudarstvennoe upravlenie Rossii s kontsa XVII do kontsa XVIII veka: Evoliutsiia biurokraticheskoi sistemy* (Moscow: ROSSPEN, 2007), 551, who lists 1,678 scribes and undersecretaries in 47 *prikazy* in 1678.

<sup>98</sup> Hughes, *Russia in the Age of Peter the Great*, 109.

structure, however, and because the colleges proved much more efficient in resource extraction and military recruitment than the old *prikazy*, they remained the cornerstone of the Russian government for the rest of the century.<sup>99</sup>

To enhance the efficiency of tax collection as well as the manning and equipping of the army, in 1708 Peter the Great replaced the old provincial administration, headed by *voevody*, with eight provinces (*gubernii*). The new provincial governors were appointed by the tsar from among the ruling families, all related to him, and were charged with both military and civilian duties, the most important of which were collecting taxes and providing for the army in their respective province. In 1719, the now 12 provinces were subordinated to the colleges and subdivided into subprovinces (*provintsii*) and districts (*uezdy*). Although the new provincial administrative system survived until 1775, as early as 1727 it was once again under the control of restored *voevody*. The reorganization of provincial administration in 1775 by Catherine the Great resulted in 41 new provinces, in principle each with 300,000–400,000 inhabitants, which were further subdivided into *uezdy* of some 20,000–30,000 people. By 1796, the number of provinces rose to 50, and that of the *uezdy* to 493, almost triple the number in 1775.<sup>100</sup>

By 1726, the total number of secretaries and chancery personnel in the central and provincial administration had reached 7,413 men, of whom 2,767 worked in the central organs and 4,646 in local ones. Of the total, only 945 (13 percent) were *chinovniki* of grades 1–14; the others were outside the Table of Ranks.<sup>101</sup> In 1755, the central and local administration employed about 10,500 officials, of whom only 20 percent occupied grades 14 and higher. By 1763 the number of officials had risen to 16,500, reaching about 38,000 by 1800.<sup>102</sup> This seems a spectacular increase, but one should remember that the empire's territory and population grew substantially in the 18th century, from some 15.6 million in 1719 to 37.2 million in 1795.<sup>103</sup> Thus Russia's central and provincial governmental organs remained understaffed; per capita, Russia had only a quarter of the number of civil servants that France or England employed.<sup>104</sup> Compared to the Ottomans, the picture is different.

<sup>99</sup> LeDonne, *Absolutism*, 63–96; Hughes, *Russia in the Age of Peter the Great*, 133.

<sup>100</sup> Peter Waldron, *Governing Tsarist Russia* (Basingstoke, UK: Palgrave Macmillan, 2007), 97–100; Simon Dixon, *The Modernisation of Russia, 1676–1825* (Cambridge: Cambridge University Press, 1999), 129–30.

<sup>101</sup> Pisar'kova, *Gosudarstvennoe upravlenie*, 662–66.

<sup>102</sup> Dixon, *Modernisation of Russia*, 132.

<sup>103</sup> Kahan and Hellie, *Plow*, 8, assuming equal distribution of sexes.

<sup>104</sup> Waldron, *Governing Tsarist Russia*, 82.



Like the Muscovites, the Ottomans were running their government with a small bureaucracy in the early 16th century. Unlike Muscovy, though, we do not see major increases in the number of bureaucrats working for the central bureaus of the Istanbul government in the 17th century. Based on various pay registers, historians have estimated the number of clerks in the Imperial Council or *Divan* at about 100–110 in the 1530s.<sup>105</sup> In the 18th century, the central government remained small, employing about 2,000 clerks, supervisors, and apprentices around 1790.<sup>106</sup> In the 17th century, the number of scribes and clerks in the central financial administration in Istanbul fluctuated between 70 and 100 scribes, except for the unusual surge in the 1620s when their number increased to about 200. Rhoads Murphey argues that these modest figures reflect the efficiency of the Ottoman bureaucracy, the need to guard state secrets, and the fact that this job required sophisticated training both in accounting and in a special “language” and script (*siyaqat*) that was known only to a handful of bureaucrats (and Ottomanists).<sup>107</sup> Although this explanation has some truth to it, these figures are misleading. For one thing, the salary records upon which such figures are based contain only the members of the permanent bureaucracy, assigned to specific bureaus. Yet, as Murphey himself notes, the bulk of the work—preparing final copies of documents, duplicating these when sent to multiple addresses, and archiving them in the relevant bureau archives—was done by lower-level clerks and copyists (*müstensih*), whose names the payment records do not list. More important, the above figures do not take into consideration officials and clerks whom the state appointed for specific tasks, of whom the most important were those who prepared land and tax surveys (*tahrirs*). If they were included, the number would certainly reach several hundreds. Although we do not have lists of provincial bureaucrats comparable to those from Russia, the structure of the provincial administration is known and suggests a well-functioning bureaucracy. The governors-general (*beylerbeyi*) had their own council (*divan*) that mirrored the Imperial Council in Istanbul. It consisted, among others, of the province’s district governors (*sancakbeyi*) and their deputies (*alaybeyi* or *miralay*), and the province’s judge (*kadı*) and treasurer (*defterdar*). The last had his own helpers who handled the various military fiefs; and a host of scribes, clerks, and (in

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<sup>105</sup> Imber, *Ottoman Empire*, 156; Douglas A. Howard, “The Historical Development of the Ottoman Imperial Registry (*Defter-i hakani*): Mid-Fifteenth to Mid-Seventeenth Centuries,” *Archivum Ottomanicum* 11 (1986): 213–30.

<sup>106</sup> Carter V. Findley, *Ottoman Civil Officialdom: A Social History* (Princeton, NJ: Princeton University Press, 1989), 22.

<sup>107</sup> Darling, *Revenue-Raising*; Rhoads Murphey, *Exploring Ottoman Sovereignty: Tradition, Image, and Practice in the Ottoman Imperial Household, 1400–1800* (London: Continuum, 2008), 256–59.

frontier provinces) interpreters assisted the governor-general in his work. The *sancakbeyi's* office resembled that of his superior on a more modest scale. The most important officials on this level included the district governor himself, his deputies, the commanders of his *sancak's* military forces, and the district judge and his deputy (*naib*), in addition to the clerks who took care of day-to-day business. In the 1520s, the number of provinces and *sancaks* was 8 and about 80, respectively. These figures had risen to 24 and over 250 by the 1570s, and the number of *sancaks* exceeded 360 by the first quarter of the 17th century.<sup>108</sup> The number of officials and clerks administering the provinces and districts could easily reach 2,000–2,500 in the latter part of the 16th century, especially if we count those who worked at custom offices, shipyards, saltpeter plants, gunpowder works, forts, and garrisons. The paper trail that these local officials produced found its way into the central administration's bureaus, and afforded the Ottoman government a long institutional memory. The deterioration of revenue surveys from the 1580s onward, however, shows that this knowledge often became inaccurate by the 17th century, except for newly conquered lands, where new surveys were carried out.<sup>109</sup>

Even more important was the lack of Ottoman war and naval academies and ministries. Staffed by administrators, clerks, soldiers, engineers, and mapmakers, European war ministries were responsible for a wide array of tasks, from weapons improvement to clothing and from training to ensuring the supply of weapons, food, and fodder. Improvements in weapons technology, organization, and logistics owed much to the experiments carried out by these ministries.

Peter I founded the School of Mathematics and Navigation in Moscow in 1701, which offered classes in geography, mathematics, geometry, and navigation, to train would-be officers for the newly established navy. The school's role was soon taken over by the Naval Academy, founded in 1716. These schools were followed by the Army Noble Cadet Corps (1731, expanded by Catherine II in 1762), the Corps for Engineers and Artillerymen (1762), the Naval Cadet Corps (1764), a Naval Cadet Corps in Kherson (1786), and the Noblemen's Regiment (1807). These institutions proved crucial to training an indigenous officer corps. By the end of Peter I's reign, Russian officers had outnumbered their Western peers, and the 18th century produced many able generals and administrators. In addition to on-the-job training, officers in the Russian army were trained in the Guards and the two cadet corps: between 1762 and 1800, the Army Noble Cadet Corps matriculated 2,000 cadets, of whom 820 became

<sup>108</sup> Kunt, *Sultan's Servants*, 43, 69. These figures exclude the *piyade* and *müsellem* (auxiliary troops) *sancaks* and those of the Kurdish tribal chiefs.

<sup>109</sup> Howard, "Historical Development of the Ottoman Imperial Registry"; Metin M. Coşel, "Ottoman Tax Registers (*Tahrir Defterleri*)," *Historical Methods* 37 (2004): 87–100.

officers. Between 1765 and 1800, some 15,000 graduates entered military service from the Artillery and Engineering Noble Cadet Corps. There were also specialized local technical and military schools.<sup>110</sup>

The Ottomans did not establish comparable military and technical schools until the 1770s, although the first attempt goes back to 1735. The recruits of the new Corps of Bombardiers—established in 1734–35 with help from Count Claude Alexandre de Bonneval of France (1675–1747), alias Humbaracı (Bombardier) Mehmed Pasha—received practical education in geometry, trigonometry, and ballistics.<sup>111</sup> The first Ottoman schools that offered instruction in military engineering and related sciences were the Artillery School (1772) and the Mathematical School (1775), both founded with the assistance of another Frenchman, Baron François de Tott, a man of Hungarian origin. The Mathematical School was soon renamed the Engineering School (1781). The number of graduates of these schools, however, was negligible compared to those trained in comparable technical and military schools in Russia.<sup>112</sup> The Ottomans did not have an officer corps trained in Western-style warfare until the Tanzimat reforms (1839–76). The 18th century was an age of “Efendi-turned-Pashas,” that is, of military governors and grand viziers who came from the civil bureaucracy (*kalemiyye*), though further prosopographical studies are needed to fully understand the process.<sup>113</sup> Most commanding officers were ill prepared for campaigning during the 1768–74 Russo-Ottoman war. The able Grand Viziers Silahdar Mehmed Pasha (1770–71) and Muhsinzade Mehmed Pasha (1771–74) were exceptions.<sup>114</sup>

## Conclusion

Until about the late 16th century, the evolutionary trajectories of the Russian and Ottoman militaries showed more similarities than differences. The examples cited in the first part of this article regarding the convergence of their military practices in the 16th century, and of Russian emulation of Ottoman strategies of recruitment and resource mobilization, all point to the existence of a Central and East European military culture that was heavily influenced by the Ottoman example—and that often developed specifically to counter Ottoman military

<sup>110</sup> Hartley, *Russia, 1762–1825*, 59–60, 164.

<sup>111</sup> Mustafa Kaçar, “Osmanlı İmparatorluğunda Askeri Sahada Yenileşme Döneminin Başlangıcı,” in *Osmanlı Bilmi Araştırmaları: İstanbul Üniversitesi Edebiyat Fakültesi Bilim Tarihi Bölümü’nün Kuruluşunun 10. Yıldönümü Münasebetiyle Ekmeleddin İhsanoğlu’na Armağan*, ed. Feza Günergun (İstanbul: İstanbul Üniversitesi Basımevi, 1995), 209–25.

<sup>112</sup> Ekmeleddin Ihsanoglu, “Education,” in *Encyclopedia of the Ottoman Empire*, ed. Gábor Ágoston and Bruce Alan Masters (New York: Facts on File, 2009), 200–1.

<sup>113</sup> Norman Itzkowitz, “Eighteenth-Century Ottoman Realities,” repr. in *Identity and Identity Formation*, xvii–xxxii.

<sup>114</sup> Aksan, *An Ottoman Statesman*, 103.

practices. This should make proponents of a culturally distinct “Western way of war” wary.

The challenges that the Ottoman and Muscovite political and military elites faced during their respective “times of troubles” (the 16th-/17th-century *Celali* revolts and the *Smuta*) and in the wars against their western and northern enemies produced strikingly different responses. These led in turn to dissimilar outcomes: a decentralized Ottoman Empire with limited sultanic authority; and a more centralized, autocratic Russia, whose government had far greater control over resources and means of organized violence than its Ottoman counterpart.

Neither path was inevitable or necessary. In Russia, alongside the autocratic modernization, one also observes attempts to limit autocratic power. Following the extinction of the male Romanov line in 1730, the conditions imposed by the Supreme Privy Council on Peter’s niece Anna, duchess of Courland, could have “effectively turned Russia into a limited monarchy.”<sup>115</sup> Similarly, in the Ottoman Empire, there were attempts at limited military and fiscal reforms under Osman II, Murad IV (1623–40) after 1632, Grand Vizier Kemankeş Kara Mustafa Pasha (1640–44), and the Köprülü grand viziers (1656–76). All these efforts were stalled by opposition from those whose interests the reforms threatened, including coalitions of Janissaries, members of the religious hierarchy, guilds, and local power brokers. Attempts at recentralization led to revolts and to the execution of grand viziers and the deposition of sultans (Mustafa I in 1618, Osman II in 1622, Ibrahim in 1648, Mehmed IV in 1687, Mustafa II in 1703, and Ahmed III in 1730).<sup>116</sup>

Both empires paid a heavy price for the choices they made. Compared to its western neighbors, Russia remained less developed in terms of its social structure, administration, fiscal and banking institutions, and industrial enterprises, which compelled the state to devolve war-related tasks such as conscription and taxation to the peasantry and urban communities.<sup>117</sup> Hamish Scott has argued that Romanov Russia was a “military–fiscal state” rather than a “fiscal–military state,” since its resource mobilization was characterized more by conscription and the requisitioning of grain and livestock than by taxation.<sup>118</sup> The Romanov

<sup>115</sup> Isabel de Madariaga, “Portrait of an Eighteenth-Century Russian Statesman: Prince Dmitry Mikhailovich Golitsyn,” *Slavonic and East European Review* 62, 1 (1984): 36–60, quotations 37–38.

<sup>116</sup> Tezcan, *Second Ottoman Empire*.

<sup>117</sup> Hartley, *Russia, 1762–1825*, 210–12; Hartley, “Russia as a Fiscal–Military State.”

<sup>118</sup> Hamish Scott, “The Fiscal–Military State and International Rivalry during the Long Eighteenth Century,” in *Fiscal–Military State in Eighteenth-Century Europe*, 48; see also chap. 4 of Brian Davies’ forthcoming book on the Russo-Ottoman wars of the 18th century. I am grateful to Professor Davies for sharing his chapter with me.

example also showed that autocratic military modernization could be achieved without major economic and social reforms. The price for the integration of the middle and petty nobility into the new-formation regiments and the regular conscript army, perhaps the most important social side of the reforms, was to secure the latter's incomes by legalizing serfdom.<sup>119</sup> The strengthening of the nobles' power over their serfs showed the limits of autocratic reform and its need to reward relatively large segments of the elite, a necessary condition of reforms. The compromise between the Crown and the ruling class, formulated in the *Ulozhenie* (1649), remained "the foundation of Russian absolutism until the abolition of serfdom in 1861."<sup>120</sup>

The Ottomans, too, restructured their military in the 17th and 18th centuries, partly in response to the tactical challenges they faced on their Hungarian frontier against the Habsburg field armies. As we have seen, neither the increase in the number of Janissaries nor the hiring of peasant militias proved successful in the long run. One should add that the changes were only partly directed by the central government. Realizing the government's need for infantry troops, the Janissaries themselves seized the moment and used it to strengthen their privileges and enlist their sons in the corps. Selling Janissary certificates that enabled their holders to draw pay and receive daily food rations also became a lucrative business for officers and bureaucrats. Apart from the Janissaries, provincial governors and local notables profited from the devolution of power. In return for their military assistance, they continued to have access to state revenues through the various tax farms. They obtained more and more such revenue sources for life; and many *muhassils*, *mütesellims*, and *voivodas* managed to turn them into inheritable revenue farms.

That the Ottoman military was still able to fight its Austrian Habsburg, Venetian, and Russian enemies with some success in the first part of the 18th century warns us against overstating Ottoman military decline. It also demonstrates that just as military entrepreneurs in 17th-century Western and Central Europe were indispensable to the war efforts of monarchs who had limited access to human, economic, and financial resources, so had the *ayans* become instrumental for warmaking in the 18th-century Ottoman Empire. Further studies are required to discern the possible parallels between the 17th-century European military contractor and the Ottoman *ayans*.

I would suggest that the question of Ottoman decentralization could be examined in the wider context of military devolution and the emergence of the military contractor and entrepreneur. Notwithstanding the political risks involved in the system, it is generally accepted that the contract system was

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<sup>119</sup> Frost, *Northern Wars*, 319.

<sup>120</sup> LeDonne, *Absolutism*, x.

an effective way to overcome limited fiscal, organizational, and administrative capabilities, especially in smaller states that thereby managed “to maintain a military capacity that far exceeded their direct access to resources.”<sup>121</sup> Could it be that the *ad hoc* measures that eventually led to fiscal and military devolution in the Ottoman Empire were originally introduced because in the 18th century, Istanbul had to fight rivals, especially Russia, who had access to much richer human and military resources and hence possessed larger military capacities?

In his reform treatise published in 1732, Ibrahim Müteferrika praised the structure and good order of the “Christian” (by which he meant European and Russian) armies, the balanced proportions of infantry (strengthened with grenadiers), cavalry, and dragoons, and the excellent cooperation among these groups. He also noted that “Christian” military experts considered army organization so important that they developed a new branch of study that examined the structure and order of armies. Other laudable qualities of the “Christian” armies, according to Ibrahim Müteferrika, included: superior methods of training and drilling soldiers and instilling discipline; military regulations and laws that were read to the troops monthly; the high proportion of officers, which ensured order and discipline; the possibility for advancement based on merit; the competence of the high command; the order and defense of military camps; military intelligence and counterintelligence; “geometric” troop formations; uniforms that helped prevent confusion and desertion during battles; and volley technique to maintain continuous fire. Unfortunately, the Ottomans were ignorant of these latest developments in the European and Russian armies. Their troops lacked most of these qualities, and hence were repeatedly defeated by their European adversaries. Therefore, Müteferrika argued, the Ottomans had to emulate the European armies and their new order (*nizam-i cedit*).<sup>122</sup>

Müteferrika was not the only, indeed not even the most important, advocate for emulating Russian reforms. By the latter part of the 18th century, Russia had become an important source of inspiration and a model for Ottoman reformers under Selim III. Several treatises noted the modernization of Russia’s military and industry, commending the well-ordered nature of the state due to the monopolization of violence—that is, the absence of weapons among the subjects. They also noticed that Russian serfs led lives of subjugation akin to those of prisoners in chains and voiced their fears that in the event of Russia’s conquest of Istanbul, Muslims would be relegated to the status of second-class subjects.<sup>123</sup>

<sup>121</sup> Parrott, “Cultures of Combat in the Ancien Régime,” 527.

<sup>122</sup> Adil Şen, *Ibrahim Müteferrika ve Usûlül-hikem fi nizâmîl-ümem* (Ankara: Türkiye Diyanet Vakfı, 1995).

<sup>123</sup> See Kahraman Şakul, “An Ottoman Global Moment: War of Second Coalition in the Levant,” Ph.D. diss., Georgetown University (2009), 30–45; and Hanoğlu, *Brief History*, 42–43.

Despite all these treatises and efforts at modernization, the Janissaries and their allies managed to derail Sultan Selim III's Western-style military, bureaucratic, and financial reforms, even killing the "infidel sultan" himself. It was not until the 1830s that fundamental reforms could be started under Mahmud II, who destroyed the Janissaries in 1826, a century and a quarter after Peter the Great's liquidation of the *strel'tsy*.

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