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EXPANDING HORIZONS

If Mehmed Ali's tenure as governor of Egypt had only lasted until 1821, this already sixteen-year-long reign would have been greater than that of any previous Ottoman governor; he would certainly have been remembered for the remarkable changes that he implemented, the influence of which was felt across the whole of Egyptian society, especially the unprecedented degree to which his control now affected the lives of the ordinary people throughout the country. In addition, Egypt's own position was greatly enhanced within the Ottoman Empire due to the unequivocal successes which had taken place in Arabia.

Yet Mehmed Ali was destined to live for some thirty more years and during the second phase of his career he introduced further changes into the economy, the administration, and society in general, that would make his already significant accomplishments fade into insignificance. For during this second phase the administration that the Pasha had established over the previous decade-and-a-half was further consolidated and its control was extended into areas where no previous Egyptian state had dared to venture. More and more aspects of the daily lives of Egyptians were being monitored, controlled and manipulated by this new administration. At the same time new institutions, schools, hospitals, factories, as well as an impressive army and a formidable navy – all tied to this new administration – radically altered the face of Egyptian society. Together they drastically transformed the relationship that the population had with its government. After the expansion of the

Pasha's influence eastward to Arabia during the 1810s, during the 1820s he expanded southward to the Sudan and north to the island of Crete, and Morea in southern Greece. And although no serious clash broke out between him and the sultan, it was becoming increasingly clear that a head-on confrontation was looming on the horizon.

A FORTUITOUS YEAR

Coming roughly midway through his long career, the year 1237 AH/1821–1822 CE was a significant one in Mehmed Ali's life – something that he himself realized. In an interview with the British Consul which he gave in 1827, he said, "I have now been twenty-two years Pasha – in the last six years [i.e., since 1821–1822] I have done more than in the preceding years ... If I live but six or seven more years, I shall be able to mature my plans and affect something of consequence" (British National Archives, 1827a). The importance of 1821–1822 is due to two related developments which occurred during that year and which together would take Mehmed Ali's power to hitherto unprecedented heights. The first was the introduction of a particular brand of long-staple cotton (whose fibers were at least 1.75 inches/45 mm in length) and its cultivation on a large scale in the Delta. A French textile engineer by the name of Louis Alexis Jumel is usually credited with the widespread introduction of this brand of cotton. He had arrived in Egypt in 1817 and was employed by the Pasha as director of a projected spinning and weaving mill. After he had seen the bushes in the garden of Maho Bey (one of Mehmed Ali's acquaintances) he experimented with the new brand in his own garden throughout 1820. When the Pasha was informed of these experiments he encouraged Jumel's researches and forwarded 125,000 piastres to him and, following the success of the 1821 harvest, Mehmed Ali gave orders for the new cotton to be planted on a large scale. It eventually came to be known as Jumel (or Maho) cotton and it soon found voracious markets in Europe, especially in England where only the Lancashire mills with the latest machinery

could handle the fineness of its quality. With the monopolies policy firmly in place, and with Mehmed Ali effectively acting as the sole merchant through whom European firms could import this coveted commodity, the Pasha's revenues grew exponentially, and in a good year the proceeds of cotton exportation contributed anything between one-third and one-quarter of his overall income.

As with other innovations introduced by Mehmed Ali, the social cost of introducing long-staple cotton was very high. In the past most of the areas cultivated had been devoted to winter crops with the land remaining idle during the summer months. However, with the introduction of long-staple cotton – spring-planted and fall-harvested – peasants had to labor throughout the year, and many women and children were also involved in the cultivation of the new crop, especially during harvest time. Peasants were also dragged into the corvée gangs whose work was needed to clear the existing irrigation canals and dig new ones. While there is some evidence that, shortly after the introduction of the Jumel cotton, peasants were paid a satisfactory price that made the extra effort worth their while, in the long run the new crop rotation policies of the Pasha were carried out through coercion. Harsh measures were stipulated for those who resisted the strict regulations that managed the cultivation of cotton. For example, those who dared to uproot their cotton plants were sentenced to life imprisonment and those who fled their villages to avoid cultivation labor, paying taxes, corvée or any of the many other government demands, were caught and sent back to their villages.

If the introduction of long-staple cotton was a fortuitous development that allowed the Pasha to increase his revenue to such a vast extent, albeit at a huge social cost, the second major development of 1821–1822 was the culmination of a prolonged process of trial and error which had gone into setting up a reliable military force – a consequence of the Pasha's deep-seated anxiety about his relationship with the Porte (the Ottoman government). This was achieved finally in February 1822 when Mehmed Ali arrived at the fateful decision to conscript Egyptians to serve in a new standing army, required above all to protect his realm and his nascent household government. After

both previous attempts – firstly, to train the Albanian soldiers along European lines, and secondly, to capture Sudanese slaves – had failed, Mehmed Ali took a serious gamble by ordering the provincial governors in Upper Egypt to gather 4000 peasants and to send them to specially created training camps in Aswan. Initially it was decided that these peasants would be conscripted for a period of only three years, after which time they were to be given a stamped certificate proving that they had served in the army, and also to be given a life-long exemption from the land tax. In practice, however, these conscripts were often pressed into the army for life.

The training of these conscripts was entrusted to Mehmed Lazoğlu, the Pasha's faithful deputy who was now promoted to a new post, *cihadiye nazırı*, or "director of the army". Assisting him was a French officer by the name of Sève who claimed to have been a colonel in Napoleon's army and to have fought with the French emperor in Waterloo. Sève would later convert to Islam and assume the name Süleyman and be in charge of training all troops, soldiers and officers. In a characteristic Ottoman manner, Mehmed Ali decided to form the nucleus of the officer corps from among his former white slaves, mostly Georgians and Circassians. Around 500 of his own slaves and 300 of his son's, Ibrahim Pasha, were trained by Süleyman Bey (later Pasha) in a special camp also in Aswan.

Mehmed Ali had clearly learned the lessons of earlier governors, most notably Hüsrev Pasha, whose attempts to train soldiers along European lines were frustrated when the new recruits resisted the harsh discipline, grumbled for their delayed pay and intermingled with the poor in the Cairo markets causing serious threats to urban security. To forestall such a possibility Mehmed Ali made sure that his new recruits were to be trained within tightly secured camps in the extreme south of the country and insisted that no intermingling between the new recruits and the wider society was to take place. At the same time, strict orders were issued to provincial governors to deliver enough food for these large numbers of men. Equally significant was the decision that the troops were to be clad in uniforms to be supplied by specially created workshops.

In short, what we are witnessing is the birth of a "modern" army, one that would be essentially different in three important aspects from any previous fighting force that the Pasha had had. The first was that this would be a standing army that would not dissipate after a particular campaign was over; the second was the fact that the soldiers of this intended army were prevented from securing their own food and would instead receive their pay, food and uniforms from the government; and thirdly, above all, the soldiers of this army were recruited from among the Arabic-speaking peasant population of Egypt, the first time in millennia that this had occurred.

In the space of ten years this army was to expand enormously, reaching the impressive figure of 130,000. Given a population of around five million, this meant that the army constituted 2.6 percent of the population – a very high percentage indeed. Although the creation of the army had a deep impact on the families of the conscripts, and on Egyptian rural society at large, what Egypt was to witness during this second phase of Mehmed Ali's long reign, and for which he is rightly famous, was a proliferation of all the many supporting institutions which were needed to maintain the army's existence. So it was actually the creation of the Pasha's army which was of overriding importance in the expansion of Egypt's administrative infrastructure, in that the many schools, hospitals and factories that were founded in Egypt during this period were established mainly to service this army. For the time being, though, and before it had time to prove its worth, the significance of this army lay in the enormous security dangers that its creation entailed. Mehmed Ali might have supposed that the conscription of Arabic-speaking peasants to be soldiers, rather than officers, in his intended army, while recruiting the officers from among members of his Turkish-speaking elite, might ease these security risks. He is reported to have once said, "I have done nothing in Egypt other than what the British are doing in India; they have an army composed of Indians and ruled by British officers, and I have an army composed of Arabs ruled by Turkish officers ... The Turk makes a better officer, since he knows that he is entitled to rule while the Arab feels that the Turk is better than him in that

respect" (Douin, 1927, 110–111). This ethnic division of labor was intended to minimize the risks involved in gathering peasants from their villages and arming them, just as resentment against the Pasha's policies was reaching its peak. After sixteen years of Mehmed Ali's rule the Egyptian peasants were becoming increasingly frustrated at the Pasha's policies because they were seen to be exceedingly oppressive. The decision to drag them off into his army came after a series of measures in which they had found their physical labors were being used to further the Pasha's own goals. After heavy taxes on their lands, longer and more brutal corvée service on distant infrastructure projects, and a tight monopolies policy that prevented them from being able to consume the very products that they themselves had cultivated, conscription proved to be one step too many for the peasants to bear.

Immediately after conscription orders were sent to provincial governors in the Delta, a large uprising erupted there during April and May 1823, and peasants refused to pay taxes in many areas. Mehmed Ali dealt with this challenge in a characteristically prompt and decisive manner: he summoned his leading generals to a "war council" at his palace and, arming himself with six field cannons, he then marched on the villages himself. In less than a week the revolt was crushed.

A year later in April 1824 a larger rebellion was to erupt in Upper Egypt which soon engulfed all the villages and towns between Qus and Isna. Up to 30,000 men and women joined this new uprising which was led by a certain charismatic leader known as Shaykh Ahmed. He had revealed himself to be the long-awaited messianic *mahdi* and, declaring Mehmed Ali to be an infidel, he urged his followers to attack the Pasha's provincial officials. Reports of looting and arson on a large scale followed, and in numerous towns peasants marched on the residences of local officials, set fire to public buildings and, in some cases, took the Pasha's officials prisoner.

This was the most serious challenge to Mehmed Ali's authority so far, and dealing with it entailed a huge gamble. There was every likelihood that if the newly trained troops were sent to suppress the

uprising that had erupted in the same villages from which conscripts had been recruited, this would carry with it the risk of the soldiers joining forces with the rebels and the peasant rebellion being transformed into an army mutiny. And sure enough, the Pasha's worst fears came to fruition as more than 700 newly conscripted soldiers joined the ranks of the rebels. Mehmed Ali, however, did not budge: he issued firm orders to the Turkish-speaking generals to deal with both the peasant rebels and the army mutineers ruthlessly. Receiving these orders, the new generals set aside military codes and *literally* decimated the mutinous units: soldiers were ordered to stand in line and every tenth man was shot. In addition, forty-five newly appointed officers were executed in front of their men. As for the villagers, the whole wrath of modern fighting armies was unleashed on them without mercy. In the ensuing fierce battles between peasants and soldiers more than 3000 villagers were killed. In a noteworthy incident a corporal was ordered to deal with people from his own village, and as bad luck would have it, he confronted his own father who had joined the rebels. Having failed to convince him to give himself up, the soldier shot and killed his father. The case was so remarkable that it was brought to the attention of Mehmed Ali in Cairo who issued an order promoting the corporal.

The brutality with which these mass uprisings were met made it clear to the peasants that open rebellion was not an option; however, they soon employed other more individual tactics to avoid serving in the Pasha's army. One was to try to leave their villages as soon as they heard of the impending visit of a conscription gang. Foreign visitors repeatedly commented on villages that were "buried in their stillness ... where the dwellings of the poor inhabitants ... still standing, neither blackened by fire, nor destroyed by war, but deprived of their inhabitants [who escaped the agents of the Pasha] by giving up house and home, and deserting *en masse*, the devoted town or village" (Madden, 1841, 41–42). The government attempted to control this phenomenon in the same way as it attempted to deal with those who dared to escape their villages to evade taxation, corvée or cotton cultivation labor: villagers had to carry permits to move from one

village to another; villages as well as Bedouin shaykhs were ordered to be on the lookout for those passing through their lands; and those found to be harboring absconders were severely punished. Another tactic employed by the peasants was to desert their units after being conscripted. In spite of the hard beating that was meted out to deserters who were caught, desertion reached epidemic proportions: an investigation carried out in 1837 put the number of deserters in the army at 60,000, in addition to 20,000 deserters from the navy. Given that the size of the army at that time could not have exceeded 130,000, this meant that for every two conscripts, one soldier had managed to escape. Most tragically, there were those who attempted to evade serving in the army by maiming themselves in the hope that they would be deemed medically unfit for service. The most common techniques of self-maiming were putting rat poison in their eyes to induce temporary blindness; chopping off the index finger to be incapable of pulling the trigger and pulling the front teeth to be incapable of loading their muskets. Mehmed Ali met these tragic acts of defiance with characteristic determination: the self-maimed were not to avoid conscription and soon orders were issued to form entire battalions of the maimed and injured!

THE GREEK WAR

The ruthless tactics employed by the Pasha's agents in quelling rural uprisings, the uncompromising discipline that Mehmed Lazoğlu imposed on the new recruits, the strict training regime that had been set down by Süleyman Bey, and, above all, the unwavering determination of Mehmed Ali, succeeded in overcoming this dangerous resistance to the new conscription policy. The gamble of arming the peasants at a time of deep resentment against the Pasha and his policies seems to have paid off. Furthermore, the decision to assign officers who were ethnically and linguistically different from the men they commanded was instrumental in creating a well-trained and dependable fighting machine. Following his success in subduing

the first wave of rural uprisings in 1823–1824, the Pasha dropped his hesitation about the speed with which conscription should go ahead, a hesitation that was based, among other things, on fears that conscription might affect agricultural production by taking away greatly needed manpower. Orders were henceforth issued to his provincial governors to gather as many able-bodied men as could be found in the countryside.

No sooner had these troops finished their initial training and been put to the test in quelling these early uprisings than the Pasha received orders from Istanbul to send them to a new and dangerous destination. In March 1821 the Greek subjects of the Ottoman sultan had risen up in a large revolt that aimed at nothing less than complete independence from the Ottoman Empire. This came at a particularly bad time for Sultan Mahmud as he had diverted a large number of his troops to fight the Persians on his eastern borders. Moreover, the young energetic sultan who, since his accession in 1808, had managed to subdue local notables and had tightened Istanbul's grip over the provinces, found himself forced to reverse his policy by turning to Mehmed Ali to help him suppress the rebellion. Just as his predecessor, Sultan Selim III, had done fifteen years earlier, Mahmud found himself trapped between a rock and a hard place as he knew that the means he deployed to pacify one province could very well lead to strengthening the governor of another.

On his part, Mehmed Ali, feeling more and more secure in his province and confident about his newly trained troops, did not hesitate for long in answering his sovereign's demand. Seeing that the *firman* he received from Istanbul entailed appointing his son, Ibrahim Pasha, as governor of Morea (i.e., the Peloponnese, the southern peninsula of the Greek mainland), he seized the opportunity to use his disciplined and tested army to further his reputation within the empire. In July 1824 after a six-month preparation period during which time the Pasha managed to put together a large fleet, the new army, which had by then reached the figure of 17,000 infantry troops in addition to 700 cavalrymen, left under the command of Ibrahim Pasha. After some months of being chased by Greek fire ships that

restricted his movements, Ibrahim finally managed to land on the Greek mainland in February 1825. He immediately deployed his troops in open field against the Greeks and in repeated military confrontations he inflicted heavy defeats on them. Soon he had captured one city after another until Athens itself fell on 5 June 1827. It was becoming clear that Mehmed Ali's new army had been successful beyond all expectations and that behind these victories on the battlefield lay the professional training that the troops had received while in Egypt, along with Ibrahim's talents as a military commander and Mehmed Ali's mastery of managerial and logistical details that guaranteed that the army was kept well supplied, well fed and well clothed.

Yet, and in spite of these spectacular successes, Mehmed Ali had many reasons to worry about the conduct of the war in the Peloponnese. For one thing, maintaining such a large number of troops entailed a very heavy burden on his finances especially given the very low Nile in 1825 and the failure of the harvest of that year and of the next. In addition, the continued demand for men for the army was responsible for the below-average cotton harvest of these two years, putting further pressure on his finances.

THE INVOLVEMENT OF THE EUROPEAN POWERS

The increasing involvement of the European powers in the Greek conflict was another source of anxiety. At the start of the conflict these powers were not much concerned with the cause of the Greek rebels, but when it became clear that the sultan was incapable of dealing with them swiftly, the European powers' position began to change. The Russian tsar, although not much enthused by the Greek revolutionary ideals, gradually became increasingly sympathetic to their cause. The other European powers – namely Britain, France and Austria – were anxious lest the conflict escalate into a Russo–Ottoman war because they feared that the inevitable result of such a

war would be an Ottoman defeat and the southward expansion of Russia at the expense of the Ottomans. Over time, though, the British shifted their position as they now saw that it was in their best interest to ally themselves with the Russians and put pressure on the Ottomans to grant the Greeks limited autonomy under the sultan's suzerainty.

Gradually, Mehmed Ali became aware of these European diplomatic moves and as soon as he got involved in the Greek war he found himself being called upon in his palace in Alexandria by countless European statesmen. With typical shrewdness he managed to allay many of their fears and expressed his desire for a speedy resolution of the conflict. Reading the numerous accounts left behind by the Pasha's visitors during these tense months, one sees the Pasha gloating in the limelight of international affairs. However, he also realized that what he had got himself into was no longer an internal Ottoman affair, for what the Sublime Porte (as the Ottoman government was then called) was seeing as an internal insubordination by the sultan's Greek subjects, was being judged in Europe as a national war of independence in which a Christian subject people were rising against their Turkish oppressors. The Pasha's European visitors were indicating that a shift in European public opinion was perceptible and that military action in support of the Greek rebels could not be ruled out. Given Mehmed Ali's extensive commercial dealings with Europe, especially Britain and France, a military confrontation with Europe was something he neither desired nor could afford.

HÜSREV'S REAPPEARANCE

Above all, Mehmed Ali was alarmed to find that his old enemy, Hüsrev Pasha, was also deeply involved in the fight against the Greek insurgents. Ever since his departure from Egypt, Hüsrev had been appointed to one senior position after another. As governor of Bosnia in 1806 he succeeded in pacifying the Serbian revolt of that year. He was also entrusted to deal with a Kurdish uprising in his capacity as

governor of Erzurum in eastern Anatolia in 1818. After the outbreak of the Greek rebellion the sultan appointed him in the prestigious position of grand admiral of the Ottoman navy (December 1822) and orders were issued to him and to Mehmed Ali to cooperate together. Not unexpectedly, Mehmed Ali was adamant that he could not work with his old enemy and he sent numerous letters to Istanbul complaining of Hüsrev's behavior and insisting on his dismissal from the joint command of the combined Ottoman–Egyptian navy and that his son be given a free hand in running military operations.

Finally, and when all his pleas to remove Hüsrev went unheeded, Mehmed Ali resorted to threats. Realizing how important he had become within the empire and how dependent the sultan was on him, he sent a letter to Istanbul saying that if Hüsrev was not dismissed from the command of the navy, he would ask his son to cease his efforts against the Greek rebels. Two weeks later the Porte acquiesced and dismissed Hüsrev from his post adding yet another score for Mehmed Ali against his old rival. However, before he had enough time to enjoy this small victory against Hüsrev, Mehmed Ali received news that Hüsrev had been appointed in May 1827 to yet another important, and dangerous, new position, namely, as *serasker*, or commander-in-chief, of a new army that Sultan Mahmud had created.

THE "AUSPICIOUS EVENT"

On the night of 14 June 1826 after the Janissaries, the age-old troops of the Ottoman Empire, figured out that Sultan Mahmud had been plotting to reform the army and that the reforms were bound to affect them adversely, they overturned their cauldrons in a typical gesture indicating that they were staging a mutiny. Nineteen years earlier the Janissaries had revolted against Sultan Selim III when he attempted a similar reform, and as has been mentioned above, they ended up deposing Selim and then killing him, thus stopping the reform program in its tracks. This time, however, it was clear that Mahmud had learnt from his predecessor's mistakes. It is also very plausible

that he was inspired by Mehmed Ali's successful elimination of the Mamluks in 1811 and that he had to perform a massacre of the rebel leaders if need be. For no sooner had the Janissaries announced their mutiny than they were encircled in their barracks and orders given to loyal artillery battalions to fire on the mutineers. Soon the entire barracks was set on fire and those who managed to escape were killed on the spot. In what came to be known as the *Vaka-i Hayriye*, or Auspicious Event, around 6000 Janissaries were slaughtered. In this event the Ottoman sultan did what his strong governor in Egypt had managed to do fifteen years earlier, and in one fell swoop his army's old guard which stood against all attempts at reform was wiped out.

Mehmed Ali received this news with alarm given that the sultan was now free to rebuild his armed forces, with all the risks that this entailed to his own position in Egypt. Finding out that his old enemy, Hüsrev, was appointed as commander-in-chief of the new army must have been unwelcome news. Shortly afterwards, when the grand vizier sent a request to him for officers from his army to train the new Ottoman soldiers because of the successes that Mehmed Ali's troops were exhibiting on the Greek battlefields, the Pasha wasted no time in turning down the request using unconvincing pretexts.

DISASTER AT NAVARINO

Meanwhile dark clouds were gathering over the army in Greece. A joint French–British–Russian fleet was roaming the waters of the Aegean and Mehmed Ali took this as a very ominous sign. For months he had been writing to Istanbul warning against the changing tide of European public opinion and urging the Porte to resolve the Greek crisis by negotiation, even if this meant granting the Greeks some kind of autonomous status within the empire. But Istanbul was adamant in its insistence that the Greek insurgency was to be crushed by force, and strict orders were passed to Ibrahim to spare no village if it was proved to be backing the insurgents. In desperation, Mehmed Ali wrote to his agent in Istanbul telling him that he and the

Europeans were on a collision course. He added that he could not bear the responsibility for the death of thousands of Muslims which, he argued, would be the inevitable result of a naval confrontation with the European navies. He pleaded with his agent to intercede with the Porte to accept a compromise. Istanbul, however, did not budge, and on 20 October 1827 disaster struck as heavily as Mehmed Ali had predicted. In a matter of a few hours the European navies trapped the combined Egyptian–Ottoman navy in the Bay of Navarino, and after the battle was over, the entire Egyptian–Ottoman navy was destroyed, its ships either sunk or burnt.

This was a severe blow to Mehmed Ali as he was now left without a fleet to protect his dominions. He was convinced that this heavy loss was not caused by any oversight on his part, nor was it the result of any negligence by his son, Ibrahim. Rather, he was adamant that the disaster at Navarino was a direct result of the Porte's intransigence and, specifically, of Hüsrev's incompetent interference – an opinion shared by many in the Ottoman capital. Mehmed Ali was therefore keen to cut his losses and refused to listen to the Porte's requests to continue the fight against the Greek rebels. Instead he opened negotiations directly with the Europeans which would guarantee his son's withdrawal from the Greek mainland.

The Greek debacle proved to be a turning point in Mehmed Ali's relationship with Istanbul, for it showed him not only how influential he had become within the Ottoman Empire but also how costly his assistance to the sultan was to him. Although the idea of complete independence had still not been contemplated, the need to keep his distance from the Porte's policies was becoming ever more pressing. So when Istanbul asked again for his assistance in its war against the Russians (a war that eventually led to the declaration of complete Greek independence), Mehmed Ali sent Istanbul a resounding rejection.

In letters to his son Mehmed Ali blamed his old enemy, Hüsrev, for his own precarious position within the empire. Yet, he also knew that his own tensions with the Porte far exceeded this personal rivalry with Hüsrev. Mehmed Ali was aware that his policies in Egypt which

allowed him to transform Cairo into a rival center of military, economic and diplomatic power within the empire were essentially contradicting Sultan Mahmud's ardent attempts at centralization and reform. Furthermore, Sultan Mahmud's calling upon Mehmed Ali to assist him in his wars against the Wahhabi and Greek rebels was part of the sultan's larger design to curtail regional autonomy and to extend the central authority of his government throughout his realm. From 1814 to 1820 Mahmud had managed to eliminate local dynasties in Thrace, Macedonia, the Danubian shores and much of Wallachia (in present-day Romania). Moreover, the Anatolian notables had suffered a similar fate to their counterparts in the Balkans. And then, closest to home was Ali Pasha of Yanina, who had established a powerbase in Albania and had formed a small army of his own. Soon, however, he was besieged in his castle by Ottoman troops and had his head cut off and sent to Istanbul to be displayed outside the sultan's palace (February 1822). There were therefore many precedents of local dynasts who were severely punished for their independent stance and, as confident as Mehmed Ali might have felt about his increased security within Egypt, there were certainly enough reasons to be anxious about the future.

PREPARATION FOR THE NEXT ROUND

In characteristically strident fashion, Mehmed Ali did not sit around waiting for Istanbul to strike first. Immediately after the Greek debacle he set about rebuilding his lost fleet. He decided not to buy ships from Europe as he had done before but, remarkably, to construct a fleet in Egypt. He therefore hired a French naval engineer, M. de Cerisy, and entrusted him with the enormous task of building an arsenal in Alexandria. In the space of four years the first of the new ships – a 100-gun ship bearing the Pasha's name – was launched and was soon followed by numerous other warships. This was not the first time the Pasha had tried to build ships himself. As early as 1809, in anticipation of the Arabian campaign, he had issued orders for his

workmen to construct a small arsenal in Bulaq, Cairo's river port, and for the pieces to be carried on camel-back and then assembled in Suez. Yet the scale of the Alexandria dockyard – by the mid-1830s it had more than 8000 laborers – and the fact that many of the laborers who toiled there were either convicted criminals or peasants serving their corvée duty, dwarfs earlier attempts by the Pasha to build a naval force.

Preparations for a possible military confrontation with the Porte were not limited to building naval installations though and, during the second half of the 1820s, fervent activities were witnessed throughout Egypt aimed at enhancing the Pasha's military and financial capabilities. For example, the Pasha issued orders to the director of the arsenal he had established in 1815–1816 in the Cairo Citadel to increase the production of cannons, swords and munitions. By the mid 1820s it is said that this arsenal was producing muskets at the rate of 1600 a month. Mehmed Ali also took the decision that much of his new army's uniforms, footwear and headgear would be supplied domestically rather than from abroad. In 1825, therefore, a fez factory was founded and it soon managed to produce 24,000 hats a month. Monopolizing the cotton crop and encouraged by the conversion of a silk factory, founded in 1816, to cotton spinning, the Pasha gave orders for the construction of thirty textile factories. These factories employed between 12,000 and 15,000 laborers in the 1820s and, with the exception of a few imported machines, most of the equipment used in them was produced by Egyptian craftsmen. The spinning jennies used in these factories (estimated to be around 1380 jennies) were turned by animals; three factories, however, had steam engines that had been imported from England.

Most impressive of all the measures taken to enhance the Pasha's fighting capacity was the establishment in 1827 of a large training hospital in Abu Za'bal to the northeast of Cairo. Given the huge cost in lives paid by the slaves who were rounded up during the Sudan campaign, Mehmed Ali realized the necessity to create a medical corps that could treat the men conscripted to the army. This was a hard lesson to be learned and one that was repeated in the Greek

campaign where it transpired that the number of the soldiers who died of disease and untreated wounds exceeded those who had died in actual combat. Furthermore, the haphazard way in which the conscription orders were conducted without any medical screening resulted in gathering thousands of men who were later proven to be unfit for military service.

All these factors, as well as the validity of the arguments presented by Dr Antoine Barthélemy Clot who was hired in 1825 as chief of the military medical corps, convinced the Pasha that his fighting force had to be protected by a professional medical corps and that it would be cheaper and more efficient if doctors could be trained at home rather than seeking the services of foreign doctors. Crucially Clot insisted that in order for these new doctors to be able to communicate with their patients, the proposed medical school should use Arabic (as opposed to French or Turkish) as its language of instruction. Clot also urged that medical instruction should be based on anatomical medicine and that students should learn pathology by dissecting human cadavers. Mehmed Ali accepted the advice of this Frenchman, who later came to be known as Clot Bey, and in due course the Qasr al-'Aini training hospital was founded in 1827 and grew to become a complex medical center whose impact in the long run expanded beyond the confines of the army to include healthcare facilities for the larger civilian population as well.

Besides medical services, the new army also created the need for many other skills which called for the foundation of various specialized schools and polytechnics. While most of these educational institutions were opened in the 1830s, it is important to note that Mehmed Ali's interest in education predated the founding of his army in 1821–1822. Soon after getting rid of the Mamluk leaders in 1811, Mehmed Ali became the owner of many young Mamluks whose masters had died in the massacre and in a typical Ottoman fashion he proceeded to provide them with military training in a special school he established in the Citadel. In 1815 in his own palace in Shubra he also opened another school to teach engineering and land surveying to young Egyptians; known as the "School of

Engineering", students were taught arithmetic, geometry, trigonometry and algebra.

However, the creation of the new army marked a qualitative change in the Pasha's interest in education. As mentioned, the training of the new cadets and soldiers required opening two special schools in the south of the country. Realizing the importance of these schools, Mehmed Ali appointed his own deputy as director of one of them and the Frenchman Colonel Sève (Süleyman Pasha) as director of the second one. In 1825 a large school was opened in Cairo to prepare students for advanced technical training in various fields, i.e. infantry, artillery and cavalry. The first intake of this technical school was approximately 500 students, composed mainly of Circassians, Albanians, Greeks and Armenians.

The full implications of the Pasha's educational, medical and industrial policies were not felt until the late 1830s and beyond. Towards the end of the 1820s however Mehmed Ali was still experimenting with different and innovative ideas on how to increase his revenue and to lodge himself ever more securely in Egypt, and following the serious setback of Navarino it did not take him much time to get back on his feet. Indeed, in just a few years he had not only managed to recover his losses but had considerably increased his fighting capabilities with the foundation of a new navy, by the expansion of his army with fresh conscripts, and by supplementing their effectiveness with medical, educational and industrial establishments.

By 1830 it appeared that Mehmed Ali was in a position to withstand virtually any attempt by the Porte to remove him from his coveted post; indeed, he was now ready to seize the initiative and to launch a pre-emptive strike on the Sultan's dominions in Syria.