

FAMILY HISTORY

HISTORY OF ASIA MINOR

One unfortunate fact about for the part of the world that includes Greece and Turkey is that politicians exploit old historical memories, often distorted memories, to create new crises that often lead to wars and a great deal of misery for the people of that region. Therefore, it is helpful to take a quick look at the region's history before I start the narrative about my parent's families. For this historical overview I have relied on the sources listed at the end of the section: the two books by Lewis [6, 7], the books by Babinger [2] and Lowry [8] and the classical work by Gibbon [5]. It is hard to do justice to three millennia of history in five pages, so those who would like to get a better understanding of those years should look into the books I cite.

Asia Minor (Μικρά Ασία in Greek) and **Anatolia** (Anadolu in Turkish) are synonymous terms that refer to what is now the Asiatic part of Turkey. The name Asia Minor goes back to Roman times, when it was used to designate the Roman administrative division comprising that area. The Hittites, Phrygians, and Lydians all had kingdoms in that region during the 2000BCE to 500BCE period. Croesus (famous for his extraordinary wealth) was the last king of Lydia. Gordias (of Gordian knot fame) and Midas (of the golden touch fame) were legendary kings of Phrygia. The Aegean coast of the region was the site of the Trojan War (circa 1000BCE) and Greek settlements along that coast probably date from that period. By 500BCE all Anatolia was under Persian rule. While Western Anatolia had Greek inhabitants the interior was inhabited by descendants of the earlier kingdoms. Greeks, Persians, Hittites, Phrygians, and Lydians were Indo-European people distinct from the Semites who lived south of the region.

Around 300BCE all of the Persian Empire, including Asia Minor, was conquered by Alexander's armies and the territory was subsequently divided into several kingdoms ruled by Alexander's generals and their descendants. Greek became the dominant language of the region and the term Hellenistic era refers to the roughly three hundred years that these kingdoms lasted before being conquered by Rome.

People who spoke Greek were naturally called Greeks but this does not mean that they were descendants of the Greeks from the Greek mainland. The new conquerors were small in number although they were able to defeat much bigger armies. The new Greeks might have

been descendants of Hittites, or any of the other Anatolian kingdoms. In most cases they kept their old pagan religions, such the Egyptian cult of Isis.

There is a modern parallel to this process. For several centuries people have been migrating (voluntarily or not) to the North American states. While many people kept their religion, they adopted the language and culture of their new homeland. (The Africans brought in as slaves lost their original religion.) After a few generations, the connection to the old countries is lost. In short, a Greek speaking Egyptian of the Hellenistic era was no more a descendant of the original Greek invaders than a modern English speaking American is a descendant of the Pilgrims.

For some reason the Greek language continued to be prevalent after the Hellenistic kingdoms were conquered by Rome even though Latin became the official language. The Roman emperor Constantine moved the capital of the Empire from Rome to Constantinople and gave a favorite position to Christianity. In mid-fifth century the Roman emperor Theodosius made a particular version of Christianity the *only religion* that his subjects were allowed to practice. Gibbon [5] has a translation of the imperial decree of Theodosius that you can find in Chapter XXVII, vol. 3, pp. 74-75 of the cited edition. The decree ends with an admonition to those who will not follow that particular dogma: "Besides the Condemnation of Divine justice, they must expect to suffer the severe penalties which our authority, guided by heavenly wisdom, shall think proper to inflict upon them." No separation of church and state here!

In less than a century Rome and most of Italy were lost to the empire but it continued to be called Roman. This state lasted for nearly another 1000 years. Historians today refer to that empire as **Byzantine**, but that name was never used by the rulers or people of that state. Late in the 7th century Greek replaced Latin as the official language but the empire continued to be called Roman. Since the 11th century split from the Catholics the religion of the Byzantines has been known as Orthodox Christianity.

The 7th century saw the Arab conquest of most of what we call today The Middle East and a near repetition of what happened after Alexander's conquest. People adopted the language of the new rulers as well as their religion of Islam. Arabic speaking Muslims have been called Arabs since that time even though few of them descend from the invaders from the Arabian Peninsula. However, a minority that stayed Christian referred to themselves as Arabic speaking Christians. (It is only in modern times that such people have been called Arab Christians.) If an inhabitant of today's Egypt could trace his ancestry back for two millennia he is likely to find ancestors who called themselves Greek.

The 11th century saw a new force in the Middle East, the Turks who came from Central Asia. They defeated the Romans and took possession of most of Asia Minor, including Cappadocia, the region of my father's family. There were several Turkish states but one of them rose to become dominant. Historians date the establishment of the Ottoman Empire with the conquest of the Byzantine city of Prusa (Bursa in modern Turkish) in 1326. In 1453 the Ottomans took Constantinople putting an end to the Roman Empire. Again, there was a repetition of the earlier pattern and people adopted the Turkish language and, often, the

religion of the rulers, Islam. Turkish speaking Muslims called themselves Turks even though few of them had any lineage connected to the original Turkmen invaders.

Before the 1453 conquest the Ottoman sultans often married Greek (Byzantine) noblewomen so many of them had Greek mothers. The famous Bayezid I, the Thunderbolt (1354-1403) had a Greek mother and a Greek paternal grandmother. In addition many high ranking Byzantine noblemen converted to Islam and achieved high positions in the Ottoman Empire. The three nephews of the last Roman emperor Constantine XI (who had no children of his own) all became high ranking Ottoman officials, one of them reaching the office of Grand Vizier (equivalent to the modern office of prime minister). So the transition from Byzantine to Ottoman rule was less than an outright conquest and more a change in the ruling dynasty. (I have relied on Lowry's book [8] for the material of this paragraph.)

The Ottomans instituted a system of government based on religious communities, *Millets* in Turkish (see the books by Babinger [2] and by Lewis [6] for details). The people of each millet were under the authority of their own religious leader and were obligated to follow the laws of their religion as long as they did not conflict with the laws of the state. The system was certainly an improvement over the practice of Byzantium where only one faith was tolerated. The granting of religious autonomy was a shrewd move because it made a revolt against the sultan's rule much less likely. The downside of the system was that it undermined any effort to create a national identity for the state.

The Muslim millet or *millet-i-hakime* was headed by the Grand Mufti of Constantinople and its members were subject to the *Sharia* law. The Jewish millet was under the Chief Rabbi of Constantinople and its members followed the Jewish *Halakhic* law. Both the Grand Mufti and the Chief Rabbi were members of the imperial council (*divan*).

The Roman millet or *Rum-millet* included all Greek Orthodox Christians under the leadership of the Patriarch of Constantinople and the rules of the Orthodox Canon Law. The Patriarch was also a member of the *divan*. Some of the members of the Roman millet were Greek speaking but others spoke Turkish, Albanian, and even Arabic.

Until the early 19th century, Greeks in both Asia Minor and in what is now Greece continued to call themselves Romans. The Greek version of the word is Romyos (Ρωμηός). The modern Greek words for Greece Hellas (Ελλάς) and for Greeks Hellenas (Ελληνας) came into use around 1830, when the modern Greek state was established (following the 1821 revolution against the Ottomans) and it was eager to link itself with ancient Greece. The ancient use of the word Hellenas implied only a person speaking a particular language and provided no ethnic connotation or citizenship. Ancient Greeks were citizens of Athens, Sparta, Thebes, the kingdom of Macedonia, etc. Therefore an ancient word used to denote a linguistic cultural group was taken to denote a modern ethnic state. When the Greek army invaded Asia Minor in 1919-1922, the locals (such as my mother's family) still kept calling themselves Romyi and used the words Hellenes for the invading army. The word Romyos is still used in Greece, but it has acquired a somewhat negative connotation. In the form of "Rum" it is still used in Turkey today for its Greek Orthodox citizens. In this chapter the word 'Greek' is used as a translation of both Romyos and Hellenas.

A traveler to Greece and Turkey cannot help but observe the similarities between those two people but there is also scientific evidence about their common nature. A few years ago Professor Robert Sokal gave me a reprint of one of his papers [1] describing how they gathered genetic markers from over 3,000 European sites and plotted a surface of their distributions. Then they looked for places where there were discontinuities. There is a boundary in the north of Greece separating Greeks from the Slavs. But there are no boundaries along the Ionian or the Aegean seas (even though there is a boundary between Sicily and Malta). So any genetic variations from Italy to Greece to Turkey are gradual.

I am not the only person who thinks that Greeks and Turks have more similarities than differences. A book about Cappadocia written (in Greek) by Eleni Karatza is dedicated to "The last Greek inhabitants of the region and their Turkish compatriots, who had more things to unite them than to separate them" [10]. Another Greek book by Ch. Samuelidis [11] emphasizes the "friendly and brotherly relations of the Greeks and Turks of central Asia Minor" until the end. To those who do not read Greek or are not willing to dig into history books I recommend the novel by de Bernieres [4]. It describes the generally harmonious relations between Christians and Muslims living in a village in Asia Minor. The depictions of the relations in the book are close to what I have heard from my parents' families.

Nothing captures the closeness of Greeks and Turks better than the inscription on the keystone of a house in the old Christian neighborhood of Germir, Cappadocia shown In Figure 1*. The word on the keystone is Turkish written with Greek letters: ΜΑΣΑΛΑΧ. In modern Turkish it is spelled as Maşalah and it means "may God protect us." (Today in Turkey, you can see this word painted not only on houses but also on trucks.) The Greek owners of the house felt quite comfortable with a Turkish blessing over its entrance.

In short the clashes between Greeks and Turks fall in the category of fratricidal religious wars even though they are usually presented as ethnic clashes. The wars reached their tragic climax with the invasion of Turkey by the Greek army at the end of World War I. The Ottoman Empire had been allied with the Central Powers and Greece had been allied with the Entente so that at the end of the war Greece, being on the winning side, was rewarded with a piece of Asia Minor around the port city of Smyrna (Izmir in Turkish). However, the Greek army did not stay in that original area but pretty soon moved into the interior.

The Greeks justified their invasion of Turkey as part of a dream to re-establish the Byzantine Empire. That seems foolish and indeed it was not the real reason for the invasion. Instead, the Greeks were encouraged by the British who had an eye on the oil-fields of Mosul (in today's northern Iraq). The Greek army was trying to reach these oil-fields from the north. In parallel the British tried a southern approach by forming a new state, that of Iraq, from three Ottoman provinces. When they succeeded in that endeavor they left the Greeks to their own devices and the latter suffered a crashing defeat in the hands of a new Turkish army. Most Greek inhabitants of Asia Minor followed the retreating Greek army for fear of reprisals by Turkish irregulars. The disaster was compounded by the 1923 treaty of Lausanne where Greece and Turkey agreed on a "population exchange" where Muslims from

* All numbered figures are in the "Illustrations of the Narrative" part.

Greece were expelled to Turkey and Christians from Turkey were expelled to Greece. This "exchange" took place right after the ratification of the treaty in 1924. The Christians of Constantinople and the Muslims of Western Thrace, a province of Greece next to its border with Turkey were exempted from the "exchange."

Ironically, the "exchange" may have made the two countries more similar to each other. For example, the Greek speaking Muslims from Crete may have good claims to ancient Greek ancestors while the Turkish speaking Christians from Cappadocia may have good claims to Hittite ancestors. I should add that some of the Turkish speaking Christians converted to Islam and thus avoided the deportation. Not only have I heard about such cases but I have also found them described in books [10]. I have not heard of any Greek speaking Muslims converting to Christianity but I would not be surprised if there have been. Such conversions go against the official line that people were supposedly happy to be "exchanged." Professor Ekrem Ekinçi provided me with a poem written in Turkish by a Greek priest, Neofitos Economos, lamenting the exchange. Below is the poem in an informal translation into English by Prof. Ekinçi and his wife Janet.

Ismet Pasha, Venizelos got together.
They decided on an exchange.
Did they concur with anyone, I wonder?
It has never happened before in history.
They displaced us from Turkey.
All our eyes are filled with blood tears.

Ismet Pasha and Venizelos were the chief negotiators on behalf of Greece and Turkey respectively. When I was growing up in Athens, I remember hearing a song in the same vein, referring to Ismet and Venizelos making a big mess (τα καναν θαλασσα). Unfortunately, I never wrote down the words.

The best and most objective historical account of these tragic events I have seen is in the book by Bruce Clark [3]. Chapters alternate between diplomatic history and stories of human suffering. Many of them are based on interviews with survivors of that era. This has a powerful effect on the reader who sees how people were dying while "diplomats talked." He is particularly fair in discussing the responsibilities of each side. (The official Greek and Turkish positions place all the blame on the other side.) As the book states on p. 161 "In most cases, the fate of (the Muslim) migrants was not as terrible as that of the Anatolian Christians who fled either in the heat of war, or as a result of forced marches followed by forced embarkations on ships riddled with disease; but the Muslim exodus was bad enough." Clark was born in Northern Ireland and I suppose his early exposure to sectarian strife provided him with particular insight on the subject.

A succinct characterization of the tragedy can be found in the book by Lewis [7]. He states that the "population exchange" was in reality "two deportations into exile - of Christian Turks to Greece and of Muslim Greeks to Turkey." (p. 355). Each group found itself in a foreign country. I have witnessed that for people in my father's family and fate brought me to hear such a story from the other side. In the early 1990's while checking out of a hotel I

had a conversation with a clerk who was a student working there for the summer. He was Turkish and he knew some Greek because his grandparents spoke mostly Greek. Of course, I knew some Turkish words that I had picked up from my parents. (They would talk in Turkish if they did not want us children to know what they were talking about.)

At that time Greece had a population of about 5 million and they had to absorb 1.4 million refugees. The number of expelled Muslim was less than half a million, so there was a need to create vast amounts of new housing. Henry Morgenthau who used to be the U.S. ambassador to Turkey and was later in charge of helping Greece has written a book [9] dealing with the resettlement of the refugees. But this process took forever. In the 1950's after more than 30 years there were still large neighborhoods of Athens and Piraeus with makeshift housing for the refugees, τα προσφυγικά in Greek. Many of the refugees were settled in Macedonian farmlands even though they were not farmers. Macedonia had come under Greek control only in 1912 and while most of the urban population was Greek or Turkish, most of the farmers were Slavs. I have heard the opinion that one reason that Venizelos wanted the "population exchange" was to settle non-Slavs in rural Macedonia displacing the original Slavic population.

Turkey had an easier time because the number of refugees they had to absorb was about one third of the people who had left. Still Turkey suffered because many skilled craftsmen were Christian and they were a loss for the country.

Sources in English

1. G. Barbujani and R. P. Sokal "Zones of sharp genetic change in Europe are also linguistic boundaries", *Proc. Nat. Acad. Sci. USA*, vol. **87**, pp. 1816-1819, March 1990.
2. Franz Babinger, *Mehmed the Conqueror and his Time*, Princeton Univ. Press, 1978.
3. Bruce Clark, *Twice a Stranger*, Harvard Univ. Press, 2006.
4. Louis de Bernieres, *Birds without Wings*, 2004.
5. Edward Gibbon, *The Decline and Fall of the Roman Empire*, first published in 1788. I have used the 1978 reprint of the 1910 Everyman's Library (Dutton: New York) unabridged edition.
6. Bernard Lewis, *The Middle East, A brief History of the last 2000 years*, Touchtone, 1995.
7. Bernard Lewis, *The Emergence of Modern Turkey*, Third Edition, Oxford Univ. Press, 2002.
8. Heath W. Lowry, *The Nature of the Early Ottoman State*, SUNY Press, 2003.
9. Henry Morgenthau, *I was sent to Athens*, Doubleday, 1929.

Sources in Greek

10. Ελενη Σ. Καρατζα, Καππαδοκία (ο τελευταίος ελληνισμός του Ακσεραι Γκελβερι), Γνωση, Athens, 1985. - A serious historical work about the Greek population of Cappadocia in the region of Akserai Gelveri.
11. Χ. Σαμουηλίδης, Καραμανίτες, Εστια, Athens, 1980 - A historical novel that takes place in

Kermira, the hometown of my paternal grandmother. It also emphasizes the "friendly and brotherly relations of the Greeks and Turks of central Asia Minor" until the end.

MY MOTHER'S FAMILY

19th Century

The ancient Greek - Roman name of the region that my mother came from is Bithynia. Its main city was Prusa that prospered during the Byzantine times. It stayed firmly in (Eastern) Roman hands until the end of the 11th century when it changed hands several times between the Seljuk Turks, the Crusaders, and the Romans. Finally, it was taken by the Ottoman Turks in 1326 and was made the capital of their state. It lost that distinction in 1413, but it has remained an important city known now (in Turkish) as Bursa.

The earliest known ancestor on my mother's side was a Christian man whose last name was Manousis. He moved from the Cretan province of Sfakia to the province of Bursa in Asia Minor (NW part of Turkey). The dashed arrow line on the map of Figure 2* shows the overall path of his trip. He settled in the town of Appoloniada situated on a peninsula in the lake Appoloniada (Turkish name Ulubal). Most likely, his move occurred around 1840-1855. (I am estimating the dates on the basis of the age of my maternal grandmother who was his granddaughter. She was born around 1890.) He married a local woman and had two sons (and very likely several other children) and, relatives have told me that these two sons were eventually "running the place." One of them was Haralambos Manousis who was my great-grandfather. I have heard many stories about him from my mother who told me that she was his favorite granddaughter. Haralambos had large land holdings and was involved in silk production (the province of Bursa is famous for that). He was also a tax farmer.

Since most of the medieval states did not have a central tax collecting organization they "farmed out" the tax collecting process to individuals in each region. The tax farmer collected the taxes from the locals and passed them to the central government after keeping a part for his labors. The position offered great opportunities for oppression and several bad things have been written about tax farmers and the system that had relied on them. In order to dilute the power of the Turkish land owners who might otherwise have designs on the throne in the Ottoman Empire tax farmers were never Muslims. That choice also had the added benefit for the sultan to direct any popular dissatisfaction to the "infidels." Some tax farmers gained their domains by submitting bids to an auction so I can speculate that my great-great-grandfather Manousis moved from Crete to Bithynia because he had won such an auction.

I should add that while most of the surrounding area was Turkish speaking, the population of Appoloniada not only was almost entirely Greek, it was also Greek speaking. By being on a peninsula on a lake the place was rather isolated and their language was an archaic idiom of Greek. This was the language of my grandmother and the first language my mother learned and she would revert to it now and then.

* All numbered figures are in the "Illustrations of the Narrative" part.

I have been told that Haralambos Manousis was sent to Jerusalem to study (in the Greek Patriarchate there) and, apparently, he did well so he wanted to join the church to follow a clerical career. (Since he came from a prominent family, it is likely that he would eventually have become a bishop.) However, when he was 5 or 6 years old he had been engaged to a girl and he had to honor the commitment. According to the custom in those times in that part of the world when someone had a baby girl he would look amongst his friends for someone with a little boy and they would agree to engage their children. So Haralambos went back to Appoloniada to marry Elisavet (Greek for Elizabeth). He was about 19 and she was about 12.

Haralambos and Elisavet had at least 12 children that grew to adulthood. One of them was my maternal grandmother Eugenia. Local custom had it that education was only for the boys. Thus while one of her brothers went on to become a physician, Eugenia had no formal schooling. Still she learned to read although she could not write. Apparently, Eugenia was quite a rebel because she refused to marry any one whom her parents recommended and at 20 years old she was then considered an old maid. She married a person whom she had seen in church (from the women's' section she could look at the men's section). Thus, in the span of about 20 years there was a change. A woman (if she persisted) would marry someone she had seen (and probably heard about) rather than someone her father had chosen when she was a baby.

20th Century till August 1922

Eugenia's husband was Konstantinos Daniilidis. He was usually called Konstantis. I believe he had four or five brothers and they all were sea-faring traders. They would board their boats in lake Appolonia and then travel through a river to the sea of Marmara and from there sail on to Istanbul. (The total distance is about 80 miles, so it could be covered within a day.) I know that my grandfather went as far as Bulgaria (the port of Varna), but I do not know whether that trip was in his own boat or not. He did well in a business and he owned amongst other things a mill where the Turkish farmers would bring their crops. According to the standards of the times and place, he was considered a self-made man.

Eugenia and Konstantis had three children, Aphroditi (born in 1910), Thanos (Athanasios, born in 1912) and Kaiti (Aekaterini corresponding to Catherine in English, born in 1915). There may have been a fourth child that did not survive infancy. They did not live in Appoloniada but in Mihalitsi and later in Kermasti (modern Turkish name M. Kemalpassa). The town was also known by the name of Kasaba. The area was quite fertile, (that is from where the Kasaba melons take their name) with rich agriculture and the production of silk. My mother had spoken a great deal about the latter. She described how they fed the larvae with mulberry tree leaves and how they would cook the pupae in ovens to kill them and extract the silk intact. Bursa continues to be a silk center today.

They would often visit Appoloniada and my mother remembered her grandfather taking her by the hand to see the fishermen bring the fish out of the lake. He would chose a nice fish and give it to her to take to her mother. By that time, her grandfather was called Hadji-grandpa. The title of Hadji referred to his having been to Jerusalem. Hadji is a title given to

Moslems who have made the pilgrimage to Mecca and the Ottoman Empire Christians adapted the custom while replacing Mecca by Jerusalem.

Life was good in the house of a prosperous businessman but the clouds of world politics were gathering in the horizon. The Balkan wars took place in 1912-13 and World War I broke out in 1914 and in 1919 the Greek Army invaded Asia Minor for the reasons I described in the section on the History of Asia Minor.

The Greek Army soon reached the town of my grandparents' household and most Greeks rejoiced although others were skeptical, including my grandfather. In the Ottoman Empire every adult male was required to wear a fez, a felt brimless hat, usually red, that sometimes had a black tassel. The fez had been made obligatory around 1830 by sultan Mahmud II and it was meant to abolish headgear that indicated the religion of the wearer. Therefore, it was eagerly adopted by non-Muslims [1]. Most Greeks stopped wearing a fez after the Greek army arrived but not my grandfather. According to my mother he was doubtful about the longevity of the Greek regime. Unfortunately, he was right. At first, the Greek army found little resistance from the Turks, but things gradually changed. To start, the army was pushing deep into the interior of Asia Minor thus not only stretching its supply lines but also going into territories with a hostile population since the Greeks were absent from most parts of the interior. At the same time Turkish resistance stiffened. The Turkish general Mustafa Kemal took over the leadership of both the army and the state, abolishing the Ottoman Empire, and creating the modern Turkish state. Since the French and Italians were eager to stop the British from reaching the oil fields they helped Kemal build the Turkish army. The then new Soviet Union also aided Kemal.

The Catastrophe of 1922

By the summer of 1922 the British had been able to carve the state of Iraq out of the lands of the Ottoman Empire and include the oil fields of Mosul within it. They had no motivation to support the Greek Army and the end came quickly. The front collapsed in August. As the Greek army was retreating in near panic, the Christian population (Greeks and Armenians) followed them. It was a rout.

One day a neighbor went to my grandmother and told her: "the Greek army is leaving." My grandfather with their 10 year old son was away on a business trip to Mihalitsi, so she had to make a tough decision on her own. Stay and risk been killed by Turkish irregulars or leave and abandon their household? She was in her middle thirties then and she was facing a true life or death decision.

Years later, my grandmother told us that she went to wash her face in a fountain in the courtyard of their house and then she made up her mind to leave. They started loading the family belongings in an ox-drawn wagon but the neighbors started putting their belongings there as well so they were able to take very little. Eugenia wrapped their gold coins around the bodies of her two daughters as a place less likely to be found by bandits. It was a very hot August day and the whole Greek population of the town started walking towards the west. At the same time, my grandfather and his son were returning home on their horse

drawn vehicle. Years later my uncle remembered that he remarked about how hot it was on that day: "Imagine to be walking in this heat." Little did he know that his mother and sisters were doing exactly the same thing. When my grandfather encountered his family and the other fleeing people, his first priority was to try to secure some protection for them before nightfall or they were all likely to fall victim to bandits. There was one unit of the Greek army that had not panicked; a regiment led by colonel Plastiras. He had kept his cool and used his forces to protect the fleeing Greek population. My grandfather was able to get a detachment from that troop to come and guard the people from Kermasti until they could reach a secure location. Eventually, they reached the port town of Panormos (Pandirma in Turkish) and took a boat to Sylivria (Silivri in Turkish) on the Thracian coast. (That part of Thrace was under Greek administration at that time although it eventually was returned to Turkey). They stayed for three months in Sylivria and then they left on a small ship to the island of Mytilini (Lesbos). I think the ship was Russian and it was severely overloaded. Their escape route is marked by the dotted curve in the map of Turkey of Figure 2.

Eugenia's decision to leave was the right one. A few Greeks that stayed after the army had left were killed by irregular Turkish troops. Plastiras decision to concentrate on the protection of the fleeing Greeks made him very popular and he later went on to play an active role in Greek politics.

A great deal has been written about the killing and raping of fleeing Christian civilians by Turks. Sadly, they were not the only victims. I have heard stories from my mother that as they were fleeing following the retreating Greek Army, they would come across burning villages with screaming Turkish women who had been raped by Greek soldiers.

In Mytilini my grandparents and their children were safe from Turkish attacks but they had to find another place to settle since they were too few opportunities on a small island. So they moved to Thessaloniki along with many other refugees from Asia Minor. About 1.5 million Greeks came to Greece as refugees and a few hundred thousand (nobody has an exact figure) were killed by the Turks on the way. The events of those times are referred to in Greece as the "1922 Catastrophe" or the "Asia Minor Catastrophe" (Μικρασιατική Καταστροφή).

Life in Thessaloniki

At first my grandfather, opened a grocery store in partnership with a local person. But the business failed (his partner may have been cheating him) and the family fell on hard times. My grandmother father (Haralampos Manousis) moved also with them. When he left Asia Minor he went to his father's old place in Sfakia but for some reason he could not stay there and he ended up in Thessaloniki. Eventually he suffered a stroke and a few years later he died. My mother remembers him as having a sharp mind and education. He used to help her in her high school work in Latin and classical Greek.

Haralampos' brother had two sons who had been educated in Greece so they were in strong positions. One of them, Nikos Manousis, became a politician and he was elected to the Greek parliament with the votes of the refugees from his area in Asia Minor. For the next 40

years or so he was like a clan leader. He married but he and his wife had no children. Later they adopted an adult woman who had been their caretaker. The other brother, Lycourgos Manousis, had a senior management position in the Austrian-Greek tobacco company. He gave my grandfather a job as a night watchman in that company. In a way it was a demeaning job for my grandfather. My mother liked to contrast that his position in Asia Minor where the Turkish farmers would treat him with great respect addressing him as "Konstanti Efendi." At the end, Kostanti's descendants have been far more prominent than anyone else in the clan. Two of his grandsons who bear his name are my brother Kostas Pavlidis who has a very successful construction company in Greece and my first cousin Kostas Daniilidis who is a professor of Computer Science at the University of Pennsylvania.

In spite of the difficulties, my grandparents were able to educate their children. After my mother finished high school she went to work as a clerk in a bookstore. While her brother went to college, the family did not think college was appropriate for girls. (Finances did not play a major part because the tuition at Greek Universities was relatively low and most people commuted from home.)

Konstantis lived until about 1948 and Eugenia until the fall of 1967. She died shortly after her two first great-grandchildren were born.

Lycourgos took a trip to Turkey about thirty years after the expulsion and visited his old hometown. He was around 30 when he had left so he had several Turkish friends. He found the people and the town in abject poverty. His old friends told him: "When you left you took with you God's blessing."

Notes

1. The story about the introduction of the fez is described in pages 441-442 of the book *Osman's Dream: The Story of the Ottoman Empire 1300-1923* by Caroline Finkel (Basic Books, 2005).

MY FATHER'S FAMILY

19th Century

My father's family lived near Caesarea (modern Turkish name Kayseri) at least since 1806. Caesarea is an ancient city in the region of Cappadocia. (Originally, Caesarea was named Mazaca and was renamed by the Romans early in the 1st century CE.) Cappadocia is directly north of Syria in the Anatolian plateau. The earliest known inhabitants of that region were the Hittites. According to Encyclopedia Britannica, the earliest mention of Cappadocia in history (around 6th century BCE) is as a Persian satrapy. (The word Cappadocia means land of the beautiful horses in Persian.) The Greek influence starts with Alexander's conquests (late 4th century BCE) when Cappadocia became part of the Seleucid kingdom.

Later it became a client state of the Roman Empire and it was fully annexed in 17 CE. According to many historical sources there was a large Jewish convert community. Eventually they were forced to convert to Christianity, but they kept many of the Jewish customs. As the Roman Empire evolved into the Byzantine Empire, Cappadocia became a province of the latter. The Arab conquests of the 7th century CE were stopped at the Taurus Mountains, in the south of Cappadocia, so the latter became a frontier province and as such it was colonized by professional soldiers. In the 11th century it fell to the Seljuk Turks and later it passed to the Ottoman Empire. Most of the people converted to Islam, but a small Christian minority remained. However they also spoke Turkish. The Christians were craftsmen (metalworkers, etc) and merchants. In general, they fulfilled a similar role in a Moslem feudal country as the Jews did in feudal Christian Europe.

A comparison: While my mother's area had been inhabited by Greeks (or people closely related to them) since at least the second millennium BCE, falling for good to the Ottoman Turks in the 14th century CE, my father's area was Hellenized only in late 4th century BCE and it fell to Turkish rule in the 11th century CE.

There used to be a family history diary, recording births, deaths, and other significant events. It was written in Turkish, first with the Arabic script and later with the Greek alphabet. It started in 1806 with the mention of the marriage of the writer. The entry mentions the name of the "best man" (apparently an important person in the community), but it does not mention the name of the wife. He also added that he had taken a trip to "Roumeli", the name for the European part of the Ottoman Empire; apparently the writer was a merchant. My father read these entries to me.

These events took place during the reign of sultan Selim III (1789-1807) who had started issuing *berats*, documents of protection, to Christian (mostly Greek) and Jewish merchants. I can assume that my ancestor was the recipient of a *berat* that let him travel widely and earn wealth through commerce.

The last entry in the book was written by my paternal grandmother (in Turkish) and was a record of my birth. A few years later she suffered a stroke so she could not record my brother's birth. Sadly, the book was discarded after my father's death as part of a cleanup!

Another story from the 19th century is about an ancestor who went to complain to the sultan because local authorities would not honor his *berat*. This was a dangerous step because the sultan may consider such a person as too arrogant and have him killed. As a result his friends held a church service while he was going to the palace. Of course, the sultan was never visible; supposedly he attended the proceedings from behind a screen. After my ancestor finished making his case, one of the officials present told him "Say that again" and my ancestor realized that he spoken too proudly so he repeated his request in a much humbler tone. Then his petition was granted.

Late in the 19th century there was a rising of awareness of "Greek identity" and not only the Greek alphabet started to be used but also people started learning Greek in school. Last

names were also changed: the family name used to be Hadjipavloglou and it became Pavlidis.

My paternal grandfather was Theodosios. He was born around 1860 near Caesarea (Kayseri in Turkish), in a place called Tavlousoun (*Tavlasun* in modern Turkish) and he died from typhoid fever around 1892 in Istanbul. His father's name was Kosmas. However his first child (my father) was named Pavlos. Normally the first child was named after his/hers paternal grandparent of the same gender, but in this case the custom was not followed because Kosmas was still alive. They were entrepreneurs. One of them owned a silver mine. It was a speculative venture and did not seem to have made any significant profits. Very often they worked away from home in major cities of the Ottoman Empire. However the wives stayed home under the watchful eye of the in-laws; such separations kept the number of children down.

Theodosios was a saraf, a dealer in precious metals and had a shop in the Grand Bazaar of Istanbul. He also had literary interests. He had translated a French novel, "Les Filles de Bronze", into Turkish and it was printed with the Greek alphabet. The book was printed in several small volumes and at the end of the last volume there is a list of customers who had subscribed for the book. The list provided valuable family history for earlier generations. Figure 3* shows the cover of the first volume.

The people of Cappadocia (both Greeks and Turks) are now as Karamanli from Karaman, the name of an old Turkmen sultanate of the region (the word karaman means a kind of sheep in Turkish). The writing of Turkish with Greek characters is also known as Karamanli. (Καραμανλιδικα in Greek.) There was a Greek premier named Karamanlis who was from Northern Greece. Apparently one of his ancestors had emigrated from Karaman and the land of his origin became the family name.

Theodosios married Hariclea Artemiadou from Kermira (*Germir* in modern Turkish), also near Caesarea in the late 1880's and they had two boys: Pavlos, born in 1890 and Savas, born around 1892. Hariclea was pregnant with Savas when Theodosios died in Istanbul. Hariclea moved to Greece in 1924 as part of the "population exchange" between Greece and Turkey. Among the items she brought with her are two with Jewish symbols that are now in my possession: a copper baking dish with the Shield (star) of David and a pen with the word Jerusalem in Hebrew and Roman characters. Hariclea spoke Greek poorly and whenever she could, she would converse in Turkish. She died early in 1942 (during the German occupation), a few years after she suffered a stroke.

My Father's Early Life

Pavlos went to a Jesuit school for a few years and then attended Anatolia College that was run by American protestant missionaries. As a result he had a good knowledge of both French and English. He was an excellent student in Anatolia College but he did not graduate. In 1906 Pavlos had to leave school and move to Macedonia (which was still part of the

* All numbered figures are in the "Illustrations of the Narrative" part.

Ottoman Empire) to work as an interpreter for a British military mission. Then, as now, the various ethnic groups in the Balkans were killing each other and Western powers intervened to calm things down. Macedonia was part of the Ottoman Empire but the population was a mixture of Turks, Greeks, and Bulgarians and each group was fighting the other two.

While this may not sound as an ideal job for a 16 year old, it also offered the opportunity to establish contacts with Western European powerful people, something desirable for a Christian living in the Ottoman Empire. Indeed, when the term of the mission ended, one of the officers (who was from a very wealthy family) offered Pavlos a job in England. Inexplicably, Pavlos did not take it. Eventually Pavlos moved to Kavala and then to Thessaloniki (still part of the Ottoman Empire). Thessaloniki became part of Greece in 1912, so Pavlos found himself in Greek territory.

Pavlos served in the Greek Army for five years in World War I, most of it in the divisional headquarters as an interpreter for English. A few years ago I opened a diary he had kept during his army service in World War I and I read a strange story. According to him, he had not been given the proper military rank for an interpreter. So in his diary he recorded all his efforts to be transferred to the front lines so that he would not suffer the "indignity" of serving without the proper rank. That struck me as strange. Going to the front lines exposed a soldier to enemy fire and I found it incredible that someone would want to risk his life for a perceived affront. After all my father was not a career soldier and whatever rank he had in the army it would have little, if any, effect in his civilian life.

In 1919 his unit was sent to Russia to fight the Bolsheviks but Pavlos was demobilized. Some years after the war he opened a bookshop in Thessaloniki and in 1932 Pavlos married Aphroditis Daniilidou who had been working as a clerk in the bookshop. She was 20 years younger than he.

After the death of both of my parents I went through their belongings and I found some papers in Turkish using the Arabic script. I brought them to Stony Brook and I had some of them translated by two students. An Arab student transliterated the Arabic script into the Roman alphabet and a Turkish student translated the latter into English. The papers turned out to be Ottoman identity papers, including an internal passport. My father had saved them for over 50 years.

Chapter 2

CHILDHOOD

MY EARLY YEARS

I was born on September 8, 1934 in Thessaloniki (Salonika), Greece, the first child of my parents. My parents had two more children. The first one after me, Savas, was born in 1936. Sadly, he suffered a bacterial infection in the maternity ward and he died about a month after his birth. Given that experience, my parents decided in favor of home birth with the help of a midwife for their next child. Kostas was born at home on June 3, 1938.

I have only one dim memory of Savas. It consists of the image of flames, a baby crying, and my father saying, "The baby is sick." The flame was probably from the doctor sterilizing his instruments.

When my mother was about to give birth to my brother Kostas my maternal grandfather Konstantis took me out to keep me away from all the fuss. That outing is my main memory of him. I recall that at some point I told him that I wanted to wear a red tie. My grandfather asked me: "Why, are you a communist?" I had no idea what that meant but it was an odd word and it stuck in my memory. Decades later I realized the significance of his remark. The false prophets of Marxism were making inroads amongst the impoverished refugees from Asia Minor and the young people were swept away by the new ideology. But my grandfather could see through the slogans and had a poor opinion of that ideology.

While my father's bookstore was doing well we lived in a nice apartment and I had many toys. But the worldwide depression presented big challenges and the bookstore failed. According to my mother, my father showed no flexibility in dealing with customers or suppliers and the collapse came suddenly. Our family was left homeless and all of us had to move into the small apartment of my mother's parents. My father found a job in Athens and we moved there. I still remember the long and cold train ride in March 1940.

The move to Athens was traumatic in several ways. In Thessaloniki we had many relatives from both sides and I was the focus of attention of my mother's brother Thanos and her sister Kathy (they were both still single). In Athens we were alone. In Thessaloniki we had a very nice apartment but in Athens we lived in an old house that was in poor condition. That sense of loss has persisted for me as I grew older.

WORLD WAR II AND CIVIL WAR

The Start of My Schooling and the Start of War

In our first few months in Athens we lived in Pangrati but in end of the summer of 1940 we moved to Kolonaki because I had been enrolled in the model elementary school of a Teacher's College that was located there. To get me admitted, my father had used connections with educators from the time he had a bookstore in Thessaloniki.

The district of Athens called Kolonaki had become a fashionable sector in the last 30 years or so but before that time it was a rural area. Some of the houses from that era survived and we moved into one of them. It had two floors and we lived upstairs while the owner lived downstairs with a niece of his who cared for him in his old age. The stairs leading to the second floor were outdoors and there was a courtyard surrounded by cavernous halls that used to be stables for cows. At the time we moved in, they were used as garages for the cars of the more affluent people in the neighborhood. The house was old and not in very good condition but that was all that we could afford. There were a few other houses like ours in the neighborhood but most of the buildings were luxury apartment houses (at least by the Greek standards of the time).

I started school in late September 1940 and I had my first experience of "academic rebellion" after a few weeks at school. Our teacher had asked us to draw a koulouri, something like a bagel. So I drew two concentric circles making sure to make them rough (with zigzags) for the drawing to be realistic. However, my teacher expected smooth circles and she scolded me for that. When my mother came to pick me up she sided with the teacher. They would not listen when I argued that a real koulouri has rough contours.

It would have been nice if school had continued, but on October 28, 1940 Italy invaded Greece from its borders with Albania. The Greek Army was able to push the Italians back into Albania but in April 1941 Hitler came to the help of Mussolini and the Germans took over Greece in a few weeks. The fighting had ended but the long night of the German occupation had begun. During the six months of the fighting there were several air raids near Athens and while no bombs fell in our neighborhood, we still had to look for safety in the shelter of a nearby hospital. We shared the shelter with many injured soldiers who were in the hospital. Many had suffered from frostbite and their legs had to be amputated. One time I heard some screaming (from another part of the hospital): "my feet, my feet, what happened to my little feet?" Apparently the screams were coming from someone who woke up from anesthesia and realized that he no longer had his feet.

The Occupation (Κατοχή)

The German occupation was awful. You may read about the big events in several books, I recommend the one by Mazower [1].

The winter of 1941-42 was particularly bad because of widespread starvation. In Athens people were dying in the streets. My brother and I went to eat in the soup kitchens run by

the Greek Church with provisions given by the International Red Cross. One day I was asked to say the Lord's Prayer as part of the grace before the meal. However I had not been taught that prayer (or for that matter any other prayer) and the priest in charge expressed great surprise for my ignorance. That probably was the start of my breakaway from the Greek Church.

My paternal grandmother Hariclea who lived with us died in 1942. She had suffered a stroke a few years earlier and she had been in poor health, so her death was not unexpected. We could not afford a funeral, so my father had the municipal hearse come up and pick up her body. She had been wrapped in a shroud but when the workers opened the door of the hearse to put my grandmother's body inside I saw another body already there, without a shroud. I never forgot that image. It was the body of a young man with long dark hair and beard. Obviously he had been picked up from the streets where he must have died from starvation.

Directly across from our house there was a small school building and during the occupation it had been taken over by an Italian military police unit (*militia dela strata*). The garages/stables around the house were also taken over by the Italians to park their cars and motorcycles. It was supposed to be an elite unit, wearing black shirts (the distinctive fascist garment), but the soldiers were quite friendly to the children and did not seem to be happy with their roles as occupiers. They would show pictures of their families and tell us stories about their hometowns. My mother knew some French and she was able to communicate with them. I remember that one of the soldiers described his hometown as a place where the streets were water canals. Years later I decided that he must have been from Venice.

Stories about Italians who during the war put their human side ahead of the soldier side have found their way into books or movies, so our own experience was not unusual. Sometimes Italian soldiers went out of their way to help us. Amongst the hardships of the winter of 1941-42 was the scarcity of fuel. One of the soldiers told my mother and other women from the neighborhood that he would let them know when there were no officers around so they could then come and siphon fuel from the vehicles parked in the garages. Later my mother told me she found it too nerve racking an experience so she attempted it only once. There were also German troops billeted in the area but they were intimidating. It seems that they had a central kitchen and soldiers from one place would march in their jackboots every day around noontime while singing a martial song. (It was always the same song, and I remember it.)

Schools stayed closed for most of the period of the German occupation. They would open sometime but then they would close again, often to be used as shelters for people whose homes had been bombed. As a result my schooling in grades first to fourth was at best sporadic and I learned to read and write on my own and spend a lot of time alone. I did not like the rough street play.

Eight or nine year olds do not usually follow political events but these were not usual times so I was well aware of what was happening. One day in 1941, two months into the German

occupation, we woke up to see large graffiti on the walls of the house across the street. One of the drawings was a hammer-and-sickle, the symbol of the Communist party. I was told that the Germans had attacked Russia and the graffiti were a sign of support for Russia. It seems that the Greek Communist Party (KKE), already underground, had kept quiet while the Nazi-Soviet pact was in order. When the Soviet Union was attacked, then it became active.

The KKE led the resistance against the Germans, in particular through the front organization EAM. (The letters are the initials of the Greek words for National Liberation Front.) The military wing of EAM was ELAS. The initials stand for National People's Liberation Army and the pronunciation of the word is a homophone of the Greek word for Greece (Hellas). I will use the term ELAS to refer to forces under communist control, even though this may not be always strictly true. The Germans had installed a collaborationist government and that was composed from right wing politicians. As a result the right wing parties were tainted, so the field was left open to the extreme left. I was told (much later) that some of the people who joined EAM were not fully aware of its control by KKE. Most of my relatives (and many other people) were supporters of the left (at least in private). People knew that fascism was bad, so they assumed that its opposite, communism, must be good. We know now that this is a false model, but at the time I was rooting for the "reds."

I remember hearing about the British victory at El-Alamein that stopped the German advance towards Egypt. The news was spread in Athens by the street peddlers who were shouting "vasta Rommel" that means "hold on, Rommel." It may seem paradoxical that occupied Greeks would sound encouragement to a German general but there is an explanation. Obviously, the peddlers could not shout anything anti-German. Shouting encouraging words to Rommel implies that Rommel was in trouble and that was good news for us.

A few months later we heard even better news, about the crushing German defeat in Stalingrad. The Wehrmacht was no longer invincible but there were still tough times ahead. In September of 1943 Italy capitulated and the Italian troops across the street packed their gear and left. Then the German occupation became even harsher. Finally, on October 12, 1944, the Germans left Athens without a battle to avoid being cut off by the Soviet advance in the Balkans. In spite of their rush, they sent a detachment to blow up the power plant that supplied electricity to Athens. Fortunately, there were ELAS troops nearby that were strong enough to fight and capture the demolition unit. We heard that the ELAS troops included an Italian who had deserted a year earlier and had brought a mortar with him. That mortar helped decide the outcome of the clash.

Liberation and Civil War

The liberation brought great joy, but it was short lived. On December 3 a civil war broke out between ELAS and Greek government forces. During the month of December, fighting raged in the streets of Athens and stray bullets often hit our house. Kolonaki was one of the few neighborhoods under the control of the "unity" government and the nationalists. Most of Athens as well as the rest of the country were under communist control. The Greek

government had no time to organize an army and it had to rely mostly on British troops. The British troops included Indian units and I remember seeing Sikhs with their beards and turbans riding on trucks. They were helped by two kinds of Greek troops. One was a brigade that had fought with the British in the Middle East and Italy and was rushed to Greece. The other were reconstituted "Security Battalions", units that had been a militia helping the Germans. In this way many German collaborators escaped accounting.

The lines between the two forces were about a mile away from our house and I remember one day I heard a horrible noise. British airplanes were machine gunning the communist lines and, by the laws of physics, they had to open fire before they were on top of them. So they opened fire when they were over our house. I was so scared that I dived and hid under a table. Many years later when I was studying the laws of gravity that state that a plane must release a bomb (or other object) in advance of its targets this personal experience came to my mind.

One night we were told that the front was reaching our area, so all of us (my parents, my younger brother, and I) went to sleep in a small room that had no windows. Fortunately, the advance of ELAS was stopped. They had overrun a British base, but instead of pressing their advantage, the troops started looting the British supply stores. Discipline in ELAS was not very tight and that was the turning point in the battle of Athens.

By the end of January a truce had been signed and most of the country came under nationalist control. In retrospect the move to Kolonaki proved a good one, even though I made little use of the school because of the war. The area saw much less fighting than the rest of the city.

Unfortunately, in about a year the fighting resumed although by that time the Greek nationalist forces did the fighting on their own without assistance from foreign troops. American help was only in terms of material. This fact came to my mind more than 20 years later, during the Vietnam War. Proponents of the Vietnam War were saying that "we should stop the communists as we stopped in Greece." Such people were ignoring one big difference. There were no American troops fighting in Greece.

A good and impartial account of the events of these years can be found in the book by Woodhouse [2]. (He was a member and, eventually, head of the British military mission to the Greek guerillas during WW-II.)

Sources

1. Mark Mazower, *Inside Hitler's Greece, The Experience of Occupation, 1941-44*, Yale Univ. Press, 1995.
2. C. M. Woodhouse, *The Struggle for Greece 1941-1949*, Ivan R. Dee, Chicago, 1976.

Chapter 3

TEEN YEARS

VACATIONS IN THE ISLAND OF AEGINA

I was two months short of my 12th birthday when we had our first vacation in the island of Aegina. It was the summer of 1946 and things were returning to normal after the war. We continued to go to Aegina for several years until the time I started college. The island is about 20 nautical miles from the port of Piraeus so the boat trip took a little over an hour. The town of Aegina barely deserved the name of town and it was built around the picturesque port. There were several farmhouses spread in the land around it and each summer we rented a room in the one of them and spend about three months there.

These houses were very simple; they had no running water, so we would have to rely on the well that every house had. We had also to use an outhouse that had been built as a concession to the city folk. The villagers preferred the outdoors but they found that people from the city did not share their enthusiasm for the practice. The villagers thought it was wasteful to build a structure that was used only for brief periods during the day.

The sea was beautiful and it made up for all other inconveniences. The beach we used was rocky but in a small bay. It had the calmest and clearest sea that I have ever swum in. The water was green-blue and crystal clear. If you stood on a high rock you could see all the details at the bottom of the sea, including the colorful little fish that were swimming amongst the rocks. Sometimes we would see a moray eel that both frightened and fascinated us. My brother loved fishing and I would join him as a helper, even though I was four years older. We used a net to catch tiny shrimps for bait and I would keep the shrimps in my mouth and hand them to my brother as needed. This was a practice we learned from the local children but one day I had a surprise when a shrimp crawled down my throat into my stomach.

The beach faced west and I remember the beautiful sunsets, especially after a storm when the clouds were painted red and purple by the setting sun.

The farmhouses had no electricity; actually the whole island had hardly any electricity. The little town (a 15 minute hike away) had a generator that would run for a few hours every evening, mainly for the stores. That made for a wonderful sky at night. The dry climate and the complete darkness allowed the Milky Way to be seen in its entire splendor. I had found

an astronomy text and I spent long hours each night identifying the constellations and the individual stars.

Some of the villagers were fishermen but most of them made a hard living by farming the not so fertile land. They cultivated wheat, grapes, and the trees that produce pistachio nuts. In September there would be the grape harvest. The grapes would be pressed by bare feet in a small slightly elevated cement area that had gutters to collect the juice from the grapes. It was a fun activity and we children joined enthusiastically. Afterwards we had to go straight to the sea to wash. There were jokes about pressing the grapes by shod feet so they would have a special flavor. The grape juice would be collected in a wooden barrel and left to ferment in the farmer's house. It was considered bad luck to pronounce the word for vinegar while the fermentation was going on.

There were no cars in the island and when we arrived with our luggage we would hire a horse drawn carriage that would take us to our place. The rest of the time we walked. The absence of cars was great for dogs that were allowed to wander freely. The house where we were renting had a dog named Mussolini after the Italian dictator. The villagers liked to name dogs after despised personalities, thinking that it was degrading for people to have a dog named after them. We usually called the dog Musso and he was quite a creature. His coat was on the white side and he was as big as a collie but with pointy ears. We would take walks with him and he always liked to run ahead. But if we told him "go home", he would obey and find his way back home without any problem.

My brother and I never had a pet, so we became quite fond of Musso. Since he was getting a lot of scraps from our table he became fond of us too. One time, when we were leaving the island, he followed us to the port (running behind the horse drawn carriage). When we got on the boat he tried to leave with us. We finally convinced him in some way to stay on the island.

Living close to the villagers was also an interesting cultural experience. Most people were illiterate, especially the women. Children of our age went to school but it was not taken very seriously so they were barely literate. Reading and writing were of no use for farm work or for fishing.

There was a lot of superstition and the villagers did not trust modern medicine. I remember an old woman saying: "Before the doctor came we had no cancer or any of the other diseases. The doctor brought them here to make business for himself." When someone was sick an old woman would be called to do an exorcism. The rite must have had very ancient roots. While working on this memoir in 2010 I was watching a video from Lebanon on *YouTube* that showed (Christian) faith healing. I recognized that some of the gestures of the priest were similar to those of the old women exorcists of Aegina.

The vacations in Aegina were such a great experience that in 1966 I went back to the island with my wife Marion. We had been married in April 1966 and after schools closed we took a long trip that included a month in Greece. In less than 20 years the place had been

transformed so that tourism rather than farming was the main industry. There was a hotel halfway between the main town and the area, Plakakia, we had vacationed.

I asked a taxi driver (taxis were a new addition to the island) how much was the fare to Plakakia. He mentioned 10 drachmas and then he asked where exactly we were going. When I mentioned the hotel name he said that was 20 drachmas (even though it was half the distance). I did not like to be taken advantage so we decided to rent a room in a local house in the town. It had much better amenities than the farmhouses of my previous vacations but it was still too tough to take so the next day we capitulated and paid the 20 drachmas taxi fare to go the hotel. We had a good time and went to the old beach but being newlyweds we did not spend that much time looking at nature.

When we returned to Athens Marion described to my mother our trip and told her that in the place we stayed there was a motorcycle parked in the bathroom. "Ah, that's progress", my mother said. "In the old days you might have shared the toilet with a goat." Indeed, if it rained hard the villagers would place their goats in the outhouses.

MY HIGH SCHOOL EDUCATION

During WW II schools functioned only sporadically. In the fall of 1945 conditions were better and we did fifth and sixth grade in one year, one semester each. We had a good sixth grade teacher, Mr. Katsoulis, who was also the elementary school principal. He was tough and he tried to teach us as much as he could in half the normally allotted time.

My regular schooling started with high school (six grades, numbered from third to eighth, in the Greek system at that time). In the fall of 1946 I entered Πειραματικον, the "experimental" school of the Department of Education of the University of Athens. They took only 30 students per class (only boys) and I had to take a competitive examination. I believe I ranked about 10th. A lot of the students were there because of connections and included children of government ministers.

Interestingly, some of the "privileged" students resented me for being there, coming from a poor family. It did not help that I was also a "nerd" and the first few years were tough. Eventually, I learned to get along and my acceptance was eased by my participation in sports, sprints and long jump. I was not good at ball sports but I found a spot as scorekeeper in basketball. I became good friends with Spiros Simitis. He was from a prominent Athens family and his younger brother Kostas became later prime minister of Greece. Spiros went to Germany right after high school and studied law, eventually having a distinguished academic and government career in Germany. He was good at languages and I was good at math and science so we helped one another. There were no "straight A" students in the school (or most other Greek high schools). The curriculum was too demanding for that and students had to push their talents to the limit to do well.

The school had several (for Greece) innovative ideas, such as student governance and a school magazine. That was written mostly by the current senior class and when it was our turn, one of my classmates, Dimitris Kontargyris, wrote a hilarious piece that was a spoof of our class meetings. Another classmate, Dimitris Theodoropoulos, wrote a humoristic description of each one of the students. My entry (No. 22) reads: "Pavlidis. Theodosios the asymmetrical. The Einstein of the class. Mathematician, philosopher, naturalist, and statistician." Even though I was not the top student in the class, I had impressed some of my classmates. The "asymmetrical" refers to my gangly appearance, very tall and thin.

I was asked to contribute an illustration for the meeting article and I reproduce it as Figure 4*. You can see my name in the line below. The person orating is supposed to be Spiros (he figured prominently in the article) and the class is depicted as a Greek chorus as was depicted in the Kontargyris' article (the attire is fictional). The pieces on the floor are supposed to be models for our solid geometry class that were also used for mischief.

Our teachers were a mixed bag because appointment to an elite school depended mainly on connections rather than qualifications. However, a few of them happened to be very good. I remember John Raptis who taught biology and emphasized thinking over rote knowledge. He was probably the one who influenced me the most from all teachers that I had before college. About fifteen years later my mother ran into him and told him that I was on the Princeton faculty. He was happy to hear that and he sent me a nice note. Two of the classicists were also dedicated teachers and tried to give us reasons to appreciate the classics. I was not particularly good at Classic Greek or Latin but I learned enough so that years later on I was able to read the footnotes in Gibbon's "Decline and Fall of the Roman Empire" that contain all the "juicy" stuff, quoted directly from the originals.

Unfortunately, the teachers of physics and mathematics were weak and the students who planned to go into Engineering had to look elsewhere for preparation for the rigorous entrance exams. Most of them would attend private tutoring schools but my father insisted that I focus on my general education. He also claimed that we could not afford tutoring. Only in the summer of 1952 I was able to attend two months of tutoring school. I suspect that keeping me away from tutoring schools was not so much a question of money (they were fairly cheap) but an effort to direct my career. (More on that in the next section.) As a result I studied as much as I could on my own. In addition, the five or six of us who planned to go into Engineering spent a lot of time working together and looking for challenging mathematical problems.

One unlikely source of problems was an old man who used to sit on a bench in a square near our school. He was a small man wearing a black kalpak (fur hat) and we would usually find him eating lunch from a greasy paper bag. He was Russian, one of several refugees from the Russian revolution that ended up in Greece around 1920. He must have been a mathematician and in broken Greek he would give us problems to solve.

* All numbered figures are in the "Illustrations of the Narrative" part.

One of our high school physics teachers had a drinking problem and he rarely bothered to lecture. He had identified those of us who were preparing for Engineering and he would ask one of us to lecture instead of him. We did not think this was that much of an honor and on a couple of occasions we conspired to give an erroneous lecture. The teacher would say "that does not seem right" but the others would vigorously insist that it was so. Eventually most of the group succeeded in passing the Engineering entrance exams and do well afterwards. A moral of the story is that good classmates are at least as important as good teachers.

Of course, work did not take all of our time. The windows of many classrooms faced the back of an apartment building where scantily clad women would occasionally sun themselves on a terrace. The first one to notice one of them would say, "it's raining" so that everybody would look out of the window. Eventually, more elaborate signals were developed, including "it's drizzling".

We also spent a great deal of time playing "dots" during class and sometimes we would run class championships. That required people to change seats (players had to sit next to each other) and that needed some explaining to the teacher. I used to draw a lot and one day I drew a ferocious ape. My classmates sitting near me made several suggestions for enhancing its appearance such as putting horns on the creature. Eventually the teacher got wind of the project, confiscated the drawing, and called my father. Because the activity had taken place during an hour dedicated to recitation of patriotic poems, I faced a serious accusation, of being politically subversive and not just being inattentive in class. Fortunately, my father was able to assure the teacher of my proper political views.

Art classes were another occasion for mischief. The lady art teacher had the unfortunate idea to have us sketching flowers, not the best subject for teenage boys. So we would take the flowers spin them from their stems and launch them as missiles against each other. Obviously, the art teacher was not happy with such activities and she complained to the head teacher. He gave us a reprimanding speech telling us that if for no other reason we should respect our teacher because of her advanced age. Apparently he told her that, so the next time we had an art class she blasted at his comments: "who does he think he is? A strapping youth?"

I have to skip the story about our "underground paper". It is not possible to translate into English the multiple double-entendres that made the core of our writing. I was amused though when thirty years later my son Paul got into trouble with his high school principal for producing an "underground paper."

REMEMBERING MY MOTHER (AND HER ROLE IN MY CHOICE OF A CAREER)

My mother Aphro (short for Aphrodit) was a very intelligent woman, but also timid, so, to use a modern phrase, she never realized her full potential. After high school she wanted to go to college to study mathematics but that was not something her family would support. I described earlier how she met my father. While my father claimed to have progressive ideas, in practice he acted the opposite. He did help with the housework (a break from tradition) but he made all the decisions. My mother had a certain naiveté about the world, probably because of to her early marriage to my father, a much older man who dominated the household and had very strong opinions about everything.

I wrote earlier (in Chapter 2) how my mother had to sit and watch helplessly as my father's business failed and then suffer the trauma of the move to Athens. During the German occupation she had to work very hard, not only making our clothes, but also our shoes from canvas. She had learned to sew in a short time and she was very talented in that. People always admired the homemade clothes we were wearing. While the financial situation improved a bit after the war, she still had to work hard taking care of her family in an old house with no modern amenities. It was only when my father retired around 1958 that they were able to move into a small but modern apartment (the equivalent of what is now called a co-op in the United States).

In contrast to my father, she was quite social and had many friends, including some from her old town in Asia Minor. Now and then she would lapse into the Greek dialect of that place (Appolodianitica). She also knew some Turkish. While the native tongue of my father's family was Turkish, my mother was from a region where Greek was still spoken. But it was a dialect that had evolved separately from the Greek of the mainland for several centuries. (This is also true for the Greek of Crete, Cyprus, and several other Asia Minor areas.)

She was very loving and she doted on my brother and me. We were her main pre-occupation. She also gave us far more realistic advice than our father, especially about our choice of a career as I explain next.

While in high school I expressed the desire to become a biologist. She raised objections pointing out that in Greece, the only career path for any scientist was a poorly paid state position. And since our family had no connections I would probably end up in some remote provincial town. She had a second cousin who was an academic in the United States and during one of his visits in Greece she arranged for me to meet him. He pointed out that it was not even possible to major in Biology in Greece. There was only one University chair in Biology and, on top of everything else its holder was a creationist! So with the encouragement of my mother I decided to pursue engineering where professional opportunities were much better than in any pure science. In Greece engineering was the field pursued by anyone who did well in mathematics and physics. The Polytechnic School in Athens (modeled after the German Technical Universities in structure but with a name borrowed from the French) had a very tough set of entrance examinations. Only one in

about ten applicants would pass them, and an even smaller fraction of them would pass on their first try. (People could take the examinations year after year.)

My father objected to engineering because, he claimed, engineers were not important. Instead he wanted me to become an economist, because "they control the world". But I did not want to control the world! My mother always took my side during the many arguments with my father on what field I was going to pursue. It was the only time I remember her standing up to my father. In September 1952 I took the entrance examination for the Department of Mechanical and Electrical Engineering at the Polytechnic School in Athens and I barely got in, scoring 37 points while the minimum passing grade was 36. (Maximum was 60.) Still I was one of the few people who passed the tough entrance examinations on their first try, so people at work were congratulating my father. I remember my mother telling me: "Look how proud he is to accept the congratulations while he put all possible obstacles in your way."

Eventually, in a way, I also disappointed my mother. When I was saying goodbye to get on the boat to New York (with ultimate destination Berkeley) I told her that the only way I would come back to Greece is "if I fail." Later she told me that these words were a "knife in her heart". On the other hand she was quite proud of my academic career in the United States, especially so because I was a professor at Princeton. When I left Princeton to go to Bell Labs, an actual step up in my career, she was disappointed.

I may digress here to mention that at both Berkeley and Princeton I did a lot of interdisciplinary research with biologists, so that, eventually, I was able to satisfy my interest in that subject (see Chapter 6).

After my father died in 1965 my mother faced a long widowhood. Her main joys were her grandchildren, especially my brother's children Maria and Pavlos who lived in Athens. My brother was very kind to her and helped her a lot financially. She also appreciated that he would send people from his construction company to take care of her apartment. Every few years she would visit the United States and spend three to four months with my family, so that she came to know my children Paul, Karen, and Harry and they in turn came to know her. In order to communicate with them and my wife Marion she had been studying English and did amazingly well, given that she had started studying the language in her mid-fifties. She had also finally reconciled with the idea of my living in another country. She would describe the unpleasant things that were happening in Greece and add, "I am so glad you left and you are away from all that mess."

An American reader might think that after my father's death my mother should have started a second life since she was only 55 years old. But a combination of Greek social attitudes and conditions and her own personality made that impossible. So those years were not as happy as they could have been. She was too bright a woman to be satisfied with the ordinary TV fare or small talk. She often talked to me about that and those conversations came to my mind when I was about to retire. So she continued to live her life through her children and grandchildren. She was happy when in 1986 she heard that I was going back to academia, leaving Bell Labs for Stony Brook. Bell Labs may have been the Mecca of

technology but for her a University position was higher than anything else. We were looking forward to her visiting us on Long Island, which we were sure she would enjoy particularly because of the proximity to the sea that she loved. It was not meant to be.

In 1987 while vacationing in Loutraki she suffered a stroke and I flew to Athens to be with her. But she was in a coma; completely unconscious (probably kept alive by machines) and I do not think she was aware that my brother and I were at her bedside. After two weeks or so I decided to return to the United States and right after that she died. It was hard for me to go back, so I missed her funeral. I have always felt guilty that I did not try harder. In retrospect, the correct thing would have been to discuss the issue with her physicians before I left.

My brother and I owe a lot to our mother's love, kindness, and, especially, good practical sense. In contrast to our father, she had her feet on the ground.

UNDERGRADUATE EDUCATION

BENEATH THE WHEEL (WITH APOLOGIES TO HERMAN HESSE)

In 1952 I began my college education at the Polytechnic University of Athens. The school was modeled largely on the German system (but with a name inspired from France) and had a five-year curriculum. There were very few electives and we had a lot of classroom hours, close to fifty a week, because we had to take ten to twelve courses each semester.

The faculty had been appointed to their positions because of connections, as it was and still is the prevailing practice in Greece. A few of the professors happened to be very good, in particular Peter Kriezis. He came from one of the politically most prominent Greek families but he was also highly qualified (see the section "A Memorable Teacher" for more on him). I remember Georgicopoulos who taught theoretical mechanics but he also discussed the philosophy of science. I still recall some of his lectures. He was known affectionately as the "old man" (γέρονς) partly because of his age and partly because he had to walk with crutches and his assistant would write on the board. Three or four others did a decent job and the rest ranged from mediocre to completely incompetent. They were also quite arrogant to a degree that it is difficult for American students to imagine. One of our professors in freshman Physics banned all questions in class threatening disciplinary action to anyone who raised his hand.

The curriculum was quite broad covering, in my major, both Mechanical and Electrical Engineering because "there was not enough material in either specialty to justify a major". This might have been true in 1850 but it was clearly absurd in 1950. We had a mixture of theoretical and practical courses with the latter usually been obsolete. We had to study a huge amount of material and we were graded (with a few exceptions) on memorization or with quite arbitrary criteria. Some of the courses included design projects and these were typically graded on penmanship. The students with the best looking drawings received the higher grades. To give the devil his due, such emphasis on draftsmanship was not limited to Greece. My friend Ken Steiglitz told me that he suffered through such a course at NYU in the 1950's.

The worst professor was a retired admiral, Pezopoulos, who was teaching the course in Electronics. He did not bother to read our exam papers and he assigned grades arbitrarily by going down the roster and giving everybody the equivalent of one the grades C+, C, or C-. Since his practice was widely known we did not bother to study for his course.

I had to get good grades because the top 10% of the students received tuition scholarships and that was the only way I could afford college. (I was commuting from home so I did not have to worry about room and board.) Most of the students were from families with limited means because affluent families would send their children to college in Western Europe. For us getting a degree in Engineering was the only way to middle class, so we jumped through the hoops. We did not dare protest or argue with our teachers. My close friends were among the best students and we did our best to get good grades even if that meant studying a lot of useless material.

The second worst professor was Stringos who was teaching a course on boiler design. He had written a book and he insisted that we memorize it and his assistant actually did grade the exams. I do not think any student ever got an A in that course. We made up for this by having several nasty jokes about him, especially because the sound of his name in Greek is similar to that of the Greek word for "wicked". After I graduated and completed my military service in 1959, I went to work in a power station that relied on steam. What surprised me was that all of the boilers in the station fell into the category of "recent advances" in Stringos' book and such "recent advances" were only given a scant paragraph or two. This was true even for the oldest boilers in the station that had been installed around 1920 (and had been designed at least 20 years earlier). The book we had to memorize covered only 19th century technology!

Deadwood is too kind a word to describe people like Pezopoulos and Stringos. I think zombie is a more accurate term.

One of the obsolete courses was on "Descriptive and Projective Geometry" that was motivated by 19th century construction technology. I liked the kind of mathematics used in the course and I did well in spite of my poor draftsmanship skills. Ironically, that turned out to be a very useful course because modern Computer Graphics relies on the same type of mathematics. This is a good argument in favor of teaching basic knowledge as opposed to, possibly, ephemeral applications.

My good performance on the mathematical part of the course caught the attention of one of the instructors, Panayotis Ladopoulos. A few years later he became professor at the University of Thessaloniki and as I happened to be serving in the army in that city, he asked me to be an instructor for his course.

The high pressure atmosphere of the school did not allow for social life or any existential worries of "finding ourselves". All of us had to pass a tough entrance exam that most people had to take several times before succeeding. I was one of the few to pass it the first time I took it and I barely made the cut. However, by the end of my first year I had moved to No. 4 spot. By the time we started college we had been conditioned to do the course work at the

exclusion of any other activities. We also learned to use our time efficiently and establish priorities since we had to complete so many courses. Each semester I used to make a decision which courses to study seriously and in which courses to game the system. I remember that one of the latter courses was Economics. I attended the lectures but I did not study at all. Before the final exam I took a quick look at the textbook and, based on what I thought were the professor's inclinations, I marked the passages I thought were likely to appear on the test. Then I devoted a day studying those passages (about a tenth of the textbook) and did very well in the exam.

Some of the graduates of the school went on to have had successful academic careers in Western Europe and the United States, in spite of the poor quality of the curriculum. I think there are two reasons for that. The first is that the Polytechnic University was accepting the best Greek students who were both very smart and knew how to work hard. Such people are bound to succeed regardless of the specifics they learned. A second reason is that we had learned to deal with adversity and unreasonable demands so any career obstacles in the western world would appear to be minor compared to what we had faced in Greece.

I can say with confidence that our successes have occurred in spite of the Polytechnic University. The school had actually thrown a monkey wrench into our career paths because of their grading system. I had graduated No. 2 in my class but my GPA was only a B. Fortunately, one person who looked at my application at the University of California at Berkeley was professor Diogenes Angelakos. His parents had emigrated from Greece and he took an interest in me. Years later he told me that he convinced the department to take a chance and admit me based on my class rank rather than my GPA. I proved him correct by completing my PhD in three years. Angelakos also told me about an encounter he had with Pezopoulos during a visit to Athens and how rude Pezopoulos was to him.

When I was on the Princeton faculty I also looked at Greek applicants and I was in even better position to evaluate their applications. The department admitted several who went on to distinguished careers. Recently, I happened to meet once again the most prominent of these people. He asked me what made me recommend his admission to Princeton even though he had so-so grades. I told him that I did not remember exactly but, in general, I used to give high recommendations to people who had poor grades in the courses that I did poorly. That was my revenge on the zombies!

While I had entered college near the bottom of the class, eventually I advanced, reaching the No. 2 spot in my third year. I kept the same spot in the fourth year and I was No. 1 in the fifth, but my standing based on five years average was No. 2. One of the professors needed an assistant for his Laboratory and he chose the No.1 person rather me. Years later I was told that others had pointed out to him that I was more academically oriented than the No.1 but he insisted on the rankings. Of course I had the last laugh. The No.1 person went on to become an industrial manager while I (and also the No. 3 person, Achilleas Adamandiadis) had successful academic careers in the United States. A few others from the class also had academic careers outside and inside Greece. These include John Nicolis and Antony Grammaticos.

At the end of our third year, during the summer of 1955, we took an "educational" trip to Germany. The trip was subsidized by German companies and that determined our itinerary. We went by a long train ride. From Athens to Belgrade (Yugoslavia) and then on to Munich where we visited the Siemens plant as well as the famous Beer Halls.

Next was Stuttgart home of Mercedes-Benz and then Cologne and the Ruhr Valley where we visited Krupp at Essen and a couple of other companies. On the way back we went through Italy, stopping at Milan, Rome and Naples where we boarded "Olympia" for Piraeus. That was the fun part of the trip! Needless to say that I was very impressed by what I saw. I also remember the sudden change from order to disorder when we arrived at the Italian border. Another thing I remember from the trip is that we saw several ruined buildings in the German cities we visited. It was only ten years after the end of WW II and a lot of the bombing damage was still visible. Whenever we saw such ruins many of the students cheered. We were old enough to remember the German occupation of Greece.

GREEK ANTIQUITIES

In the 1950's the Polytechnic University campus, located on Patission Street in Athens, consisted of only seven or eight buildings. The three most visible from the street were built in neo-classical style. The largest of the three was set back and it was quite imposing looking like an ancient Greek temple. It was the original building of the University but in the 1950s housed only the School of Architecture. The two smaller ones were on either side, one used for the Administration and the other for the School of Fine Arts. That used to be part of the Polytechnic University in the 1800's when Engineering was the Crafts part of Arts and Crafts. But things had evolved since then and the School of Fine Arts was spun off although it continued to be on the same campus. The contrast between the "nerdy" Engineering students and the "bohemian" Fine Arts students could not have been greater.

There were no dormitories or social halls on campus and only one miserable eating facility in the basement of the Fine Arts building. The neo-classical façade of the main building often made tourists confuse the Polytechnic campus with the Archeological Museum that was farther north on Patission Street. The other buildings were of contemporary style and the School of Mechanical and Electrical Engineering occupied space in one of them.

University professorships carry great prestige in Greece and, given the Byzantine ways of the country, were often given to people who had relatives in the government or were retiring from "important" positions. Thus the professor who was teaching us calculus was the brother of a government minister. Two other professors were retired admirals (of the Technical Services of the Navy).

The professor of Electrical Machinery had retired from a senior engineering position of the local power utility. His course had a laboratory (one of the few that did) and we had weekly sessions. One noticeable feature of the equipment was that the property tags said "Greek

Republic". At that time Greece was a kingdom so the tags were a source of puzzlement. The wags would claim that they were from the Athenian Republic of Pericles so we should be honored for having access to such ancient treasures. The realists dated them to the republic that followed a military coup in 1924 and lasted till 1935. Thus, in 1956, we knew the equipment was more than 20 years but no more than 30 years old. That was a relief because other courses dealt with technology that dated to the start of the twentieth century. And some of the courses in Civil Engineering, such as one on "bridges made of stone and wood," did not seem to have been updated since Napoleon's time.

Fast forward now to 1979. During a trip to Greece I was invited to give a lecture in my *alma mater*. Afterwards I was given a tour of the facilities that included a visit to the laboratory of Electrical Machinery. And there they were! The same machines with the tags of "Greek Republic"! Also the students seemed to be using the same style of notebooks as we did 23 years earlier. Even though the professor had changed, the curriculum had remained the same.

When I was back in the United States I told the story to some Greek graduate students. "So, what is wrong with the tags? Greece is a republic" was their answer. Indeed, in 1974, the king had been expelled and Greece had become a republic. I had to explain that the tags were from the short-lived 1924 republic and the curriculum was now 50 years out of date rather than "only" 20.

This is only one of the stories about antiquities in the premier Greek University of Technology and people often ask me how the archaic curriculum reconciles with the fact that several graduates of that college have had successful academic and research careers in the West. In a perverse way that system might have helped. We knew that most of our professors "were out to lunch," so we had to take the initiative to find out and study the right material. And certainly we learned how to work very hard and manage our time carefully. The flip side of that argument is that it is valid only for the most highly motivated students who would "thrive in adversity". The rest of the students are short changed.

A MEMORABLE TEACHER

The Greek system of appointing faculty based on connections rather than merit resulted in several dismal appointments but in rare occasions a highly qualified person happened to have the right connections and was given a professorship. This was the case with Petros Kriezis who came from a prominent old family. One of his ancestors was a leader of the Greek revolution of 1821 and had later served as prime minister of Greece. Kriezis did have the appearance of an aristocrat, very polite and serious.

He had studied in the United States (Caltech I believe) and at the Polytechnic University he taught a three-year sequence of courses in Applied Mathematics. While the administration frowned upon elective courses he not only insisted that his courses be electives (for 3rd to

5th year students) but he also insisted that the alternative be a very easy course (such as machine shop practice). In this way only the most motivated students would take his course, usually no more than five from each year so that the total enrollment was around 10-12. That allowed for excellent teacher-student interaction. It is ironic that his strong connections gave him freedom to be more effective in his teaching and we were fortunate in being part of that.

He used American textbooks and that meant that I had to learn English very quickly. Fortunately, mathematical texts are not only full of equations but also the writing is quite stylized so that one can do well with only a subset of the English language. I remember that, for me, the most difficult part of a book was its preface.

Later I found out that in the United States this material was usually taught to engineers only at the graduate level and that proved quite helpful when I went to graduate school at UC Berkeley in 1961. In my first term at Berkeley I had signed up for four courses, one of them a senior electronics course. However, I found it rather difficult (my previous course in electronics had been taught by one of the retired admirals), especially the laboratory. The TA was amazed that I did not know how to use an oscilloscope (how could I explain to him that such "valuable" pieces of equipment were kept under lock and key in my *alma mater*). I heard from some French students that there was an interesting course in probability theory, so I went to the registrar to switch. The clerk was horrified that I would drop an undergraduate course in my major and replace it by a graduate course in another department. But I insisted to have the course changed and I did very well in probability theory.

Kriezis also helped me in more important ways besides giving me a strong background in mathematics. He helped me plan my graduate work and career. I vividly remember one of the conversations we had. I had asked him whether I should go to Western Europe or the United States. He replied: "In Europe you will always be a stranger. But in the United States everybody is from somewhere else. Even if he was born there, his father was not. And even if his father was born there, his grandfather was not." It was clear that for me the issue was not just where I would do graduate work but where I was going to make a career. There was no place in Greece for a person such as me. Later he offered specific advice about graduate programs in the United States as well as about strategies for choosing a thesis topic.

I kept in touch with Kriezis long after graduation. I wrote to him in the spring of 1966 saying that I had married on April 7 and my wife Marion and I were going to be in Greece that summer and I hoped that we could meet. He replied that he had also married on April 10 and he would be glad to meet us. I should add that this was his first marriage even though he was 20 years my senior. That summer we met and we had dinner in a nice country restaurant that was well known for its retsina wine. He explained that it is best to drink retsina directly from the barrel because bottling spoils the flavor. Marion still remembers that conversation.

I saw him for the last time in 1978 during a stopover in Athens on my way back to the United States from Israel. We had dinner and he remarked that I was the one of his students that had kept most regular contact with him. I hope that made him happy. I always feel happy when I hear from old students of mine.

Compared to American college professors, Kriezis did not do anything unusual. But for Greece he was truly from another planet. Greek college professors not only did not have office hours, most of them did not even have an office on campus.

When I look back on my life, I see that having someone like Kriezis as a teacher was a major lucky break for me. Without him I might still have been able to pursue an academic career outside Greece but it would have been far more difficult. Besides giving me the benefit of his advice he had also served as a role model.

I had three or four other professors whose lectures I remember and who helped my understanding of the deep issues of the subject taught but none of them came close to Peter Kriezis in helping me with my career.

While writing this memoir I tried to find some information about him from my *alma mater*. They have a web site but, sadly, there was no way to contact them via e-mail. Can one think of an American University that does not have a way for its alumni to contact it?

THINKING ABOUT GRADUATE SCHOOL

I do not recall who put into my mind the idea of going to graduate school to the United States but Petros Kriezis certainly encouraged me and I have to credit him for pointing me in the right direction. Of course, it was left up to me to take care of the specifics. My family was of no help. As I wrote earlier (in the section about my mother) my father was too involved with himself and he had formed the opinion that the United States was not a good place to go to graduate school. So I went to the cultural office of the U.S. embassy in Athens and, in my halting English, inquired about the options for graduate work. I recall a lady telling me about the Fulbright program and I decided to apply to it. The program offered fellowships that included travel grants, something quite important for me because I did not expect any financial support from my family.

So I applied to the program, underwent an interview (in English) by a committee in the fall of 1956 and several months later I heard that I was accepted at M.I.T. From what I learned later the Fulbright program submitted the folders of selected applicants to various graduate schools who then decided whether to admit a person and with what kind of financial support.

Unfortunately I could not go to M.I.T. because the Greek Army had other plans for me. When I left the Army I applied again to the Fulbright program and that led eventually to my going to Berkeley. I tell these stories in the next chapter.

There was one aspect of the Fulbright program that I did not pay enough attention to. Recipients of a Fulbright grant could not apply for an immigrant visa unless left the United States for two years. This caused some problems later but, in spite of that, I think I made the right decision. I knew very little about American Universities and I would have never picked up Berkeley on my own.

Chapter 5

ARMY AND WORK

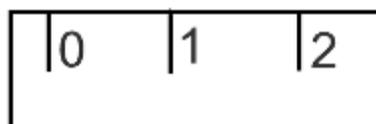
A FRACTION OF AN INCH

In July of 1957 I graduated with a degree in Mechanical and Electrical Engineering. A few months earlier I had heard that I had won a Fulbright Fellowship for graduate work at MIT. I had been elated but I was soon deflated when I was told by Greek officials that I could not leave the country until after I completed the compulsory two years of military service.

A few months later I was in uniform undergoing basic training. After two months at the boot camp I was transferred to the Reserve Officer's School of the Technical Branch. This was the army branch responsible for the maintenance of the vehicles and other mechanical equipment. We were a class of fifteen cadets who were going to become officers after six months. Ten of us were classmates from college and that helped us deal with the army life. We were glad to be out of the grueling physical challenges of the boot camp and were looking forward to an easier time in place where the emphasis would be on technology, no matter how mundane.

Unfortunately, the Greek Army leadership had formed the opinion that even career officers of the Technical Branch were not sufficiently imbued with military spirit and therefore they could not, by themselves, transform civilians into proper soldiers. As a result the Officer's School was under the command of an infantry major. This person had a mean streak and never missed a chance to give us a tough time or humiliate us.

We were allowed to go out into town once a week for a few hours and we all looked forward to that liberty. One day we were told that our hair had to be short, no more than one inch in length. The infantry major walked into our dormitory with a ruler. We lined up in front of our bunks and he would place the ruler on each person's skull and pull the hair to make sure that it did not go beyond the one-inch mark. It turns out that the zero mark of the ruler was not at end and there was about a quarter of an inch gap between the end and the zero mark. The major made no adjustment for that discrepancy.



When he came to measure my hair he found out that it was a quarter of an inch too long. "But sir," I blurted, "you forgot to subtract the amount of the gap at the start of the ruler." "You are right," the major snapped back, "you can go." Of course, the correct adjustment would have been to add the quarter of an inch rather than subtract it, so I got away with hair too long by half an inch!

There were many other tough times that could not be dealt with so easily. The camp we were based was undergoing major reconstruction and the colonel in charge of the camp (we called him the "Tiger") had the idea of using the cadets as construction supervisors. This was on top of our military "education." Still, the "Tiger" was not satisfied. One day he punished the whole officers' school (two classes of fifteen cadets each) with 30 days confinement in the barracks because we did not exhibit the "proper military spirit."

I have included a photograph (page 4 of *People and Places*) from the parade of the Greek Independence Day on March 25th 1958 where the Reserve Officer's School of the Technical Branch shows its military posture. The three men in the front row are all classmates from the National Technical University of Athens. "D.D." is Demos Daskalakis, "A.G." Antony Grammaticos and "T.P." yours truly. Daskalakis later married a cousin of mine. Grammaticos earned a Ph.D. at the University of Pennsylvania and followed an academic career in Greece. The rifles are British Lee-Enfields, World War I vintage.

LOST IN TRANSLATION (TO PUT IT MILDLY)

The View from the Field

In June 1958 I was posted to a battalion of the Corps of Engineers based in *Karabournaki*, just outside the city of Thessaloniki. I had finished the Army Technical Services Reserve Officers School in Patras where I had spent eight tough months with several of my classmates from college. My new base was near the sea and that made it rather pleasant even though I had no chance to go to the beach. (*Karabournaki* means *Black Promontory* in Turkish.) Until the Balkan war of 1912 the occupant of the base was Ottoman cavalry. Now there were several Greek army units. Besides the Engineers, there was an artillery unit and a veterinary hospital for mules. Mules were used in the Greek Army to carry supplies over mountainous terrain. Occasionally, a mule would run loose and create a bit of excitement.

My specific assignment was with the mechanical repairs unit that was responsible for the maintenance and repair of trucks and other army vehicles as well as bulldozers and other road construction and bridge building equipment. I was second in command under captain Basmatzis. He had joined the Army as a private in the 1920s and he had risen through the ranks. During World War II he had served with the Greek troops in the Middle East that had been formed from the remnants of the Greek army after the German invasion. He was a nice person with a lot of folk wisdom and we got along very well. (Incidentally, his last name means Shoemaker in Turkish. It is not unusual for Greek last names to be of Turkish

origin.) There were 15-20 mechanics in the unit. Two of them were civilians and did most of the work; the soldiers were of widely varying quality.

In 1958 the Cold War was at its height and Greece was part of NATO. Thessaloniki was less than 60 miles from the "Iron Curtain", so it had become a major military base for units that were to fight a possible Soviet invasion. If war came, we would be frontline troops. The United States had a strong interest in the fighting capacities of the Greek Army and as a result the Greek Army had been the recipient of large amounts of American Army equipment (most of it World War II surplus). However, the donations were in an awful state of repair, mainly because the Greek soldiers had little familiarity with machinery. Most of the "technicians" were from rural areas, where cars were a rarity. They had been placed in the technical services rather than the infantry through favoritism, typically because of the intervention of a local politician. (I should point out that people who were truly well connected would go the Navy or the Air Force.) On the other hand there were men who had been mechanics in the Greek Merchant Marine but because they had delayed their enlistment, they were assigned to digging ditches. Fortunately, the battalion commander let me look for such people amongst the troops and transfer them to the repair unit. After all, this meant that the equipment of the battalion would be in better working order.

It turns out that the High Command of the Technical Services had its own ideas on how to improve the maintenance of the equipment. The plan was to translate the American Technical Manuals into Greek and distribute them to the technician soldiers. Our unit had copies of some of the manuals but they were kept under lock and key. Why? The manuals were written in the official Greek language that was quite different from the common language spoken by the soldiers. Even worse, most of the soldiers were barely literate so they could hardly read. I tried to read some of the manuals and I found them so poorly written that it was hard to find in them any information that could be used. The repair unit was responsible for the books and we did not want any to be lost, thus the safekeeping. When an inspector was expected, the manuals would be taken out and distributed to the soldiers. It was my job to match the manuals to the equipment a soldier was repairing. We did not want the inspector to see someone working on a Jeep using a manual for a 2-ton truck. (We used to joke that I also had to make sure that the books were held right side up.) Another part of the preparation for the inspection was to pour some machine oil on the floor and throw the manuals down so they would be dirtied and appear used.

I had heard similar stories from my former classmates who served in other units around Thessaloniki. Apparently, the career officers, who had come up through the ranks like captain Basmatzis, had a cynical attitude towards the higher ups. Whenever we received a document marked confidential we would throw it in the stove to burn. This way we would never get in trouble if someone found the document lying around.

One day I received through official mail a copy of an American Technical Manual and I was asked to translate it. Apparently, someone had noticed in my records that I was proficient in English and they thought I could do the task. I had quite a busy schedule in the repair unit and I did not want to devote my few free hours to an Army task, but I managed to translate a chapter and send it back. A few months later I received a notice that I was transferred to

the Technical Services Translation Office in the Army Headquarters in Athens. The transfer to Athens was highly desirable and it seemed an appropriate reward for my translating efforts.

The View from the Top

In April 1959 I reported to my new post. However, I was not going to be a translator, but a technical editor supervising other translators. The head of the office was a major, an easygoing type who did not seem to take things too seriously. The translators were civilians, most of them young women who had some knowledge of English but no technical background whatsoever. (Yes, I ended up "going out" with two of them; one during my service and another after I had left the army.) I was supposed to take what they had written and make sure it was technically correct. It was an impossible task but now I understood why the manuals we had were so poorly written. Each manual had a section on destroying the equipment (so it would not fall intact into the hands of the enemy) and we used to joke that we need not translate the part. Maintaining the equipment according to the earlier sections was certain to destroy it.

The head of the Translation Office reported to a colonel who, in contrast to the major, was all fire and thunder. It was my luck that the colonel would bypass the major and deal directly with me. He assigned to me an additional duty: to go to the Army Printing Plant to approve the galley proofs before the manuals were put into production. To travel to the printing plant from the headquarters I would ride on the sidecar of a motorcycle driven by a messenger soldier. I often wondered what "important mission" people would think I was on as we made our way through the city traffic.

The printing plant duty turned out to be quite pleasant. Knowing from experience that no one was going to read the manuals, I was quick to approve their printing and that made me popular with the staff (all civilians). They told me that after I had finished I could go home, and if the colonel called they would cover my absence.

One day an American liaison officer came to the translation office and, in my minimal conversational English, I explained that the manuals were translated into the official Greek idiom rather than the spoken language. He knew the difference between the two idioms and he was surprised that the Greek Army would make such a poor decision. Apparently he spoke to the colonel who, the next day, thundered to me: "What right did you have to tell the American that we use the official language? I told him you were crazy and did not know what you were talking about!"

From then on, the colonel would call me the first thing in the morning and tell me to go to the printing office. He would shout "Are you still here?" At first I thought he was anxious to push the production of the manuals but later I realized that he wanted me out of the Headquarters so I would not provide any more "leaks" to the Americans. Since the printing office duty was light, my "mischief" turned out to my advantage. I am sure the colonel wrote a poor evaluation for me but since I was anxious to leave the army any way, it did

not matter. I completed my two-year enlistment period and was discharged in late September 1959.

TEACHING WHILE IN THE ARMY

After a long day at the base, most evenings I would teach in the vocational school *Euclid*. That school had the requirement that instructors had to be licensed engineers but they paid only a dollar an hour, too low for civilians. As a result almost all their instructors were moonlighting army officers. Some of them were of high rank, including the colonel who oversaw all Technical Corps in the Third Army Corps. (I think his name was Sclavounos.) They used to come in civilian clothes; I did not have time to change so I was always in uniform. One day I was waiting at the payroll window to collect my pay (we were paid cash) and the cashier address the man in front of me as Mr. Sclavounos. So here was someone several levels above me in the army, but we were both moonlighting in teaching. Wearing a uniform helped (I think) a bit with keeping order in class. Like vocational schools elsewhere, the students were a tough lot.

I forget exactly when, but eventually I was appointed an instructor at the University of Thessaloniki. Here is the story. The professor in the chair of "Descriptive and Projective Geometry" was Panagiotis Ladopoulos who had been earlier an instructor in the National Technical University. There I had become his favorite student. After he became professor in Thessaloniki he continued living in Athens and he would fly once a week to Thessaloniki, stay for a couple of days and then fly back. He offered me a non-paid job there and I was glad to accept. My army higher ups were duly impressed and they gave me time off for the University. In Greece even the paid staff was there for prestige because the salaries were a pittance. Ladopoulos was a civil engineer and he had a thriving construction company that provided most of his income. When he flew into Thessaloniki he would meet for lunch at a nice restaurant with his University staff as well as his construction company managers and he would give each one of us the appropriate suggestions. Because of the "flying" professor I ended up with more duties than what my position entailed.

"Descriptive and Projective Geometry" was considered an obsolete subject, developed in the early 1800s in France to deal with stone bridges, and other stone structures. But irony of ironies: The mathematics of the subject are exactly the same as that used in modern Computer Graphics! Twenty years later my extra familiarity with the subject helped in writing my book "Algorithms for Computer Graphics and Image Processing."

MY ENCOUNTER WITH THE DEVIL

The tall smokestacks were spewing black smoke with pieces of soot falling from the sky. Inside the noise was deafening from the machinery and the hissing steam coming out of the escape valves. If you looked at the combustion chamber of a boiler all you could see was a wall of fire, straight out of hell. And that is where I had my encounter with the Devil.



The place was the Paleon Phaliro Power Plant supplying electric power to the area of Athens and, on October 1, 1959, I had been hired to be one of the engineers running the place. The job had a very high (with Greek standards) salary and a lot of perks. There was a company car that would pick us up in the morning and take us home in the evening (for those who did not have their own car). There was a separate dining room for the engineers where two ladies, who also did the cooking, served us. The company had a true caste system. Engineers had to be addressed as Mr., but we addressed the staff reporting to us by their first names, even people who were much older than ourselves. The company was British owned and I am not sure whether such practices were due to the influence of the British class system or the Middle Eastern traditions of Greece. I have never been treated with more "respect" in any other job I have held in my nearly 50 years of professional employment.

I had not given up on my plans to go to graduate school and soon after I started work I took part in the Fulbright program competition. When six months later I was notified that I had been accepted at Purdue I was not that eager to go and I declined the offer (I forget what my excuse was). The Devil kept telling me that I had one of the best jobs in Greece and why would I want to become again a student and go through the hassle of course taking and exams. Most of my friends, including women I was dating, thought that the Devil was right. Why would I want to abandon beautiful Greece and my family for the harsh climate of North America?

Well, the money and the perks might have been good but after a few months on the job I was deadly bored. Under normal conditions nothing is supposed to happen in a power plant. Most of the time we sat around shooting the breeze and occasionally we would make a round of the premises to check on the staff. There was periodic maintenance of the equipment when a boiler or a turbine would be shut down but while this was mildly interesting the first time, it quickly became a routine. The engineers who had been working there for several years seemed to have lost all technical intelligence, unable to deal even with the small challenges that would arise now and then. Here are three cases that illustrate my point.

(1) There was an oil pipeline connecting the Phaliro plant to the main plant of the company, located just west of the port of Piraeus in a place called Saint George of Keratsini. (As a result the nickname for that plant was "the Saint".) The oil had high viscosity and it had to be pre-heated so that it could flow through the pipeline. Its temperature had to stay above

a certain point or the flow would stop. It was obvious that the longer the oil stayed in the pipeline the cooler it would become so the flow could not be too slow. My colleagues thought that we could compensate for that by heating the oil at a higher temperature at the start and they were surprised that this did not seem to work out. There were lots of heated discussions on the issue and I was amazed that none of them could see that because the temperature drop was exponential the initial temperature had very little effect. The rate of flow was the only factor that had a measurable effect. I tried to explain that to them but I may as well have been talking in Chinese. The monotony of the work routine had deadened the brains of these people.

(2) In the power plant we had steam turbines whose speed was controlled by a feedback mechanism. When a turbine would slow down, a sensor would detect the decrease in speed and would increase the supply of steam. The converse would happen when the speed increased. However, if too much steam was provided when the speed went down, the speed would increase beyond the desired value and it would be necessary to slow down the machine. The result would be a machine with oscillating rather than constant speed. Such malfunctions of feedback control are known as *hunting*. It turned out that one of the generators suffered from hunting, so it could not be connected to the network. This was a serious problem but no one seemed able to figure it out. Clearly, it required a sophisticated analysis, beyond the abilities of the engineers at the plant. Instead of trying to analyze the feedback loop, the engineers did all kinds of ad hoc adjustments, none of which fixed the problem. I do not know if the machine ever went back to service.

(3) Another technological fiasco came to light after the shaft of a diesel generator broke. The engineers blamed the manufacturer for defective material. It turned out that the shaft had been misaligned. The local technicians had interpreted the tolerances in the metric system (millimeters) while they had been given in thousands of inch. So the misalignment could have been 40 times larger than allowed. What was remarkable was the first reaction of the management. When the shaft broke, the rotor rubbed on the stator causing a fire and the fire was the first sign of trouble. Immediately, the director of the plant concluded that there must have been a short circuit caused by humidity from the drainage of the cooling water. He ordered all drainage ducts to be covered. The next day one of my young colleagues, Dinos Constantinou, took a look at the generator and noticed that the shaft was broken. Dinos was a classmate from the Polytechnic University and we had also been together in the Army. He was a smart person but he did not want to take the risk of emigration and he stayed in Greece. (He was also an only child.) Several years ago I heard that he died at a relatively young age.

The Devil kept telling me that I should not bother with such matters. What was wrong with me to want to look at challenging problems? Those were best left for the foreign experts. I should enjoy the retsina, the bouzouki music, and the beautiful beaches of Greece. Where else would I find such a great lifestyle? I was not convinced and I took part again in the Fulbright program competition. I should add that trying to come to the United States through the Fulbright program was not the best strategy because I had to accept a requirement that I was going to leave the country for two years before I could apply for

immigrant status. I have to blame the Devil for tricking me into that, because that condition complicated my life later on. But that is another story.

In the spring of 1961 I received a letter saying that I had been awarded a fellowship to study at the University of California at Berkeley. My old professor, Petros Kriezis, told me that this was an excellent school, so I took the leap and accepted the offer even though the Devil kept telling me that I was giving up a great career path for an uncertain future.

I arrived at Berkeley in September of 1961, a few days before my 27th birthday. I did not know any better so I rented a cheap apartment that was about a mile away from the campus and in a not-so-nice part of the city. I was miserable and the Devil kept reminding me what a mistake I had made. I told the Devil that I was going to give it a try for a year. After all it was nowhere as bad as the Army. If I were still miserable at the end of the year I would pack up and return to beautiful Greece.



I started looking for another place and at the end of the first month I moved to a house near the campus that I shared with two other students. After that things started moving fast. I joined the dining plan of the International House because it was cheap (three meals a day for two dollars). But the main benefit was socializing and after a few weeks I had a girlfriend. Even though she was in her mid-twenties, she had just started college. She had tried to make a career as a nightclub singer (her father had been a singer in Europe), then she worked for a few years as a secretary, and finally she enrolled at Berkeley. She was a Hungarian Jew and she and her family had survived the Holocaust by using false papers. She was a fascinating woman but quite restless. She did not like to stay with a boyfriend for more than a few months. We broke up after about six months (she told me that I was one of her longer lasting boyfriends). Even though I was heartbroken, I realized that we were not "long term compatible". I had several other girlfriends at Berkeley but I did not meet one that I could become serious with. However, I had decided that if I was going to get married one day, I would marry an American woman.