



THE UNIVERSITY OF ARIZONA  
COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES

# Center for Middle Eastern Studies

## Contagion, Quarantines, and Cures in History – Case Study: The Ottoman Empire

### **Prologue:**

Characters:

Narrator 1

Narrator 2

Narrator 1: Throughout history, people have moved from place to place: to find new pastures for their flocks, to find a better life and more job opportunities, to engage in international trade, or to travel for pleasure. This movement brings many positive things to society. People learn about new technology and ways of doing things; people acquire goods or foodstuffs that can't be produced locally. However, population movements also lead to the spread of disease.

Narrator 2: The Ottoman Empire was an important crossroads: between Europe, Central Asia, the Middle East, and North Africa. This meant that the Ottoman Empire was often affected by the diseases that spread along the trade routes and in the wake of military movements. Luckily, the Ottoman Empire was also at the crossroads of the medical learning of the time – and it was quick to come up with medical innovations of its own.

### **Act 1: 15<sup>th</sup> – 17<sup>th</sup> Centuries**

#### **Scene 1:**

Setting: A meeting of a city council in Edirne, a city in the Ottoman Empire (today's western Turkey). Mid-15<sup>th</sup> century.

Characters:

Musa (male): an Ottoman official governor

Evliya (male): a doctor

Mehmet (male): a leader of the Muslim clergy

Alexander (male): an Orthodox Christian leader

Musa: I've called this council meeting today because of the most recent outbreak of plague. I don't have to tell you that recurring outbreaks of the plague have serious effects on our society, not only on private citizens, but on our government: its ability to control the population, its ability to launch a military attack against our enemies. We need to

consider whether we can prevent or lessen the severity of the plague and how to deal with the threats to public health and public order that an outbreak causes. (*Indicates Evliya.*) So doctor, what do you have to say about how such outbreaks occur and what can be done to treat them?

Evliya: With all due respect, sir, I'm afraid that I do not have any good news to report. As you know, there is no known cause for the plague and therefore no way to prevent it. Outbreaks usually occur when a trading ship has docked – and often the ships come from the West.

Mehmet: Then maybe we should cut off all contact with the infidel Christians!

Alexander (*glaring at him*): It is NOT the fault of the Christians! We suffer just as much from the plague as Muslims do. Also, I have been told that the terrible outbreak of the plague in the last century came from the East, from the steppe country beyond the Black Sea.

Mehmet: Well, I didn't say that you caused it; only that trade with the West can be dangerous.

Alexander: WAR also is a form of contact with the West, and you're not giving up on that!

Musa: Gentlemen, you're both being petty. Doctor, please continue.

Evliya: Victims have a headache, high fever, chills, often vomiting too. Within days, they develop hard, painful lumps on their necks, underarms, and inner thighs. These turn black and split open....

Musa (*interrupting*): That's enough about symptoms. What progress have you made toward finding a CURE?

Evliya: Unfortunately, there is no cure. Almost all the victims die within a week. And soon their families and friends have it – and anyone who comes in contact with a patient or his dead body. We doctors try to help, but.....

Musa: OK, so there's no way to help a patient. But is there a way to prevent people from becoming ill?

Mehmet: Only God has the ability to prevent the plague. Obviously, He is sending it to punish mankind. So we shouldn't resist it or try to run away from it.

Alexander: Yes, we Christians agree with the Muslims on this. People should not be afraid, should accept the fate that God has planned for them.

Evliya: But I disagree with you! People should NOT just pray and say it's God's will. They should be allowed to leave the city. Fleeing from the plague is our only defense. You can't insist that people stay where they are certain to die!

Musa: So many dilemmas. If we try to prevent people from leaving, then the disease spreads and kills everyone, especially in the cities where people live close together. However, if we allow them to flee, that shows disrespect for the will of God, causes disorder, and possibly brings the plague to new places. This disease really causes problems for the government. How do we keep up a healthy military and a healthy population? How do we maintain order?

Mehmet: Also, how do we keep up with proper religious burials?

Alexander: That's right. It's a problem for all of us: Christians and Jews as well as Muslims. Sometimes people have just put victims into mass graves without proper religious rites. That jeopardizes their eternal souls.

Musa: There don't seem to be any easy answers. I think for now, we just have to work together. Provided that His Majesty the sultan agrees, I will allow people permission to leave if they are seeking pure air to prevent the plague or if they are seeking treatment. However, I will NOT allow it if they are just fleeing out of fear, trying to avoid the will of God. Doctors will do their best to help patients and find a way to prevent the outbreaks. Muslim ulema and Christian priests will help their people to cope – and will try to prevent panic and unrest. Those are my orders!

## **Scene 2:**

Setting: Near a hospital in Istanbul. Early 17<sup>th</sup> century.

Characters:

Hamid (male): a doctor

Melike (female): Hamid's wife

Emir: a student of medicine

Hamid: I am expecting a new student today, the son of my old friend, Hasan. I hear that he is very bright and eager to learn.

Melike: That's wonderful! It's always good to have someone to share your learning. Besides me, of course!

Hamid (*smiling affectionately*): Yes, I always respect your opinion. You are much more knowledgeable about medicinal plants than I am – though I always thought that you should become a surgeon for women. You wouldn't be the only woman surgeon.....

Melike: No, my dear, being a physician is your interest, not mine. I much prefer creating medicines for you to use. I love working with plants, extracting their medicinal properties....Anyway, have you decided how to begin teaching your new intern?

Hamid: Maybe with a tour of the hospital – or...? (*They are interrupted by the arrival of the new student. Melike retreats so that the men can talk.*)

Emir: I am very excited to be here, really interested in learning more about medical treatment, especially surgery!

Hamid (*smiling at his enthusiasm*): I have something to show you, then, which should really interest you. Come with me. (*Carefully removes a book.*) This is Şerafeddin Sabuncuoğlu's surgical textbook. He wrote it nearly 150 years ago, but it's still the most practical, useful work there is. He drew on the work of Al-Zahrawi and other knowledgeable physicians, taking the learning of the West and of the East and combining it with his own experience in medicine. Isn't it a marvelous text?

Emir: The pictures are so clear! And he explains exactly what to do. (*peers closely at a page*) In this picture, is this a branding iron that the doctor is using?

Hamid: Something similar. What you are looking at is the process of cauterization, which is used to treat hemorrhoids, fistulas, headaches, and sometimes forgetfulness or melancholy. Other things we surgeons do a lot are procedures like blood-letting – to balance the humors in the body – and draining abscesses.

Emir: Isn't it painful for the patients?

Hamid: Sometimes. And that's why patients often refuse surgery – or doctors don't try to do it. However, we can use opium or murkid for anesthesia. My wife is an expert at acquiring and preparing these medications. Also, there are other techniques to calm a patient, like music.

Emir: So there's a lot to learn.

Hamid: Oh yes. You know, Emir, modern medicine can do a lot to help people live better, healthier lives. There is a lot that doctors don't know, of course – like how to cure the plague – but over time we are making progress.

## **Act 2: 18<sup>th</sup> Century**

### **Scene 1:**

Setting: a home on the outskirts of Istanbul

Characters:

Marie (female): a visitor from France

Sitti (female): an older woman

Hafza (female): a young mother

Marie: Explain to me why the women and children are all getting together today. I'm not sure that I really understand it. Please explain it carefully because I don't speak Turkish very well.

Sitti: Today we are doing something very important. Every year around this time – in September – after the heat of summer is over, we get together to protect the children against smallpox.

Marie: (*shuddering*) Smallpox is a terrible illness! It struck my town in France when I was a child. About 1/3 of the people died, and others were terribly scarred for the rest of their lives. I was lucky, but many in my family were not so lucky.

Hafza: That is awful! But I'm glad you told me the story. It makes me feel better about having my son get the ingrafting today. Even though he will become ill, he will recover without any problems.

Marie: Ingrafting? What is that? There is no way to prevent smallpox....

Sitti: There IS a way to prevent it! You should learn this from us. We older women know the procedure, and today we will show it to the younger ones AND make sure that the children are protected.

Marie: How will you do that?

Hafza: I remember seeing it before. They take a needle and make a big scratch with it. Then they put some of the smallpox poison into the scratch.

Sitti: Yes, that's how we do it. After that, the children dry their tears quickly – it's just a scratch and not really painful. Then, they go off to play, while we women have our own little party.

Marie: So that's it? Nothing else?

Sitti: A week or so later, the children become ill with a fever and get a very mild case of smallpox. However, they recover in only a few days.

Hafza: After that, they never get the disease?

Sitti: Never. They become immune to it.

Marie: I wish that they had had that process in France when I was little. Then maybe my cousin would have lived and my aunt would not have such ugly pockmarks all over her.

## **Scene 2:**

Setting: hospital in Edirne (today's Turkey)

Characters:

Midhat (male): an Ottoman doctor

Omer (male): another Ottoman doctor

Thomas (male): a visiting doctor from England

Midhat: Welcome to our hospital! I am glad that you have come to Edirne to visit us. I will be happy to show you something of the advanced medical training that we provide here in the Ottoman Empire and the modern treatments that we offer our patients.

Thomas: I'm really interested in seeing how your medical system works.

Midhat: Before we go in the hospital, let me tell you that there are several kinds of medical care in this country – as in most countries, I think. Before patients come to us, they have usually tried popular medicine, based on customs and folk cures. They may also have made use of religious medicine, based on prayer and what is written in the Quran. What we do here, however, is provide formal, scientific medical care.

Thomas: I think that's basically true in England too. (*stops suddenly and looks around him*) This is quite a large complex! And not a new one, I see.

Omer: You are right. This hospital and medical school have been serving the public for several centuries. The complex was built in 1488 during the reign of Bayezid II. As you can see, it is centered around a mosque, an important part of the community.

Thomas: Aren't you worried that having a hospital right in the middle of the city will cause illness to spread from patients to healthy people?

Midhat: (*puzzled*) Why? Most illnesses – except for leprosy or plague – don't spread.

Thomas: Yes, they do! Many sicknesses are contagious.

Midhat: I don't know about that. But I DO know that the sick are part of the community. They shouldn't be separated from other people. They need their family and friends around them.

Omer: Cities are more unhealthy than the countryside. So of course, we put a hospital where people need it most.

Thomas: We think differently about this in the West. (*suddenly stops and listens*) Do you hear that? I hear music. Is there some kind of party?

Midhat: No, it's music therapy.

Thomas: Music therapy?!

Omer: We use it for treatments. It works especially well in treating mental illness. If a patient is depressed, there are certain kinds of tonalities – special types of music – that make him feel happier. If a patient is under stress or is agitated, there are other tonalities that calm and soothe him. It's very scientific.

Thomas: That seems so odd to me!

Midhat: When I visited a hospital in your country, you just took people who are mentally ill and locked them up. Here we are trying to treat them.

Omer: Yes, and we treat them in a very humane way.

Thomas: Do you use music therapy for physical illnesses too?

Midhat: Oh yes. The mind and the body must both be in harmony for any patient to become well. Music helps to create that balance. So we have other tonalities to give a person strength to endure a painful condition or treatment, others to help him sleep, things like that.

Omer: Also, the time of day must be taken into account in order to make the therapy more effective. Each tonality works better at some times of the day than at others.

Thomas: So musicians are part of your medical staff?

Omer: Yes. But they are not trained doctors, of course.

Midhat: Our medicine seeks to treat the whole patient. All the senses are important: taste, smell, sight, touch, and hearing. We make sure that patients eat tasty, wholesome foods (There is a connection between food and good health, anyway.) have beautiful things to look at (like the hospital's gardens), and hear good music and stories.

Omer: Cleanliness is also important. How can a patient feel well – physically or mentally – if he is dirty? We have baths in the hospital.

Thomas: Eating well, beautiful surroundings, resident musicians! Your treatments must be really expensive.

Midhat: Expensive? Medical care is free! Of course, people who can afford it often prefer to be treated in their own homes, so most of the patients here in the hospital are not rich people.

Thomas: And it seems that there are only men. No women or children.

Omer: Women have separate hospitals, while children are usually treated at home, where they are more comfortable.

Thomas: Well, I'm so glad that I got to visit the hospital. I can't wait to sit in on some of the medical classes to learn more about your methods of treatment!

### **Act. 3: late 19<sup>th</sup> Century**

Setting: 1896, in a private home in Paris, France

Characters:

Jacqueline (female): wife of Henri, a French public health official

Mustafa (male): an Ottoman public health official

Henri (male): a Frenchman attending the proceedings of the International Sanitary Conference

Jacqueline: Mustafa, I hope that you are enjoying your stay in Paris. My husband says that you are here because of the Ninth International Sanitary Conference. How is the conference going?

Mustafa: I am enjoying Paris very much, but the conference – well, not so much. While it is good that during the past 50 years we have had international conferences to deal with issues concerning the spread of contagious diseases, sometimes it seems that everyone just blames the Ottoman Empire. Whenever the issue of cholera comes up, we are told that our poor hygienic measures allow the disease to spread to Europe.

Jacqueline: Why is the Ottoman Empire blamed for that?

Henri: Each year, hundreds of thousands of Muslims travel to Mecca in Arabia for the Muslim pilgrimage. (Mecca is part of the Ottoman Empire, as you know). Often there are outbreaks of cholera. Sometimes – as in 1865 – as many as 30,000 or 40,000 pilgrims die in just a few weeks! Then the disease spreads across Turkey and into Europe.

Mustafa: That is true. But it is not our government's fault! The disease seems to be endemic in India, and the pilgrims bring it from there to other parts of the world. So the Conference should be looking at the source and not blaming us, who are victims too!

Jacqueline: What causes cholera? And why are the Ottomans blamed if it started somewhere else?

Henri: It is a very serious intestinal disease that thrives in impure water. So the international community wants the Ottomans to be stricter in maintaining a clean water supply. More importantly, from their point of view, they want the Ottomans to implement a strict quarantine of ships coming into the Empire from India and also traveling out of the Empire to Europe.

Mustafa: We try to do that! I admit that efforts were a little slow at first because some of our religious officials, the Muslim ulema, opposed such measures, saying that cholera shouldn't be limited since it was sent from God to punish misbehaving mankind.

However, for several decades now, we have followed the quarantine system: keeping track of where ships came from and putting people from infected ports into lazarettos for 40 days so that they are isolated from the healthy population. Meanwhile, we air out the goods and.....

Henri: But sometimes you do not enforce the rules strictly enough!

Mustafa: We do it as well as you! But our location is more difficult: a crossroads of Europe, Asia, and Africa. Of course, we see more disease! Also, tens of thousands – even hundreds of thousands – come into our territory for the yearly Muslim pilgrimage to Arabia, where they all crowd together at the same time. We are trying hard to control the spread of disease. We've set up more than 65 quarantine stations all along our borders just for that purpose.

Jacqueline: (*reflectively*) Hmm. So your border checkpoints are to control the spread of disease more than to keep out invaders.

Mustafa: I suppose so. The permanent border stations started with the purpose of controlling disease. Although we've always, like everyone, watched the borders for signs of attack, the checkpoints and requiring travel documents from outside visitors began as sanitary measures.

Jacqueline: Are there other diseases that people worry about besides cholera?

Henri: Well, the Sanitary Conference is concerned with typhus and tuberculosis too – though those are everywhere. And we worry about yellow fever though that one is not in Europe or the Ottoman Empire but in the Americas.

Mustafa: Disease is a big problem for the military as well. Usually, more soldiers die of diseases than from wounds. During the Crimean War, we lost a lot of people to illnesses such as malaria.

Jacqueline: Do you quarantine people for malaria too?

Mustafa: No, that is caused by bad air or something like that, and it is specific to certain places. We get malaria if we go to other places, but people in our own country don't get it. It's the same with yellow fever, which concerns the Americans and people who go there more than it concerns us. Those diseases are not contagious in the same way as typhus or cholera.

Jacqueline: But those other contagious diseases – if they spread by people traveling from place to place, what can we do to stop it?

Henri: In the modern world, people move around a lot because of international trade or religious pilgrimages or military movements. And we can't – or don't want to – stop them! Also, today people travel for fun much more than in the past, and they move

around so quickly now that there are fast ships, better roads, and even railroads. These people on the move often bring illnesses along with their luggage. So diseases are carried on merchant ships and by armies.

Mustafa: Another problem that we Ottomans are having is with movements of whole populations. For example, some Turkic peoples were kicked out of the Russian Empire and sent to our lands in the 1860s – after the Crimean War. The Russians expelled tens of thousands – maybe more! – Crimean Tatars who were accused of taking our side in that war. They rounded up the people – men, women, and children – forced them onto boats, and sent them across the Black Sea to Anatolia or the Balkans. Many had diseases like smallpox, typhus, and measles, which spread on the crowded ships so that they became death ships.

Jacqueline: How awful!

Mustafa: Yes, that's another feature of the modern age of nationalism: groups of people being moved from one place to another – forcibly and under bad conditions – because their language or religion makes them different from the majority group.

Jacqueline: What is the solution to disease control?

Henri: International cooperation over public health – like the Sanitary Conferences. Better regulations so that trade and travelers can move freely but diseases cannot.

Mustafa: New cures – or at least ways to prevent diseases. Modern medicine!

Jacqueline: I was thinking: maybe even preventing war and forced population movements.

Mustafa: That would be nice.....

### **Conclusion:**

Characters:

Narrator 1

Narrator 2

Narrator 1: Over the 600+ years of its existence, the Ottoman Empire experienced many challenges in the area of health.

Narrator 2: Because of its great geographical diversity, there were many plants available to make medicines and a wide exchange of ideas about medical treatments. However, also because of its geography at the crossroads of trade and religion, communicable diseases, such as the Black Death and cholera, frequently swept the empire.

Narrator 1: Public health was not only an issue of helping people to live longer and better; it was an issue that affected political control and internal security – and even relations with other countries.

Narrator 2: Even today, similar problems exist. How do we find new treatments for disease? How do we ensure that medical treatments are both effective and humane? How do we keep travelers, traders, and soldiers from spreading disease from one area to the next without limiting international travel, trade, and military options? Public health is complicated, especially in an era of globalization. The case of the Ottoman Empire provides an early example of efforts to solve those problems.