ARAŞTIRMA RESEARCH

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Healthy Countries of the East in Information Provided by Silesian Calendars from the Years 1744 and 1746: Systematic Review

Silezya Takvimlerinde 1744-1746 Yılları Arasında Belirtilen Doğunun Sağlıklı Ülkeleri: Sistematik İnceleme

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ABSTRACT In modern Europe in the 18th century, calendars were the second - right after the Bible - type of a printed book. They were widely purchased by most members of the middle and upper classes, providing them with useful information and advice. Among the topics covered by the calendars that most interested readers was information pertaining to health and disease. The aim of the article below is to analyse the content in two of these calendars, published in years 1744 and 1746 for the residents of Silesia, that pertains to the health characteristics of the countries of the East. I intend to highlight the persuasive elements used by the authors - who were giving accounts of their travels to the countries of the East - to convince the readers that these regions were healthy and safe. The arguments presented by the authors of these accounts, used in the creation of a health profile of the countries of the East, were consistent with the state of European medical knowledge in the 18th century. As a result, the health characteristics of the described areas in the 18th century are overly optimistic and incomplete.

Keywords: History of medicine; prophylaxis; Silesian calendars in the 18th century

ÖZET 18. yüzyılda modern Avrupa'da takvimler- İncil'den hemen sonra - ikinci basılı bir kitap türü idi. Onlara yararlı bilgiler ve öneriler sunan orta ve üst sınıfların çoğu üyesi tarafından yaygın olarak satın alınırdı. Takvimlerin kapsadığı konular arasında okuyucuların en çok ilgilendiği bilgiler sağlık ve hastalık ile ilgili olanlardı. Aşağıdaki makalenin amacı, Silezya sakinleri için 1744 ve 1746 yıllarında yayınlanan bu takvimlerden ikisinde yer alan ve doğu ülkelerinin sağlık özellikleriyle ilgili içeriği analiz etmektir. İkna edici olanı vurgulamak niyetindeyim. Doğu ülkelerine yaptıkları seyahatler hakkında bilgi veren yazarların okuyucuları bu bölgelerin sağlıklı ve güvenli olduğuna ikna etmek için kullandıkları unsurlara dikkat çekmek istiyorum. Doğu ülkelerinin sağlık profilinin oluşturulmasında kullanılan bu hesapların yazarları tarafından sunulan argümanlar, 18. yüzyılda Avrupa'nın tıbbi bilgisi durumu ile tutarlıydı. Sonuç olarak, 18. yüzyılda tanımlanan bölgelerin sağlık özellikleri aşırı iyimser ve eksiktir.

Anahtar Kelimeler: Tıp tarihi; profilaksi; 18. yüzyılda Silezya takvimleri

In modern Europe, calendars were the second (right after the Bible) - type of printed book shaping common awareness.[1] This was the case in the 18th century also in Silesia - in the 17th and early 18th centuries remaining under the authority of Austria, and from 1741 - Prussia. The purpose of this article is to analyse the contents of two source materials from the years 1744 and 1746 addressed to Silesian readers.[2-4] Medicin in Silesian calenders described Andrzej Syroka in his book.[5] The descriptions of the countries of the East rich in details that I discussed in a article written together with Andrzej Syroka.[6] In this study, I focus only on a selected element of these materials: the health characteristics of the countries and areas described. My intention is to bring out persuasive elements used by the authors to convince calendar readers that these are

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healthy and safe lands, which had an effect on the features of products imported from them.

MATERIAL AND METHODS

By analysing each written source**,** we may try to recover the intentions which underlay its creation and influenced the specific way in which its contents are presented.[7-9] We can treat each source as a cultural text the analysis of which allows us to recover the intentions of the sender of the message it included**,** and at the same time elements of the awareness of the recipient to whom this message was addressed.[10-12] By analysing descriptions of Persia and Egypt, I will look in them for persuasive elements which were supposed to create among readers the conviction that these were safe and healthy countries. I am also going to evaluate the arguments that the authors of these descriptions used referring to the standard of applied medical knowledge at the time. **This study is exempt from requiring ethics approval and consent statements.**

The calendar from 1744 presents Persia as a country bordering Mongolian principalities, Turkey, Arabia and the Arabian Sea, Georgia and the Caspian Sea. Six big rivers flow through the territory of Persia or along its borders: the Euphrates, Araxis, Tigris, Phafis, Oxus and Indus. The author defines Persia's climate as warm but healthy, and its lands as very fertile. Lands assigned for farming are artificially watered by means of specially made canals. There are many water reservoirs, covered water corridors and underground cisterns on farming lands and in the towns. Artificial ponds and fountains are built in the towns. Plentiful irrigation of fields and favourable climatic conditions are the reasons why Persia is a producer of many food articles which are imported to Europe. The general image of the country resembles a blooming garden in which are located rich towns with wonderful architecture and town planning solutions favourable to health. The calendar from 1744 presents towns Ispahan, Tauris, Qom, Candahar and Shiraz. Egypt are shown in the calendar of 1746 as a country situated on the Nile which ensures it continuous and abundant irrigation. Farming lands are irrigated artificially via a system of canals which allows harvesting of abundant crops. The Mediterranean and Red Seas lie on the borders of Egypt which improves the country's climate thanks to sea winds. The air of Egypt is ventilated also by winds blowing from the desert. The calendar from 1746 presents towns Cairo, Alexandria, Rosetta and Damietta. The author presents Egypt as one of the biggest centres of international trade.

RESULTS

ANALYSIS REGARDING PERSUASIVE ELEMENTS APPLIED BY AUTHORS OF THE REPORTS

Descriptions of Persia and Egypt include persuasive elements referring to potential health risks. These elements constitute generally a small percentage in the contents in these descriptions which are characterized by the richness of the topics, from the history of ruling dynasties, to the characteristics of historical monuments, religion, major wars. However, the very fact that contents concerning health characteristics appear in descriptions of each of the big trading towns, and also that they have a standardized and schematic character, support the assumption that the authors believed they were important and that presentation of them is essential. The selection of contents referring to health characteristics which were regarded as worth presenting by the authors of the calendars from 1744 and 1746 is connected with the concept of pathology recognized in Europe in the 18th century as rational - humoral pathology.[13]

The calendars from 1744 and 1746 emphasize that all described regions of Persia and Egypt, in which the big trading towns were located, are abundantly supplied with water. It comes from rivers with a periodically high water level. In descriptions of the towns, numerous fountains and artificial ponds are mentioned which humidify the air in hot and dry months of the year. The authors write about numerous caravanserais and bathhouses in which you can have a bath all year long. The calendars present drinking water in Persia and Egypt, both in town and in villages, as healthy. The confirmation of this fact is supposed to be that it is consumed both by people and animals which do not get sick after drinking it. With respect to water from the Nile, although the author is aware that its organoleptic properties deviate from the standard (it is cloudy, slightly sweet and sticky, rather than as it should be tasteless and clear), he deems this unessential to its health characteristics. In descriptions

of the Persian rivers, the calendars do not record at all any features connected with the colour, taste and smell of water used for consumption. It does give them any reason to doubts that it is healthy. This is due to the fact that it has been used by the population of Persia for a long time, all year long, taken both directly from the rivers and from underground cisterns in which it is collected in spring. Similar underground cisterns collecting drinking water are also built in Egypt. Among the health characteristics of both countries, it is mainly the abundance of water, which allows easy access to it and its collection as a resource for the entire year, that is most important for the authors of the calendars. Drinking water in Persia and Egypt is not presented in the calendars as a source of any risk to health. An important argument supporting this thesis is the high population of the described areas.

Another important element in the health characteristics of the described towns and lands is the healthy climate prevailing in them. The argument in favour of this is the settlement of these areas for many centuries, and also the ancient origins of many towns. If any unfavourable climatic conditions existed in the areas described by the calendars' authors, contributing to conversion of normal air into miasmas, these areas would have been abandoned a long time ago. The same would have happened, if they did not have sufficient sources of water and food, allowing the people's survival. The high population of the described lands and successful breeding of domestic animals, as well as the occurrence of numerous species of wild animals, confirm that the air they breathe must be healthy. To summarize this type of argument: in healthy places people can build healthy towns, and then live in them for centuries.

The calendars also report practices intentionally performed by people, the goal of which is to improve the health characteristics of the areas they inhabited. They concern mainly air and water that they are trying to use as well as possible, and also attempts to modify the climate's influence. According to the author of the calendar from 1744, the inhabitants of Persian, regarding ventilation of towns as the main element of protection from miasmas, design their towns in such a way as to ensure that the wind has easier access to them. They build wide streets and also many extensive squares. Along the streets, they plant trees, forming hedges between which the wind can blow in a specific direction. An action in the Persian towns intended to guard the purity of the air breathed by the people is the imposition of a ban on the entrance of horse-drawn carts and beasts of burden into the town centres. Actions improving the quality of air which was breathed in towns, both in Persia and in Egypt, include the building of artificial ponds and fountains, and also the establishment of public parks and private gardens as well as the planting of trees. Retail trade places are situated either in covered bazaars or in extensive, well ventilated squares. In this way, the goods are protected from moisture and rotting. The calendars contain also the information that covered bazaars and commercial warehouse are located far away from residential houses. This note would prove that goods kept in them are not exposed to contamination from air coming from lavatories, handicraft workshops, slaughterhouses or tanneries. The authors of the calendars draw attention also to actions taken by the inhabitants of the described lands and towns aimed at improvement of the conditions of travel for merchants and the shortening of its duration, which was essential from the point of view of goods which may easily go bad. The calendars described multiple caravanserais in Persia and Egypt, providing to merchants an opportunity for a bath, meal and rest, as well as the opportunity to change camels. The calendar from 1746 described filtering of cloudy water taken from the Nile by using clay pots, designing houses in such a way to create "air ducts" in them increasing fresh air access, and designing towns situated by the sea in such a way as to open them to inflow of the sea breeze.

DISCUSSION

Summarizing descriptions of trading towns in Persia and Egypt, we can state that Persian towns were idealized in them to a much higher extent that the Egyptian ones. Most probably, this results from the fact that in the 18th century very few Europeans visited them personally, contrary to Cairo or Alexandria which at that time already welcomed travellers from the European higher strata. Thus, readers were able to confront descriptions of Egyptian towns published in calendars with information coming from other

sources. Descriptions of Persian towns and rural areas adjacent to them include elements which are clearly the opposite of those which were considered in Europe particularly distressing and oppressive, and also dangerous to health i.e.: cold and humidity. They are presented as bathed in sun, neat and clean. The image of Egypt and Egyptian is constructed in a different way. The author begins with the realities which can be known (at least to some readers) from their own travelling experience or can be verified based on other sources. Hence, he does not avoid remarks concerning facts which can be easily confirmed as realistic but provides with them a commentary which would alleviate their negative influence on the development of the health conditions of the described land or their consideration as unfavourable. The calendar mentions the risks that the reader might consider obvious and confront them with descriptions from other sources, confirming their occurrence, by minimizing their importance or pointing to factors which may limit these risks.

CONCLUSION

In the analysis of arguments and persuasive elements used by the authors of calendars, which, we find a reflection of the status of medical knowledge from the first half of the 18th century. It determined which elements of the environment shown in the materials analysed by the authors could be regarded by them as posing a potential risk to health or could be at all considered by them in any connection with such risk. Not being aware of the possibilities regarding the risk connected with them, they did not notice the and similarly, its effects, which are today obvious to us. Polish physician and microbiologist Ludwik Fleck introduced the term directed perception, derived from clinical medical methodology, to the methodology of the history of medicine.[14-16] According to this concept, the authors of the materials concerning Persia and Egypt could not notice risks connected with diseases of bacterial and parasitic etiology, which were recognized by scientists only in the second half of the 19th century. When evaluating water from the Nile with respect to health, the authors of the calendars did not consider the risk connected with its microbiological contamination by the excrement of people and animals flowing to the river above drinking water intakes because this risk was not yet recognized by them yet. The fact of thousands of livestock grazing on the banks of the Nile, on meadows situated above the big trading towns, was not perceived by them as dangerous. On the other hand, the mass animal breeding carried out successfully in the Nile valley was interpreted in a completely different way: confirming the availability of healthy air and water there, allowing the execution of this breeding on a large scale.

The ban on the use by animals of the promenades arranged in the centres of the big trading towns in Persia also requires a comment. In the 18th century, this ban was intended to ensure that the animals do not leave excrement which would pollute the air and make it smell bad. According to the opinions of physicians at that time, it was just this factor that was considered essential in prophylaxis against diseases which could be caused by stinking vapours, leading to the conversion of normal air into a miasma. The ban on using municipal promenades by beasts of burden and pack animals in practice turned out to be effective in prophylaxis against diseases but not for the reason which was assigned to it. Only in the second half of the 19th century, it was possible to interpret the positive effects of this ban for public health using cognitive categories derived from microbiology.

Not reasoning in microbiological categories, the authors of the calendars also did not ask themselves the question of whether the consumption of water collected for many months in underground cisterns was safe. The risk that they knew and which was important for them was a shortage of drinking water, causing dehydration and distortion of humoral balance, considered to be the causes of diseases. Therefore, the authors focused on descriptions of the abundant filling of the underground cisterns with river water and the possibility of using these resources for a long time. The reports from Persia and Egypt do not include even a minor remark questioning the safety of consuming water collected by people for a long time in underground containers. The reason was that this

was considered obvious. The very existence of underground cisterns in the countries of the East was evaluated very positively by the authors of the calendars published in the 18th century. They highlighted that people in France and Germany do not use water as skillfully as in the East. Rivers flow there straight to the sea and their water is not collected for either farming or consumption purposes.

The attitude of the authors toward diarrhoeas is also symptomatic. Not connecting their etiology with pathogens the existence of which remained unknown to them and not being aware that they may be the initial symptoms of many threatening infectious diseases, they do not consider diarrhoeas to be a dangerous phenomenon, particularly if they occur in a regular and repeatable way. Apart from one reference of 1746 concerning the occurrence of summer diarrhoeas in Cairo and surrounding areas, there is no information on this topic in the descriptions of all other towns. Not being afraid of regularly appearing diarrhoeas and not being able to draw appropriate conclusions from the observations he carried out, the author considers Cairo, like all of Egypt, to be a healthy town. One important argument supporting this thesis is for him the fact that the diseases that he knows from Europe and that he is realistically afraid of (gout, kidney stones) do not occur here.

The authors of the calendars were also unaware of the danger connected with the presence of mosquitos and parasites in resources of still water existing near settlements of people. The role of Anopheles mosquitos spreading malaria and Aedes Aegypti mosquitos which are dengue vectors was recognized only more than one hundred years later. The authors of the calendars also did not know about other diseases spread by insects or the manner of spread: for example, African sleeping thickness spread by the tsetse fly or West Nile fever. Frequently occurring Egyptian conjunctivitis, as we know today caused by chlamydia, or diseases caused by protozoans and parasites (e.g. filariosis, frequent particularly in the Nile Delta) were not mentioned in any of the analysed calendars. It is difficult to assume that no cases of them were found in the described areas in the 18th century. Lack of knowledge among the authors of the calendars was the reason why they were not present within the field of their attention.

It should be emphasized also that in descriptions of the healthy countries of the East, we do not encounter any information about the crowds moving in the streets of the towns. This is the case both with respect to Cairo having several million inhabitants and all other municipalities described in the calendars. They are presented in such a way that one may become convinced that rarely does anybody walk along their wide streets which resemble promenades (as in Persian), similarly to Egypt where streets are narrower. The abundance of references to public parks and private gardens, and also to extensive commercial squares, may create among readers the conviction that the streets of the East are not visited by inhabitants in great numbers. This is an important suggestion in as much as that in the 17th and 18th centuries the calendars in many cases published warnings against staying in crowded places during the hot months of the year, because it causes the risk of becoming sick.

Finally, the question can be asked whether the lack of any warnings about potential risks to health during one's stay in Persia and Egypt resulted mainly from lack of knowledge about them (then this would be an image invisible to the authors of the calendars) or from the accepted form of relaying the information about these countries. This form had the character of a silva rerum source, the authors describing facts, stories and anecdotes loosely connected with each other, providing them with a didactic comment. It concerned e.g. the change in the standard of astrology which was considered a scientific concept by ancient Egyptian priests, but in the 18th century was no longer considered as such. The reason for the lack of warnings may be idealization of the described countries, clearly visible in their descriptions, or the fact the mercantile aspects lay behind the publication of articles regarding this topic. Maybe publication of the descriptions of the healthy countries of the East was somehow ordered or inspired by Silesian merchants and wholesalers. Their intention would be to direct the contents of these reports to show the trading towns of the East and the countries in which these towns are located as centres of a high civilization, not

inferior to the European one, and in some aspects seemingly exceeding it, as metropolises of high aesthetic values, and additionally healthy and safe.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

This study is entirely author's own work and no other author contribution.

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