

## Comparison of the Anthropological Studies of Metodi Popov in Bulgaria and Afet Inan in Turkey

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The aim of this study is to shed light on the anthropological history of two neighbouring Balkan countries, Turkey and Bulgaria. Metodi Popov in Bulgaria and Afet Inan in Turkey unawares performed widespread anthropological studies simultaneously (1937-1943). Metodi Popov measured 8.862 people (6.531 males and 2.331 females) and Afet Inan measured 59.728 people (39.465 males and 20.263 females). Although they used the same tools for measuring, only 10 metric values and 5 indexes related with these values can be compared partially because of differences in methodology. We wish to study on new anthropological research projects with anthropologists from Balkan Countries using the same methods in the future.

*Key Words:* History of Anthropology, Metodi Popov (Bulgaria), Afet Inan (Turkey).

During the first half of the 20<sup>th</sup> century, physical anthropology developed rapidly and anthropometric methods were used commonly. Scientists, who wanted to clarify ethnogenesis, found it appropriate to support historical, archeological and linguistic findings with anthropological data. The scientific world that set its hopes on 'Human Genome Project's today, relied on anthropological researches one hundred years ago. These studies had also been supported by National State Administrations. Almost all countries were performing anthropological profiles of their own citizens with widespread studies. This increasing trend was also spreading in Balkan countries. Towards the end of 1930's, two widespread anthropological studies that were performed both in Turkey and Bulgaria, are specifically noticeable. After half a century of their publication, we would like to examine the differences and similarities of these studies that are parallel in terms of their time, method and aim.

Metodi Popov in Bulgaria and Afet Inan in Turkey were the scientific administrators of these studies. Let's introduce these famous scientist who are well known in their own countries.

Metodi Popov (1881-1954) was born in Shumen and graduated from Sofia University. He earned his PhD degree at Munich University in Germany. He became a professor in 1916 and a member of the Bulgarian Academy of Sciences in 1947. Metodi Popov, who was the rector of the University of Sofia and chairman of the Biology Institute, is accepted as the founder of modern Bulgarian Biology [7].

Between years 1938 and 1943, this famous scientist who was known for his studies on general biology, cytophysiology and microbiology, performed a widespread anthropological study with 8862 subjects, but could only publish his results as a book in 1959, 16 years later. *Antropolgiya na Bulgarskiya Narod, t.I.Fizicheski oblik na Bulgarite(1959) BAN, Sofya [ Anthropology of the Bulgarian People, c.I. Physical View of the Bulgarians ]*[11].

Afet Inan (1908-1985) was born in Doyran, country of Salonika, but after the Balkan War her family migrated to Turkey. Afet Inan, who graduated from the Bursa Teachers Training School, is one the first woman teachers of the Turkish Republic. Mustafa Kemal Atatürk, who visited her school in Izmir while she was a teacher there, because he knew Macedonian branch of her family, he took her under his protection and sent her abroad to be a scientist [8]. She studied first in Lausanne, then she attended Geneva University for history and sociology education. She became a student of prof. Eugène Pittard, who is a famous anthropologist in the world, and performed an extraordinary widespread anthropological study on 64 000 people with his advice, in Turkey between years of 1937 —1938. She could published results of the study as a book 9 years later: *Türkiye Halkının Antropolojik Karakterleri ve Türkiye Tarihi (Anthropological Characteristics of Turkish People and The History of Turkey)(1947), TTK Press, Ankara* [2]. Afet Inan, who became an associate professor in 1942 and a professor in 1950, worked as the president of the Turkish Historical Assembly and as a manager of the Turkish Institute of Reform History for many years. Between 1955-1979, she presented Turkey in UNESCO [9].

Because they represented over 1:1000 rate of the country population of that time, both of the studies have wide contents. Each of them had examined both of anthropometric and anthroposcopic (descriptive) parameters, and used the same tools for the metric measures such as anthropometer, compass, calliper. According to common view, both of the scientists search for racial and national features and interpreted in terms of ethnogenesis. However, none of them used expressions such as: superiority, racialism or chauvinism in any sentence. Both of them tried to increase number of female subjects as far as possible. Even though it is a Muslim country, 20.263 female subjects were measured in Turkey, due to the secular republic regimen that gives equal rights to women.

In order to examine 7.919 Bulgarian origin, 4.500 Pomak origin in Rhodope's region, 538 Macedonian origin in Vardar Macedonia, Metodi Popov divided Bulgaria into 3 geographical regions. Male/Female ratio was about 3:1.

In order to examine 39.465 male subject with 20.263 female subject, Afet Inan divided Turkey into 10 geographical regions. Statistical analyses were performed 59.728 subjects, after excluding unreadable cards. Male /female ratio was about 2:1. Afet Inan did not apply ethnic principles appropriate to that term ideologies and did not mention national minorities. Metodi Popov did not mention Turkish people and the other ethnic minorities either.

Afet Inan was greatly supported by the government: she was funded from the budget, was given the duty of organising the Ministry of Health and Social Aid by order from Atatürk, appointed pollsters and recieved great support from governors. Pollsters, who were pre-educated in Ankara, spread all over the country and completed the measurings in 1937. Unfortunately, 10% of measurings were lost. The statistical calculations were completed by about 30-40 civil servants from General Management of Statistics in 1938 [2]. In Bulgaria, Metodi Popov was complaining about the absence of government support, as he pointed out in his book which was completed in 5 years [11]. But it is a fact that the results were published by official academic corporations (BAS and TTK).

When he started his research, Metodi Popov was 57 years old and experienced. He earned his PhD degree in Germany and was following the German school. He applied Rudolph Martin's methodology in anthropology — definitions, terms, measuring methods and analysis were performed in accordance with Martin (1928) [4]: 31 metric measurements, 15 descriptive signs were calculated with 20 indexes.

Afet Inan was 30 years old when she started her study in anthropology. After she earned her PhD degree in Switzerland, she returned to Turkey and found the country in the distress of revolution. A few years before, she had performed a small scale anthropological study which was published internationally [1]. She was fluent in French and knew a lot about the culture. She had been the student of prof. E. Pittard and had been following French school in anthropology. Terms and analyses were performed in accordance with E. Pittard [5], but Turkish anthropologist Ş. A. Kansu prepared methodological guide [3]: 21 metric measurements, 6 descriptive signs were calculated with 28 indexes.

In terms of all parameters, it is not possible to compare the results of these two anthropological studies which were performed in different methods. The scientists were unaware of each other. Most of the measurements do not match and methodological differences are notable in the others. Only 10 metric measurements (height, length of open arms, head length, head width, frontal width, facial width, facial height, upper facial height, nasal length, nasal width), 5 indexes (ischelic index, open arms index, cranial index, facial index, nasal index) and 4 anthroposcopic marks are accepted identical in both of the studies but some of them rely on different methodologies (Table 1).

Table 1. Numerical results of M. Popov (1959) and A. Inan (1947)

| Features                    | M. Popov ( Bulgarian) |                     | A. Inan (Turkish)   |                      |
|-----------------------------|-----------------------|---------------------|---------------------|----------------------|
|                             | males<br>(n=5759)     | females<br>(n=2160) | males<br>(n=39465)  | females<br>(n=20263) |
| 1. Height (mm)              | 1709.0                | 1603.8              | 1652.0              | 1522.0               |
| 2. Length of open arms (mm) | 1756.2                | 1609.0              | 1714.0              | 1569.0               |
| 3. Head length(mm)          | 189.02                | 180.29              | 182.3               | 195.1                |
| 4. Head width (mm)          | 153.78                | 149.90              | 151.9               | 146.7                |
| 5. Frontal width (mm)       | 111.35                | 108.33              | 108.0               | 104.0                |
| 6. Facial width (mm)        | 139.63                | 132.43              | 139.0               | 130.6                |
| 7. Facial height (mm)       | 126.84 <sup>1</sup>   | 118.52 <sup>1</sup> | 137.57 <sup>2</sup> | 129.49 <sup>2</sup>  |
| 8. Upper facial height (mm) | 79.28 <sup>3</sup>    | 76.56 <sup>3</sup>  | 90.10 <sup>4</sup>  | 88.37 <sup>4</sup>   |
| 9. Nasal length (mm)        | 58.25                 | 56.53               | 52.00               | 48.40                |
| 10. Nasal width (mm)        | 33.72                 | 31.34               | 34.00               | 31.00                |
| 1. Ischelic index (%)       | 53.32 <sup>5</sup>    | 53.43 <sup>5</sup>  | 93.91 <sup>6</sup>  | 87.86 <sup>6</sup>   |
| 2. Open arms index (%)      | 97.38 <sup>7</sup>    | 99.79 <sup>7</sup>  | 103.7 <sup>8</sup>  | 103.6 <sup>8</sup>   |
| 3. Cranial index (%)        | 81.30                 | 83.23               | 83.33               | 83.78                |
| 4. Facial index (%)         | 90.81 <sup>1</sup>    | 89.53 <sup>1</sup>  | 102.32 <sup>2</sup> | 101.38 <sup>2</sup>  |
| 5. Nasal index (%)          | 58.23                 | 55.75               | 65.04               | 64.05                |

Explanations: 1- Nasion- Gnathion  
 3- Nasion — Stomion  
 5- Sitting Height / Height  
 7- Height / Length of open arms

2-Ophryon-Gnathion  
 4- Ophryon-Stomion  
 6- Height — Sitting Height / Sitting Height  
 8- Length of open arms / Height

Comparing anthroposcopic marks are very difficult, because criteria and categories used are different than others. Concave nasal profile ratio is 13.9% in Bulgarians, 7.64% in Turks, convex nasal profile ratio is 27.9% in Bulgarians, 61.19% in Turks (including beak shaped nose). Eye shaped epichantus frequency is 0.5% in Bulgarians and about 5% in Turks. Different scales used for eye color prevent comparison. For hair color, according to triple scale, dark-colored hair is found 41.17% in Bulgarians and 31.13% in Turks; brown hair is found 42.57% in Bulgarians and 60.27% in Turks; blonde hair is found 16.00% in Bulgarians and 8.61% in Turks.

In conclusion, the aim of this study is not to discuss the data of the two anthropological studies, that were performed 60 years ago, in detail. These studies, that were performed in two neighbouring countries simultaneously, relied on different methods and trends. But this is an interesting example of how two great anthropological schools (German and French), which do not compromise with each other, affect the developing Balkan anthropology. We want to express that both of these studies, which were performed simultaneously in Turkey and Bulgaria, are accepted as an important degree in anthropological history of the two countries [6, 10]. In the future, we would like to study on new anthropological researches with Turkish and Bulgarian anthropologists using same methods and principles.

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