

# Theodore von Karman's Visit to Turkey in 1955 and Its Reflections on Local Press - Part 1



The Cold War period did not only witness unique diplomatic strategies. Among various political steps the achievements in aviation and aerospace technology should also be considered as important milestones between the east and west blocks. NATO countries established such a committee to specify the conditions and control the associated scientific research. Within this scope, Theodore von Karman as the Chairman of Aeronautical Research and Development of NATO organized a visit to Turkey on 9-14. January 1955 to discuss related topics with local authorities.<sup>1</sup>

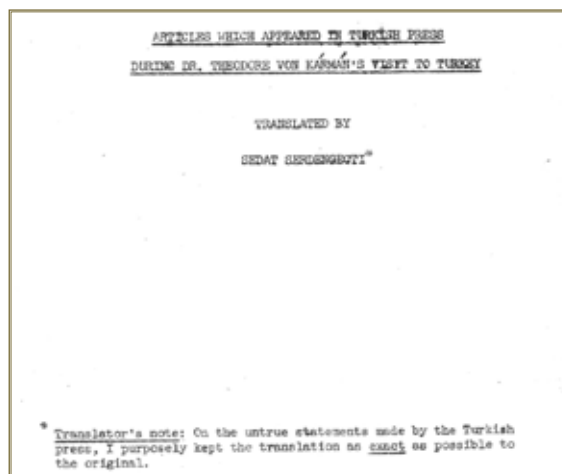
*Von Karman's personal collections at the CALTECH ARCHIVES (the archives of the California Institute of Technology) provides us with some useful information about his official meetings in Ankara and Istanbul. The files TVK 156.11 and TVK 156.12 entitled "Articles Which Appeared In Turkish Press During Dr. Theodore von Karman's Visit to Turkey" contain some copies of Turkish newspapers and English*

*translation by Sedat Serdengeçti, who was a Turkish Ph.D. researcher in mathematics during that period at CalTech.*

As a guest of the Turkish government von Karman arrived in Ankara on the 9th of January with his staff, met with officials and discussed national defense issues related to Turkey. Later he gave a guest lecture at Istanbul Technical University, where he received an honorary doctorate degree, and held discussions with Turkish scientists about the progress in aerospace research. In one of the interviews he even claimed that in previous centuries

the Turks used to invent rocket technology. The significant questions of the reporters were on the disasters of jet fighters and the scientific collaboration of NATO countries. He also visited the new wind tunnel facility in Ankara, which was apparently under construction at that time, and insisted to include it into actual research activities as soon as possible. In this article we look back in time, scrolling back to introduce an interesting historical event of an aviation pioneer based on official records in chronological order.<sup>2</sup>

## Zafer, 09.01.1955



Cover page of the file which contains the related newspaper articles during von Karman's visit to Turkey

### Esteemed Scientist Theodore von Karman is in Ankara Today

Professor Theodore von Karman, the chairman of the Advisory Group for Aeronautical Research and Development of the United States Air Joint Chiefs of Staff and Chairman of Aeronautical Research and Development of NATO, will get in touch with scientists in our city.

*Released by Ministry of National Defense:*

As a guest of Ministry of National Defense, Professor Theodore von Karman, Chairman of the Advisory Group for Aeronautical Research and Development of the United States Air Joint Chiefs of Staff and Chairman of the Aeronautical Research and Development of NATO, will arrive at Ankara on January 9, 1955 (today) at 3:30 p.m. by a private plane. His staff includes General Gregory, the United States Military Attaché to Paris, General Adrier and General Molinier, French Air Force Joint Chiefs of Staff, Mr. Paul Dane, engineer of US. Air Force and Dr. Frank

<sup>1</sup> His second visit was in 1960 to Istanbul to participate in the 10th AGARD Conference on 3-8. October. The archive files at CalTech contain related newspapers as well.

<sup>2</sup> Some minor changes are applied into the text by author. Additionally a personal camera record of Istanbul's historical parts by von Karman can also be found in his personal collection (TVK 161.1); starting at 8:20: <https://www.youtube.com/watch?v=ivly-55tzU4>, last access: 16.08.2020

Wattendorf, General Secretary to Aeronautical Research Group of NATO.

After meeting Turkish officials in Ankara, Dr. von Karman and his staff will visit Istanbul and Prof. von Karman will deliver a lecture at Technical University on "Today's Scientific Developments in Aeronautics". Dr. von Karman is a worldwide known celebrity and has devoted his life to his research and inventions in aeronautics.

*Theodore von Karman (written by Engr. Col. Fuad Uluğ)*

Theodore von Karman who took the first breath of our earth's atmosphere in Budapest in the spring of 1881, whom I met three years ago at a meeting, said the following as if he is passing out a sweet secret: "I was very little. Our house was located across Gül Baba, I always remember those days when I played in those beautiful gardens as the sweetest memories of my life".

Today we are also very happy and pleased to see this great scientist in our country.

There is no doubt that his tremendous improvement in aeronautics in a very short time is due to his past and present scientific research. Today without doubt he deserves the largest portion of the credit if the jet planes are breaking through

**Değerli İlim adamı**

**Th. VON KARMAN**

**Bugün Ankara'da**



Aynı zamanda Amerika Hava Erkânı Harbiye-i Umumiye Riyaseti İlim İstisnâ Kurulu ve Nato Havacılık Arştırma ve Geliştirme Grup Başkanı Doktor Theodore Von Karman, Millî Müdafâ Vekâletinin davetini ederek 9 Ocak 1955 günü (Bugün) saat 15.30 da özel bir uçakla Ankara'ya gelmiştir. Doktor Karman'ın Amerika'dan Paris Akademi Generali Geogrey, Fransız Hava Kurvetleri Komutanı Başkan Admiral ve Fransız Generali Malinier, Amerikan Hava Kurvetlerinin Mihverleri Paul Dore ve Nato Havacılık Arştırma Grubu Genel Sekreteri Dr. Frank Wattendorf refakat etmektedir.

Heyet Ankara'daki görevli görevlilerininle sonra İstanbul'a geçecek ve Dr. Karman tarafından Teknik Üniversite'de "Havacılığa İlim Bakımından Bugünkü İhtiyaç" mevzuunda bir konferansa verecektir. Dr. Karman uzun yıllardan beri havacılık sahasındaki Enstitü araştırmaları ve buluşları ile şöhret yapmış bir zatdır.

**THEODORE VON KARMAN**  
Bu beş-sahifeli şöhretin başını bu konuda Fuat Uluğ tarafından hazırlanan bir yeni kitabın sayfalarında.

Bugün şehrimize gelecek olan değerli İlim adamı Dr. Von Karman

Zafer, 09.01.1955: Esteemed Scientist Theodore von Karman is in Ankara Today

the sonic barrier and if the rockets are climbing the stratosphere with tremendous speed.

He was only twenty years old when he got his degree in mechanical engineering

from Imperial Technical University in Budapest. During those days it was impossible for man to fly with a device heavier than air. In 1903 when the Wright Brothers in North Carolina flew for the first time with

a machine composed of wings and an engine, nobody in Europe believed this to be possible.

On a summer morning in 1906, a French journalist invited this young engineer to witness a historical trial flight for about one kilometer on a grassy field in Paris. The day he watched this historic first flight with his own eyes; the decision was made that he would devote his life to aerodynamics.

He completed one year of military service in the Austria-Hungary army. After the day he watched the first flight, his job as a research engineer in the machine factory was not impressive for him. He was hypnotized with the feeling that he must do research to uncover unknown aerodynamic laws for the improvement of flight. To increase his knowledge in mathematics and physics he entered the University of Göttingen in Germany. In 1908 he passed his doctorate examination with high honors and then he joined the teaching staff of the University of Göttingen; there he and the famous physicist Max Born developed the modern theory of the specific heats of solids.

When he was thirty years old, he was appointed as the Director of the Institute for Aeronautics of Aachen University. During the First World War he served as

**Baynelmilel Şöhretler :**

**Theodore von Karman**

**B**udapeşte'de, 1881 baharında dünyamıza saran havayıcılık defa teneffüs eden Theodore von Karman ile üç yıl önce bir toplantıda görüşürken, zekâ saçan bakışlarıyla, tatlı bir sır tevdi eder gibi bana şunları söylemişti :

«Pek küçüküm. Evimiz (Gül-baba) nın karşısında idi. Onun güzel bahçelerinde oynadığım günleri hayatımın en tatlı hatıraları olarak her zaman anarım.»

Bugün, biz de, bu büyük ilim memleketimizde misafir olarak görmekte çok seviniyoruz.

**Dünyaya feyiz saçan hayatı**

Zafer, 09.01.1955: Theodore von Karman (written by Engr. Col. Fuad Uluğ)

## AVIATION HISTORY

an officer in the Austria-Hungary Air Force. When he returned to the Institute for Aeronautics in Aachen in 1918, this center became the world's most productive and efficient institute. Since his interests were very well diverted to several scientific fields, Dr. von Karman served as a consultant to several German aircraft industries such as Junkers and Zeppelin.

For safe flying, it was necessary to know the properties of fluids, specifically air and its effects on the objects moving through it. These feelings led him to study the vortex formation in air and he discovered his famous theory known as "vortex streets of Karman". After that he contributed numerous research to the boundary layer flow which was originated by the famous scientist Ludwig Prandtl.

The rate of development of the aircraft industry was increased tremendously with the theory of plasticity which he developed with Haar, and with the theory of stability of beams and shells beyond the elastic limits, which he developed with the famous Chinese scientist H. S. Tsien.

Merely the titles of the scientific research and discoveries of Theodore von Karman are enough to fill these columns. His discoveries and studies are utilized not only in

aeronautics but also in several other scientific and engineering fields.

In 1926 he was invited to the Guggenheim Institute in the United States for the purpose of improving and developing the field of aeronautics. Here von Karman contributed his valuable advice and opinions for the construction of additional wind tunnels. In the meantime he gave several lectures all over the United States. During his world tour he contributed valuable scientific aid to the construction of the very first wind tunnels in China and Japan.

In 1928 he was invited to join the teaching staff of the California Institute of Technology. After that year he divided his time between Pasadena and Aachen. In 1930 von Karman was appointed as the Director of the Guggenheim Aeronautics Laboratories and in 1936 he became a citizen and settled in the United States. Under his leadership a great deal of study and research were conducted on supersonic flight, and he built the first supersonic wind tunnel at this laboratory. Just before the Second World War, the United States Armed Forces Research and Development Office began the study of rocket projects under his guidance.

Again just before the war von Karman, who was technical advisor to the



Theodor Von Karman (ortada g'ülükü) dün ilim adamlarıyla görüşürken

### Jet uçaklarını yapan Von Karman izahat verdi

Theodor Von Karman, «B. 86 jet uçakları tecrübelerden sonra istenilen neticeyi verirse Mig uçaklarıyla aradaki fark çok artacaktır» dedi

Vatan, 13.01.1955: von Karman who Built the Jet Plains Reported

United States Army at this time, supervised the study and research on the development of long range artillery rockets. He has been Chairman of the Scientific Advisory Group to the Joint Chiefs of Staff of United States Air Force from the year 1944 when it was first established.

He was the first scientist to convince the military personnel to pay special attention to the future development of rockets and jets. In 1941 he tried to convince some American industrialists to assume the project of building rockets for the Armed Forces, but none would take the risk. He did not give up since he knew that he must stimulate them with a small demonstration in order to get them started. With four of his friends at the California Institute of Technology he collected \$ 8.700 and established the Aerojet Engineering Corporation,

consisting of only five employees. During those days their products were used as JATO rockets. This example was sufficient to start the rocket industry in the United States.

Dr. Theodore von Karman, who hates politics as much as he loves science, is a very close friend and helper of people who hunger for knowledge and wish to be free to apply their ideas. His superior ability to gather together and organize scientists and researchers of the peace loving nations is as famous as his scientific accomplishments.

In 1953 President Eisenhower presented to him the Wright Brothers Award during the 50th Anniversary of the Aircraft Industry. D. Robinson has beautifully summarized the accomplishments and character of Dr. Theodore von Karman when he said "Thanks to him we are able

to fly faster, higher and with greater safety".

## **Vatan, 13.01.1955**

von Karman who Built the Jet Plains Reported

Theodore von Karman Said: "If the Experiments on F-86 Jet Planes Give the Expected Results, MiG's Will Be Left Far Behind"

Theodore von Karman, the Chairman of AGARD and group leader of NATO, Aeronautics Research and Development, arrived in our city at 3:30 p.m. yesterday. He is accompanied by Fuad Uluğ. von Karman was interviewed by one of our correspondents and he answered questions in the following manner:

"I wanted to visit Turkey, valuable member of NATO, for a long time, This was not possible due to my continuous work and research in science. My visit at this time is one of the routine visits I usually make to NATO countries".

### **Q: At present do you have any plans and inventions for the improvement of jet planes?**

A: We are working on new types of jet planes. We are hoping that developments in jet planes will be kept parallel to present day technical improvements. F-86 is a new type of jet plane, on which tremendous effort is being concentrated at present.

### **Q: Would you please compare Russian built MiG with American built jet planes?**

A: (The inventor of jet planes answered with a smile)

"I am happy that I am still alive; otherwise they (Russians) could have claimed the invention of jet planes themselves, I really wonder. However, MiG's which were built by German engineers have some superior qualities. For example, Russians do not place any value on the life of human beings. For that reason they are not using any safety measures for their pilots. Therefore, they are able to fly their planes faster. However, they have not reached to the level of our jet planes. Certainly if the experiments on F-86 jet planes give the expected results, there will be a great difference between these two."

### **Q: What do you think of the frequent jet disasters in our Air Force?**

A: The same type of disasters are also present in the US. Air Force. The number of disasters is not greater than in other countries. Of course experience in these planes is a major factor in knowing how to fly them. When the crash of the jets due to technical difficulties is eliminated, the number of disasters will certainly be reduced considerably ☺

## **Theodore von Karman Biography**

*Dr. Theodore Von Karman was born in Budapest, May 11, 1881. He was trained as a mechanical engineer, graduating with highest honors from the Royal Technical University at Budapest in 1902. The next eighteen years were devoted to the founding and development of the Aeronautical Institute of the University of Aachen, which eventually became a leading aeronautical center.*

*Von Karman first visited the United States in 1926 under the auspices of the Daniel Guggenheim Fund for the promotion of aeronautics. In 1930 he became Director of the Guggenheim Laboratory in Pasadena, California. In 1936 he became a naturalized citizen of the United States of America,*

*In 1944, von Karman organized a Scientific Advisory Group to advise the US. Air Force on the role of the new technical developments. He personally was largely responsible for the establishment of the Advisory Group on Aeronautical Research and Development (AGARD) within the North Atlantic Treaty Organization. He was unanimously elected its first chairman and still holds the office.*

*One of the striking attributes of Dr. von Karman's scientific and technical work is its international character. Carried out in diverse geographical and technical environments and printed in diverse languages, his reports are sought by scientists and engineers all over the world.*

*Dr. von Karman's penetrating analysis of complex, scientific and engineering problems to discern the important and essential elements, his success in subordinating mathematical techniques to physical principles by the use of appropriate simple and rational approximate solutions and his skill in the presentation of the results in clear and logical form have made him the outstanding aeronautical scientist of our generation. He had been to the field of aeronautics what Prof. Einstein, his good friend, had been to the field of mathematics. He has been a researcher, professor, author, advisor to governments, the founder of the first industry for the manufacture of solid rocket propellants in the United States, and perhaps most important of all, the inspirational friend and teacher of brilliant students from all over the world.*