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MATHEMATICS FOR SOCIAL AND ART SCIENCES

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Constantin Carathéodory and his vision to establish the University of Smyrna – Light from the East

Abstract. In 1919 Constantin Carathéodory, following the vision of the great Greek statesman Eleftherios Venizelos, abandoned his chair at the University of Berlin and undertook to organize a university in Smyrna, which could function as a cultural bridge between East and West, joining Europe with Asia and Africa. The School of Ethnology was to blend the religious, cultural and linguistic diversity of the population living in these areas, although the official language for this university was Greek. However, this institution never opened its gates, as the Asia Minor disaster in September 1922 put an end to this ambitious plan.

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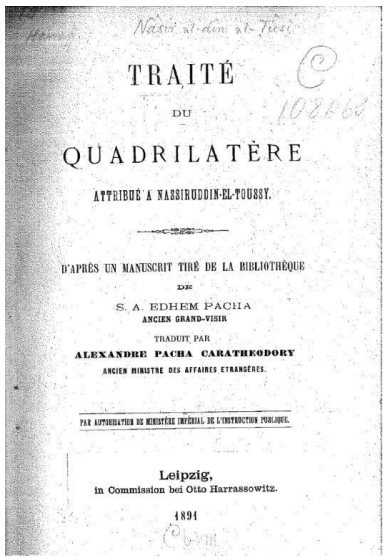
Key words and phrases: Constantin Carathéodory, Alexander Carathéodory, Eleftherios Venizelos, Treaty of Versailles, Treaty of Sèvres, Asia Minor (Villayet of Izmir), Lloyd George, University of Smyrna – Light from the East, Greek University system .

1. C. Carathéodory and E. Venizelos: The beginning of their friendship. A Greek of diaspora, descendant from a family of erudites, physicians and diplomats, well-educated, with many intellectual interests, Constantin Carathéodory was born on 13 September of 1873 in Berlin. His father Stephanos represented the Ottoman Empire at the Congress of Berlin (13 June –13 July 1878). Two years later Stephanos Carathéodory was appointed plenipotentiary ambassador in Brussels, where he lived even after his retirement in 1902 and until the end of his life (1907).

In 1891 Constantin Carathéodory entered as élève étranger the Military School of Brussels (established in 1834 and modelled on the Ecole Polytechnique in Paris), where mathematics constituted an important part of the curriculum. Thus he studied infinitesimal calculus from the

old treatise of J. Sturm , while the course in descriptive geometry by Chomé – who followed Mongian style – familiarized him with geometry. The exemplary teaching of Charles Henri Lagrange in probability, astronomy and geodesy completed his mathematical education (cf. [25, p. xiv]).

After his graduation in 1895 the young engineer paid visit to the commander general of Crete, a cousin of his grandfather, an amateur mathematician (he translated, from the Arabic to the French, the treatise of Nasir al-Din al Tusi, on the quadrilateral) At Chania Alexander Carathéodory (1833-1906) met for the first time the young lawyer Eleftherios Venizelos (1864-1936), who at that time was well known only among the Cretans. It might be stressed that Venizelos'personality greatly impressed the commander general who as it seems prophesied that «...one day this young man will rule Greece» [22, p. 68]. This first meeting put the foundation for a solid and sincere friendship between these two young men. Later, his relative and a distinguished Greek writer, Penelope Delta (1874-1941) in her Notes on Venizelos stressed that Carathéodory revealed that Venizelos with his shrewd mind and his human qualities deeply impressed him during their first meeting in Chania (cf. [11, p. 9-10]). We must stress that during the Cretan revolution as well as the period of the Cretan State, Venizelos showed evidence of his skills when fighting for the unification of Crete with Greece. After the Coup d' Etat (28 August 1909) of the Military League, some of the officers went to Crete and proposed the office of Prime Minister to Venizelos. But conforming to his democratic conviction he advised them to proceed with legislative elections. So, his allies nominated him for a seat in the region of Atticoboetia. Although the young Cretan kept himself at a distance from any electoral campaign, as he was abroad, he finally won this seat. Based on his liberal principles he founded the liberal Party and, as the Parliament continued to be dominated by the old politicians, Venizelos decided to call immediately new elections in 28 November 1910. The Messiah of the new political stage


Nasir al-din al-Tusi

TRAITÉ
DU
QUADRILATÈRE
ATTRIBUÉ A NASSIRUDDIN-EL-TOUSSY.

D'APRÈS UN MANUSCRIT TIRÉ DE LA BIBLIOTHÈQUE
DE
S. A. EDHEM PACHA
ANCIEN GRAND-VISIR
TRADUIT PAR
ALEXANDRE PACHA CARATHÉODORY
ANCIEN MINISTRE DES AFFAIRES ETRANGÈRES.

PAR AUTORISATION DU MINISTÈRE IMPÉRIAL DE L'INSTRUCTION PUBLIQUE.

Leipzig,
in Commission bei Otto Harrassowitz.
1891

Figure 1: The front page of Al Tusi's treatise translated by A. Carathéodory

won with an overwhelming majority of 307 from 362 deputies [21]. In this same year C. Carathéodory was appointed as full professor in the newly established Technical University of Breslau (cf. [2], [29], [32]). Venizelos, desiring to realize his program of reforms, mainly in educational matters, invited his friend to participate in the evaluating committee of the professoriate in Athens University (cf. [27]). Thus, in 1911 he presented his considerations regarding the Physico-mathematical Faculty. Then, he proposed D. Hondros, a disciple of Sommerfeld, who also attended his lectures in Göttingen, to take the chair of Physics, and G. Remoundos a former student of the Ecole Normale Supérieure, to replace Nikolaos Hatzidakis in the chair of Analysis.

After the victorious Balkan wars (1912-1913) Greece under Venizelos' leadership redoubled in size as well as in population. Already in 1913 Carathéodory conceived the idea to organize a second University in Thessaloniki, which in 1912 was incorporated into the Greek territory. Its geographical position in the North represented an excellent reason to attract many students from the New Lands (a native term used to refer to the former Ottoman regions of Macedonia, Thrace and Epirus) and the Balkan countries. However, the University of Thessaloniki was inaugurated only in 1926. The next years Carathéodory succeeded Klein in the University of Göttingen (1913) and in 1918 became Frobenius' successor in the University of Berlin. But after two years he abandoned Berlin, resigned from his chair on the 3rd December 1919 and, free from any professional obligations, he accepted Venizelos' invitation to organize a new University on the Ionian coast (cf. [26]). However, we must take into consideration that Berlin after the end of WWI was not the same anymore. The unstable political situation (the Spartacus revolt in January 1919), the mass of ruins, the troubles of daily life, the difficulties to find an appropriate residence, caused Carathéodory to decide to live alone in Berlin while his family remained behind in their house in Göttingen. So this invitation was not only a challenge for the distinguished mathematician but also a gift from heaven, i.e., an unique opportunity to organize from ground zero an university as well as and to reconnect himself with the roots of his ancestors.

2. The Organization of the University of Smyrna. The edition of Carathéodory's monumental book of 1918, «Lectures on Real Functions» (cf. [6]), as well as his nomination as Frobenius' successor at the Berlin University (1918) spread Carathéodory's renown in the scientific community. Moreover his election (supported by A. Einstein, M. Planck, E. Schmidt, F. Schottky, H. A. Schwarz and others) as effec-

tive member in the Prussian Academy of Sciences sealed his undisputed success in the mathematical community.

The welcome speech of the secretary of the Physico-mathematical class of the Academy Max Planck remains classic. «You, Mr. Carathéodory, have pointed out the double attraction which lies inside variational Calculus. It shifts the view from difficult, confusing individual points to a clear, wide view of the whole. It can compose a wealth of individual statements together into one simple sentence, and even stranger, not only does man but also nature profit from this special manner of newing things. I hope there will yet arrive many fruits from your scientific activities to decorate our academic journals» (v. [8, p. 185]). At the end of the First World War the multinational empires were demolished and a new political order appeared. Eleftherios Venizelos who thereby made the correct choice now belonged at the side of winners (cf. [24]) and Greece participated at the Peace Conference (cf. [31]) in Paris (cf. [33]). Moreover the Greek Prime Minister Venizelos took advantage of his erudite friend C. Carathéodory in order to reorganize the educational system in Greece. Thereby he invited Carathéodory in Paris in order to present his plan concerning the organization of a second University (cf. [26]).

Judging from the appearance of his manuscript we consider that after their meeting he wrote his memorandum on the spot and in one go, as the numerous erases and additions show.

So, Carathéodory on the 20th of October 1919 sent to Venizelos his memorandum written in French: *Projet d'une nouvelle Université en Grèce présenté au gouvernement Hellénique par C. Carathéodory* (Project for a New University in Greece presented by C. Carathéodory to the Hellenic Government) (cf. [5]). The distinguished mathematician who possessed numerous academic titles, signed only with his name. According to his idea this new institution would not follow either the English or the German universities; it should be a kind of antipode of the Athenian University founded by the young King Otto in 1837, mostly orientated towards the classical antiquity.

The distinguished mathematician considered that the attachment to the Greek antiquity turned the country away from its Slavic and Eastern neighbours. In order to stress his position he noticed that in these days it was quite possible to find in Athens good archeologists and philologists but no one specialized in Slavic topics.

The accumulation of the cultural and intellectual life in an unique center was untenable, because from now on important Turkish, Slavic,

Jewish, and Levantine minorities would be included in the Greek Kingdom and would contribute to the public life.

So, this new perspective required that Greece should not neglect the East anymore. This great opportunity obliged the country to create appropriate special educational and cultural centers in order to develop friendly relationship with all its neighbors.

Henceforth all his efforts were directed towards avoiding this unilateral orientation to Western Europe. It should be stressed that Carathéodory was very familiar with Eastern civilization, not only through his family. At a young age, in 1900, he worked for a while as an engineer on the construction of the Assiut Barrage. Moreover, during his sojourn in Egypt he carried out measurement at the main entrance of the Great Pyramid of Cheops (cf. [6]). We must take into consideration that this Ionian vision, for a greater Greece inspired the Byzantine, constituted one of the goals of the policy of the great leader Venizelos, who wished to protect the Greek population of his ancient land, including the city of Smyrna, which was founded about 1000 B.C. by the Aeolian Greeks (cf. [14]). Later this memorandum gave rise to the Law 2251 /14 July 1920, "On the foundation and operation of a Greek University in Smyrna " which was approved by the Greek Parliament.

As pointed out by professor G. Ioakimoglou in his obituary for Carathéodory, the main objective regarding this institution was that "Greece did not go to Asia Minor to conquer alien population, but to bring to them its superior civilization" (cf. [19, p. 80]).

The Allies decided that Greece should take care the Christian dominated west coast of Asia Minor. Thus, in order to protect the inhabitants of Smyrna the Allied Forces permitted the Greek troops to land in Smyrna (v. [20]). It should be stressed that this invasion was supported by David Lloyd George's government. The British interests remained intact leaving the administration of Christian minorities on the Greek hands. The Greeks would best serve the British imperial plan toward the petrol road to Mosul. (cf. [3]) Carathéodory believed the vision of his friend and sustained it. And so he abandoned his brilliant career, although Berlin was the place of his birth , Germany for the last decades became his homeland and German science and art did not remain foreign to him, as he pointed out in his inaugural speech in the Prussian Academy of Sciences (cf. [8, p.181]). On the 3rd of December 1919 he resigned to follow his Ionian dream. According to Bismarck's conviction that the geographical reality remained invariant, as well as to the

multinational policy of the Phanariots[1], he conceived a remarkable idea regarding the improvement of his fatherland. The religious, cultural and linguistic diversity of the populations living in these areas must be unified so that it could gain its homogeneity. Conforming to this conception Carathéodory in his memorandum stressed that: «the true driving force behind the rapprochement of different peoples lies in a community of interests, and in the capacity of education to play the part of the catalyst in a chemical compound... the creation of centers of education and study suitable for developing the natural relations which Greece is called on to restore with all its neighboring states » (cf. [5, p 4].

We must take into consideration that Smyrna had a specific character : " in no city in the world did East and West mingle physically in so spectacular a manner as at Smyrna , while spiritually they always maintained the characteristics of oil and water " (cf. [18, p. 90]). So, when Venizelos finally received the permission from the Allies [cf. [1]] that the Greek army could debark at the port of Smyrna (May 1919), the Greek prime minister took the occasion to expand his country in order to create an interposed «state» between two empires i.e.: the former powerful Ottoman empire on one hand and the Russian empire on the other hand, now ruled by the Bolsheviks. Thus arose the term "Greece of the Five Seas and two continents", which constituted the emblem of Venizelos' policy.

It should be stressed that by the treaty of Sèvres signed on August 10, 1920 between the Allied and associated Powers of WWI and the Ottoman Empire, the city and the territory of Smyrna was under the Ottoman sovereignty but Greece was responsible for the administration of the region (art. 70) and was obliged to organize a local Parliament in which all the diverse nationalities were to be proportionally represented. The League promised to oversee a plebiscite in five years, so that the inhabitants could decide if they wanted definitely to be annexed to the kingdom of Greece or remain part of the Ottoman Empire (art. 72). However, such euphoric climate regarding the status of Izmir Villaeyt (cf. [13]) had not met with the approval of politicians. Clemenceau stressed that the embarking of the Greek Army was unjustified and the British Minister of Military Affairs W. Churchill characterized it "so rash and fatal step " (cf. [10, p. 390]). The knowledge and the development of science related to Slavic, Ottoman and Arabic culture could

[1]Members of distinguished Greek families in Phanar (Fener in Turkish), the chief Greek quarter of Constantinople, Carathéodory's ancestors. They occupied important posts in the Ottoman Empire and imitated the Russian and Hapsburgian institutions.



Figure 2: Greece of Five Sees and two Continents (poster of the epoch).



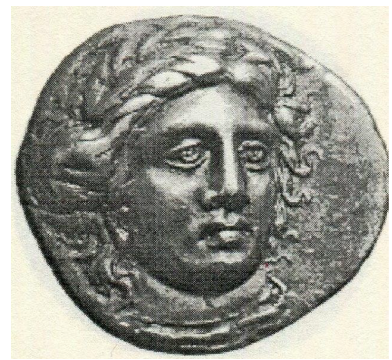
Figure 3: Elefterios Veniselos signing the Treaty in Sevres 1920.

strengthen the validity of Greece and contribute to the comprehension of particularities regarding the population in the neighboring countries. Osmotic results could thereby be beneficial to both sides. Carathéodory stressed this particularity due to the variety of population of Greeks, Armenians, Jews, Levantines and the need «for active participation of the minorities in public life and in the development of the country»

(cf. [5, p. 4]). Thus he choose the motto of the new University Ex Oriente Lux (Light from the East) (cf. [4]). The faithful friend of Eleftherios



(a) The seal of Smyrna's University conceived by C. Carathéodory inspired by a coin of Apollo of the 5th century B.C.



(b) Coin of the 5th century representing Apollo God of light.

Figure 4: Motivation of the graphical signs of the University of Smyrna.

Venizelos proposed that the new University should adopt Greek as its official language and thereby put at a disadvantage the department of mathematics. Taking into consideration the needs of this annexed state for each School he proposed the appropriate curriculum stressing that all his proposals were temporary and high-priority. (cf. [25])

(A) The Technical and agricultural Schools must offer the following courses :

(i) Pure Mathematics (analysis and geometry)
(ii) Applied Mathematics(descriptive geometry, nomography, graphic static, numerical calculus)
(iii) Mechanics (pure and applied)
(iv) Geodesy and astronomy
(v) Physics
(vi) Chemistry (inorganic, organic, physical chemistry, metallography)
(vii) Minerology
(viii) Geology and Paleontology
(ix) Biology
(x) Botanic

(xi) Zoology
(xii) Geography (Anthropology , Oceanography)
(xiii) Hygiene (cf. [5, p. 22]).

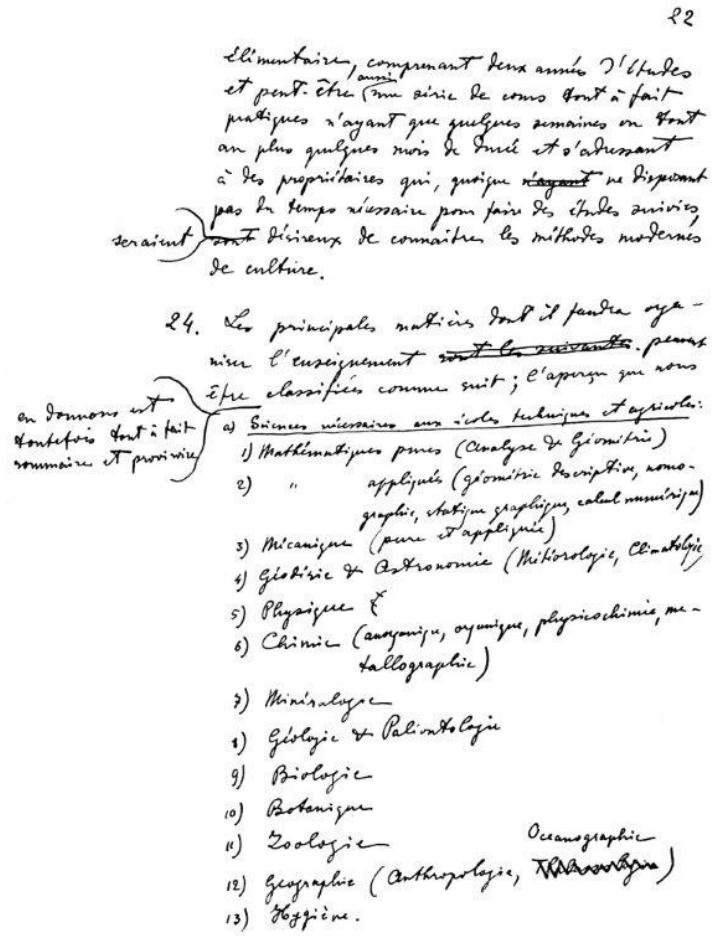


Figure 5: Program assumptions manuscript (excerpt 1).

(B) **The School of Engineering** must offer the following courses:

(i) Technology, strength of materials
(ii) Construction
(iii) Architecture
(iv) Railways
(v) Hydrodynamics, Hydraulics, bridges, drying, irrigations
(vi) Electrical engineering

(vii) Applied Chemistry (cement, sugar, soaps) (cf. [5, p. 23]).

(C) Agriculture

(i) Agronomy
(ii) Horticulture
(iii) Zootechnics
(iv) Agricultural engineering
(v) Administration

(D) **Trade**

(i) Modern languages
(ii) Political economy and statistics
(iii) notions of law
(iv) accounting[2]

(E) **The School of Ethnology of the people of the East** had to provide the following courses:

(i) Comparative linguistic
(ii) Slavic languages and literature (Slavonic, Russian, Serbian, Bulgarian)
(iii) Semitic languages and literature (Hebrew and Aramaic, Arabic)
(iv) Other oriental languages (Turkish, Farsi, Armenian, Romanian, Albanian)
(v) Classic languages (Greek, Latin)
(vi) History
(vii) Archeology and History of Art
(viii) Muslim law (cf. [5, p. 24]).

Regarding the School of Agriculture we must stress that it should have aimed to provide courses of two- or four-year duration for those who were interested in the practical study of agriculture as well as for those who intended to follow the scientific career of agronomist, in order to improve the existing methods of cultivation, to introduce new ones and to promote the agricultural industry as the land was extremely fertile. Moreover, this School would offer specialized seminars for farmers and landowners associated with the experimental farm of Tepekioy.

[2]Remark: general knowledge must be also be included, such as, for example, history and geography (cf. [5, p. 23]).

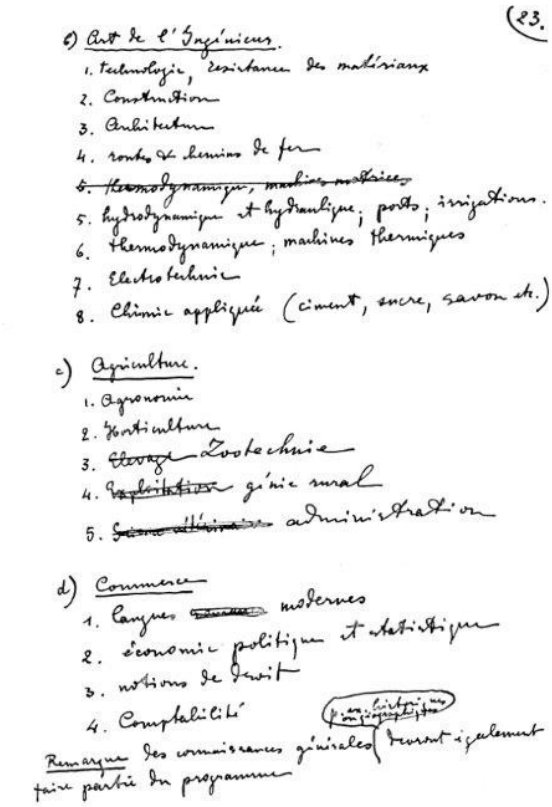
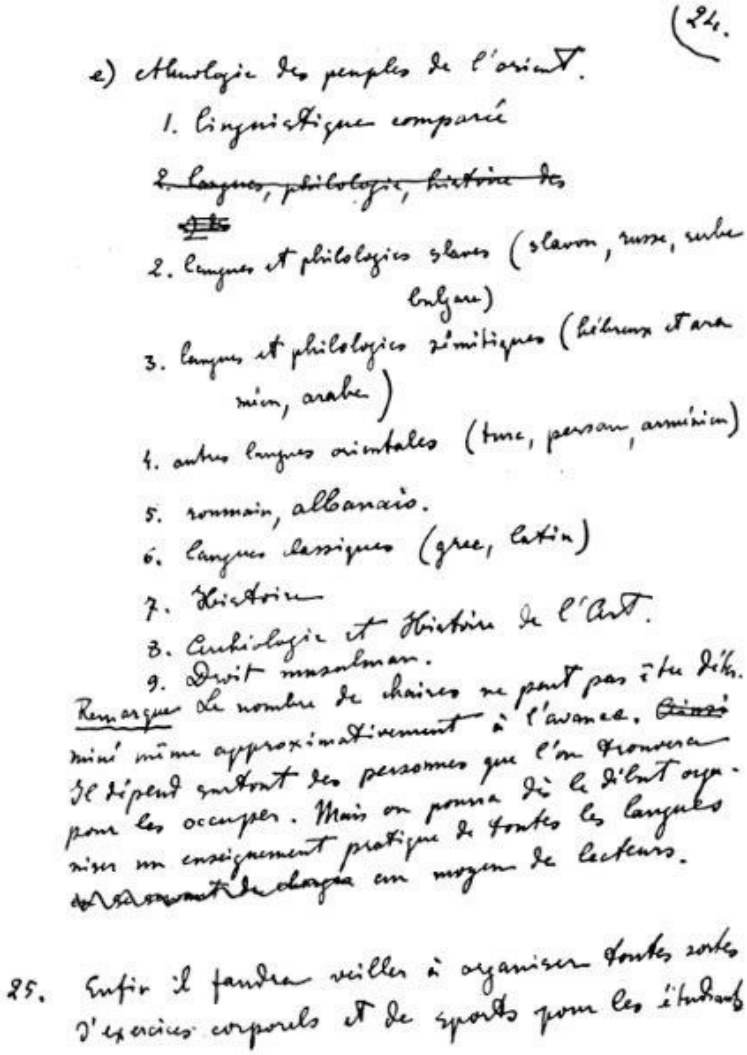


Figure 6: Program assumptions manuscript (excerpt 2).

Due to the multinational character of the city of Smyrna commercial transactions flourished there. Carathéodory had in mind to extend later this department in order to become a School of Economic and Social Sciences, because of the commercial potential of the city. This department of commercial studies was intended to prepare employees of the major international commercial firms, which could be useful and effective to those wishing to expand their business in the Villaeyt of Smyrna. We think that the seminar on Oriental languages (Seminar für orientalische Sprachen) which was founded in 1887 in the Friedrich Wilhelm University of Berlin [28] was the model for this Department. It is evident that only this School of Ethnology could obliterate the existing differences, the oppositions and the rivalries, and at the same time could unify the Balkan Nations with the newly annexed state. Thus, the invisible network which was created by the history and the culture of all these multinational trends in the former powerful Ottoman empire remained


(24.

e) Ethnologie des peuples de l'orient.

1. Linguistique comparée

~~2. Langues, philologie, histoire de~~

2. Langues et philologies slaves (slavon, russe, serbe bulgare)

3. Langues et philologies sémitiques (hébreux et araméen, arabe)

4. autres langues orientales (turc, persan, arménien)

5. roumain, albanais.

6. Langues classiques (grec, latin)

7. Histoire

8. Archéologie et Histoire de l'Art.

9. Droit musulman.

Remarque Le nombre de chaires ne peut pas être déterminé même approximativement à l'avance. Il dépend surtout des personnes que l'on trouvera pour les occuper. Mais on pourra dès le début organiser un enseignement pratique de toutes les langues de chaque un moyen de lecteurs.

25. Enfin il faudra veiller à organiser toutes sortes d'exercices corporels et de sports pour les étudiants

Figure 7: Program assumptions manuscript (excerpt 3)

intact. This idea impressed A. Toynbee, who characteristically stressed that this department would promote the study of Eastern languages [30, p. 168]. Moreover, this unique institution would also include:

(i) The Department of preliminary Studies, which would provide one-year courses for prospective university students who did not have a sufficient level of qualifications to be selected for one of its main Schools.

(ii) The School of Construction supervisors, having as its main aim to educate technical staff urgently needed to supervise the construc-

tion of important public work planned to start in Asia Minor, according to the treaty of Sèvres.

(iii) The School of Higher Studies in Islam would offer courses for the prospective Muftis (a kind of religious judge).

(iv) As we have already mentioned, the Experimental farm at Tepekioy, which already functioned since 1920 was the model for the practical instruction of agricultural students of all levels, farmers, and agronomists.

(v) The Institute of Hygiene, divided into a department of Bacteriology and a department of Hygiene, should offer free medical examinations for all the classes of the inhabitants as well as the production of vaccines, antitoxins, and antigonococcal serums (cf. [18, p. 56]). The instruments and the apparatus which had been installed could be characterized as the best laboratory in the Balkan countries and the Near East.

Moreover this institution was aware of the sanitation of the town at extensive scale, for example of the water supply, but also had as its mission to train midwifes and nurses and to organize a registry office of births and deaths The distinguished historian of the 20th century Arnold Toynbee, in his classic book, The Western Question in Greece and Turkey. A study in the contact of civilizations stresses that his professor friend at the University of Göttingen started to organize his new University in which the Institute of Hygiene would fight tuberculosis, venereal diseases, trachoma, and malaria in the East (cf. [30, p. 166]).

The Ionian University, which at first had the promise to be financially supported by a prosperous Greek of Diaspora St. I. Palantzis, could not be complete without the organization of an important library. The Library was considered by the great mathematician as the backbone of the University (cf. [5, p. 23a]). He had in mind to expand it and make it a public library, and to include books and periodicals covering topics not included in the University curriculum. A special bureau was organized to the deal with the acquisition of books. For the establishment of this library the eminent professor engaged Dr. Ausserer, who worked in the National Library of Germany and spoke fluent Turkish. Thus, the distinguished mathematician created an informal office alongside the official one. All the information concerning the sale of private libraries, as well as duplicate reprints in public German libraries were thereby gathered. Through the assistance of the Greek state, Carathéodory was able to buy these books. Moreover, an important number of rare books were collected by the Austrian archeologists in Ephesus. The Library was

also destined to contain a collection of all kind of newspapers edited in Asia Minor including those which were published on the military front. Carathéodory, culturally deeply rooted both in Orient and Occident, by his renown as well as by his international career, assured the realization of this ambitious and impressive plan. As Carathéodory's family had before accomplished important functions for the Ottoman Empire, Venizelos was fully convinced that his friend could not be confronted with any problem from the Turkish side, due to Carathéodory's diplomatic talent.

A. Toynbee, stressing his friend's polyvalent personality, noticed: *"He was interested in everything-archaeology, hygiene, economics, languages –and constantly reminded me of what I had read about Ludwig Ross and the other German savants who came out to Greece in the thirties of the last century in the train of King Otto. In fact Professor Karatheodhoris [sic] was a Westerner abroad -constructive, broad-minded humane and out of water"* (cf. [30, p.166]). It should be stressed that all these



Figure 8: In Greek is written the well known emblem of the Platonic Academy "Let no ignorant of geometry enter"[3].

various Schools and Departments were to start functioning gradually. Of course Carathéodory gave the priority to the Institute of Hygiene, the

[3]Photo from Hilbert's Archives NSUG-HSD. cod. Ms D. Hilbert 754 (v. p. 365 in Georgiadou (2004)).

Department of preliminary studies as well as to the Library, which were to be inaugurated at the beginning of the Academic year 1922-1923.

In December 1920 a decree of the High Committee established that Carathéodory's memorandum was made into the law 2251/14 July 1920 "On the Foundation and the function of a Greek University in Smyrna, "which was approved by the Greek Parliament (cf. [16, p.1347]). Regarding staffing, this new specific institution, a real universitatas litterarum, Carathéodory proposed that it should be staffed by distinguished Greek scholars who mainly lived abroad. So, he invited the lecturer of the University of Berlin G. Ioakimoglou, born in Ionia, to assist in its organization.

Besides Ioakimoglou, Carathéodory, proposed F. Theodorides, a graduate of the Polytechnic School of Zurich and P. Weiss' disciple , for the chair of Physics, and the chemist P. Kyropoulos, assistant of Gustav Tammann to organize the Faculty of Metallurgy. For the department of agriculture he indicated Th. Kessissoglou, a graduate of the agricultural School of Gembloux (Belgium) and organizer of some agricultural schools in China, Colombia and Uruguay. Also following Carathéodory's proposition, Paschevitz was appointed machinist of the University. Carathéodory, rector of this institution, choose as secretary for the University, his former student Nicolaos Kritikos from Göttingen, who during that period served in the Army, division of Cydonies (Asia Minor).

Carathéodory, highly cultivated in art and aesthetics (he was a renowned collector) took an interest at the University's furniture and ordered the seats for the lecture halls from the well-known firm in Berlin, Zelder and Platen. Also (cf. [15, p. 159])

> «he contacted Siemens and Halske to invite bids for the supply of the central lighting installation of the University... From Schott & Genossen in Jena he bought glass instruments»

Concerning the building which would host this unique University, Carathéodory opted for two vast but incomplete buildings on the hill of Bahri Baba at the entrance of the city. These buildings were initially constructed by Rahmi Bey, Vali of Smyrna until 1918 in order to house a public Library and an Institute of higher education. The renowned Greek architect Aristotle Zachos was invited to reconstruct and complete these spacious buildings, which included 70 lecture rooms, a large amphitheater, as well as many laboratories. By the summer 1922 the buildings were completed at a price of 110.000 Turkish liras. This grand institution was to be inaugurated in autumn 1922.

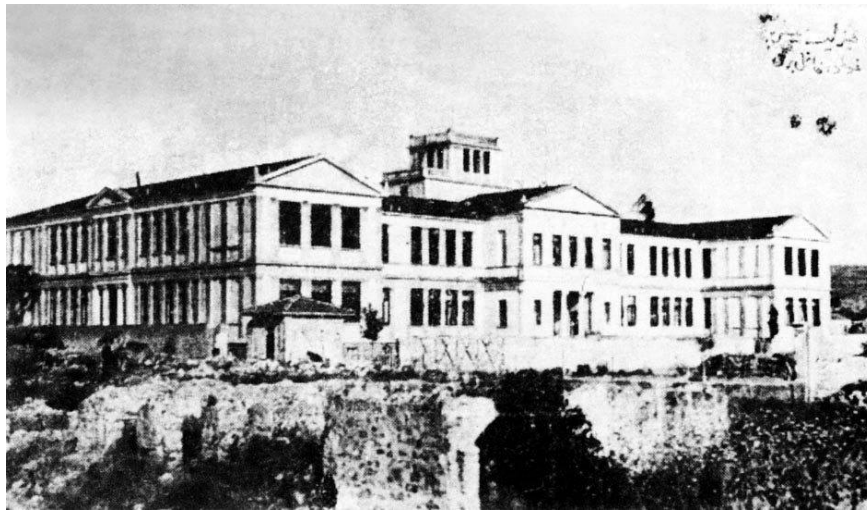


Figure 9: View of the University of Smyrna (December 1920- September 1922). From 1923 hosted the high school Izmir Kiz Lisesi.

It should be stressed that during the period of preparations Carathéodory continued his research in mathematics (see On a transformation analogous to that of Legendre (cf. [7, pp. 374-382]). On canonical variables in the calculus of variables of multiplied integrals (cf. [7, pp. 383-395]), On a reciprocity law of the generalized Legendre transformation (cf. [7, pp. 396-400]). However, despite all these very attentive and meticulous preparations the University, this real universitas litterarum, remained a chimeric institution. Toynbee , in his book published a few months before the disaster, criticized this newly «established» Institution: «the new Greek University was a castle in the air without local foundations–a doubtful experiment even if made at the cost of nothing else" (cf. [30, p. 177]). Carathéodory aware of the gravity of the situation and feeling that the catastrophe will come soon in his letter of the 4th February 1922 to F.Klein unveiled the truth, stressing that : "we are leaving the country " (cf. [15, p. 166]). Unfortunately Toynbee's statement on this chimeric institution came true. The Ionian University never opened its gates as the tragic events of September 1922 swept everything. At nine in the morning of Saturday 9 September 1922 the forces of the nationalist leader Mustafa Kemal, born in Thessaloniki in 1881, reached the outskirts of Smyrna and two hours later the Fourth Cavalry Regiment entered the city of Smyrna. The Greek army was unable to defend the greatest and the oldest town of the Aegean civilization from this barbarian invasion as it already had received the order to

leave Asia Minor. The atrocities against Greeks, Armenians, Levantines as well as the 95 hours of fire, which destroyed 5.000 shops, 55.00 houses , many orthodox churches, 117 schools, as well as the Greek, Dutch and Catholic hospitals, including the patients who were disabled to walk out, represented one of the darkest and tragic pages in the history of the 20th century " ...All morning long the Turkish army marched into the city and about three o'clock that Saturday afternoon they started the most terrible looting , raping and killing that is possible to describe in word. (...), The city was systematically looted and things were carried in carts down] to the Turkish quartiers. The American teachers in our American Girls' Schools watched the soldiers kill civilians in the street in front of the School , enter homes and kill families and throw them into the street , and then take cart loads [sic] of goods along with them. When the sun set that evening, dead bodies were lying all over the streets of that doomed city " (cf. [3, p. 25]). Thus, all the military and diplomatic manoeuvres starting with the treatises of Versailles and Sèvres in order to make peace and reward Entente's allies failed. Carathéodory, remaining calm, tried to save University's library and equipment. His daughter Despina described his efforts: «He stayed to save anything he could: books, instrument etc. They were put in different ships hoping that one day they will arrive in Athens. My father stayed there until the very last moment» (cf. [9, p. 47]). George Horton, Consul of U.S.A. in Smyrna, in his book, Report on Turkey, noted: «One of the last Greeks I saw on the streets of Smyrna before the entry of the Turks was Professor Carathéodory, president of the doomed University. With him departed the incarnation of Greek genius of culture and civilization in the Orient» (cf. [18, p. 31]). The great mathematician left Smyrna on 8 October 1922, aboard the ship Naxos, and fortunately could take with him the Archives of the University, some of the precious laboratory equipment, as well as a significant number of the Library books. In his letter to Hilbert on 25 December 1922 described his flight from Smyrna:

> «...Despite all the difficulties that we have experienced we have still had a lot of luck: just two days before the Catastrophe, I was able to put my family on a sailing ship that brought them to Samos. My wife managed to take all her possessions and my books with her – it was like a pleasure trip and she did not need to notice that it was a flight. Of course, I had stayed up to the last hour, but since I took care nothing happened to me, only that I had to sail from one island to the other for ten days within all this chaos until I reached Athens»

(cf. [15, p. 169]). The paradise was definitely lost for the great mathematician, so, for the rest of his life he never referred to his Ionian vision, his ambition to revive this ancient cradle of civilization, which was transformed to a mass of ruins and ashes. However during the WWII in his letter (11 December 1943) to B. van der Waerden's wife desiring to encourage his colleague, unveiled that after Ionian disaster he took refuge in mathematics "the most important for your husband is to return to his work with mathematics as soon as possible. After Smyrna's catastrophe this was the only thing that kept my head above water" (cf. [15, p. 170]).

3. Carathéodory's last intervention on educational matters according to Venizelos' demand. In 1928 invited by the American Mathematical Society Carathéodory visited the U.S.A., as a guest professor for one semester in Harvard, giving lectures in various Universities (Austin, Berkley, etc). In a letter to Penelope Delta he defended the decision of his settlement abroad and expressed his sadness for Smyrna (cf. [12, p. 476])

> «I assure you that in the few months that I am here I achieved more than in two years in Athens. My activity in Smyrna could be fruitful, nevertheless Greece did not lose anything from my departure, on the contrary! Rather than waste my time there, I can be here more useful through my propaganda for Greece».

After the electoral defeat of the Liberals on 14 November 1920 Venizelos settled abroad. But the victory of the Liberal Party in August 1928 offered him the opportunity to become concerned again with the educational problem of the country as the Prime Minister. Regarding the reform of the University education Venizelos asked for Carathéodory's contribution, which he accepted hoping to convince the Government to take effective measures. It should be stressed that as Carathéodory was the only ardent partisan of Venizelos among the Royalist members of his family, above all he expected to overcome the existing schism between royalists and liberals for the profit of his homeland. So, Venizelos called on Carathéodory to rescue the Greek University system and to establish the University of Thessaloniki, an idea that, as we have already mentioned, was conceived at the end of the Second Balkan War.

In the session of the Greek Parliament on 17 December 1929, the Prime Minister E. Venizelos declared (cf. [17, p.276]):

> *I remind you that after the end of the Greek war, Venizelos' Government at that time decided not only to establish a second University but a third one. Wishing that the new Universities will be established as perfectly as possible, it called on Professor Carathéodory, who is not only a great mathematical genius but a preeminently distinguished organizer of Institutions, since the Great Germany charged him with organizing the Polytechnic School of Breslau. So, we invited Mr. Carathéodory and we told him "We need to establish these two Universities, we consider you as the best one to organize them. We think that it is better to start with the University of Smyrna and after that of Thessaloniki".*

In 1930 Carathéodory was appointed Governmental Commissioner (a post which he kept until 1933) in the Universities of Athens and Thessaloniki. In the sessions of University Senate (according to the law 5143 of 10.07.1931 he was a Rector), he gave the directions for the creation of internal regulations, he planned the formation of the veterinarian school (unique in Greece, which started functioning only in 1950). «The Reform of the University of Athens» (Athens 1930) constitutes his memorandum which was submitted to the Government about the restructuring the Athenian National and Kapodistrian University. In this memorandum he proposed measures for the improvement of its financial situation, the reduction of the number of students, the reform of the exams, the procedure to elect the professorship, etc. His memorandum became the State Law no. 5343/1932 regulating all University matters until 1982!

During his life Carathéodory remained close to his roots and to the Greek ideals, trying to serve his country. Characteristic is O. Perron's opinion expressed in his obituary for the renowned mathematician: *As a member of the Greek nation, with his soaring spirit and restless pursuit, he continued the recognition of the tradition and legacy of classical Greek culture* (cf. [23, p. 50]).

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Constantin Carathéodory i jego wizja ustanowienia Uniwersytet w Smyrnie – Światło ze Wschodu

Christine Phili

Streszczenie. W 1919 roku Constantin Carathéodory, idąc za wizją wielkiego greckiego męża stanu Eleftheriosa Venizelosa, porzucił katedrę na Uniwersytecie Berlińskim i podjął się zorganizowania w Smyrnie uniwersytetu, który mógłby funkcjonować jako pomost kulturowy między Wschodem a Zachodem, łączący Europę z Azją i Afryką . Szkoła Etnologii miała łączyć różnorodność religijną, kulturową i językową ludności zamieszkującej te tereny, chociaż oficjalnym językiem tej uczelni był język grecki. Instytucja ta jednak nigdy nie otworzyła swoich bram, gdyż katastrofa w Azji Mniejszej we wrześniu 1922 roku położyła kres tym ambitnym planom.

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