

REFORM OF CALENDAR: MAKSIM TRPKOVIĆ AND MILUTIN MILANKOVIĆ

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Abstract. This paper considers the importance of Maksim Trpković's work on solving the question of calendar reform whose project is the central point for the Serbian Orthodox Church in developing its activity concerning the calendar question. In this context is also given the modification of Trpković's project by Milutin Milanković, the polemics concerning this version, as well as the outcome of the calendar reform.

1. INTRODUCTION

In late 19th century, was actualised again the question of the Reform of the Julian Calendar used in the Eastern Orthodox Church countries, not only for scientific reasons but also because of the difference with respect to the Gregorian Calendar which is also, but less, inaccurate. The difference between the two calendars produced difficulties in mutual communications in all spheres of public life.

In Russia a commission was set up to propose the most correct reform taking into account all relevant scientific facts, as well as the requirements of the Church prescriptions concerning the Easter festival after the vernal equinox (March, 21).

In the Kingdom of Serbia the question of calendar reform was also initiated. As a result of the work of some scientists and professors (Lj. Uzun-Mirković, M. Nedeljković, M. Trpković, Dj. Stanojević, Petar A. Tipa) several projects of calendar reform were published. The proposal of professor Maksim Trpković (1864 - 1924), published in 1900 met a strong echo in the scientific community.

2. MAKSIM TRPKOVIĆ AND HIS PROJECT OF CALENDAR REFORM

The name of Maksim Trpković is closely related to his thorough work on solving the question of calendar reform. His project was the central point for the Serbian Orthodox Church in its activity in the late 19th and in early 20th centuries concerning the calendar question.

Maksim Trpković originates from the environment of Kičevo (village of Orlandi), then within the Ottoman Empire (now Republic of Macedonia). Already as an grown-up boy, he was brought to the only liberated Belgrade by his father, a baker (Janković,

1985), immediately after the Serbo-Turkish wars 1876-1878 (Džambazovski, 1985), where he finished the Belgrade "Realka" (special gymnasium) and the Faculty of Philosophy (Division of Natural Sciences and Mathematics). He was especially interested in astronomy, being among rare students with an excellent mark in astronomy and meteorology taught by Prof. Milan Nedeljković (1857-1950). Already as a young teacher Trpković (1895) published an article entitled "Something about the Distances of fixed Stars and Structure of the Universe" ("Nešto o daljinama zvezda (nekretnica) i sklopu vasiona") and in the same year he passed the teacher examination with a work "Measuring the Distances of Celestial Bodies". He taught mathematics, physics, cosmography and mineralogy at the Belgrade "Realka" and afterwards at the I, II and IV Belgrade Gymnasiums and for a short time also in Pirot and Skopje.

In the late 19th century and in the first half of the 20th many intellectuals originate from the Trpković family: two lawyers (Milan and Milutin), a physician (Žarko), an engineer (Dragutin), as well as a parliament deputy (Stavra).

As a progressive and competent intellectual of his time, wishing to help the society, suffering bad effects of using a double and an incorrect calendar, Maksim Trpković worked conscientiously on project of calendar reform. His own ideas about this Trpković (1900, 1901, 1909, 1910, 1919-1921) presented in the papers published in church-social journals, and also, in the journal of Professor Society. His book "Pravoslavna pashalija i proveravanje datuma" ("The Orthodox Paschalia and the Date Verification") according to a decision of the Presidency of the Academy of Social Sciences (II meeting on June 5, 1913; XI meeting on October 16, 1913) should have been printed as an Academy publication i. e. "awarded from the fund of Dr Ljubomir Radivojević", however, during the First World War this manuscript, together with the printed material in the State Printing Shop of the Kingdom of Serbia had perished. Only one copy containing printed the first eight sheets of this work was found (Godišnjak SKA, 1914, 1921; Stogodišnjica Srpske Akademije nauka i umetnosti 1886-1986, 1986).

Trpković's project of calendar reform was published in Belgrade in 1900 entitled "Reforma kalendara" ("Calendar Reform") and in the same year this proposal was also printed in "Glasnik Pravoslavne Crkve" ("Messenger of the Orthodox Church"). Briefly, his project of calendar reform consists of the following: to omit from the old Julian calendar 13 days; leap years to be those whose number can be divided by 4 without rest (as had been until then); the new rule introduced by M. Trpković is: the secular years will be leap years if divided by 9 yield a rest of 0 or 4, otherwise a secular year is a simple one. Also he included in his project the exact calculation for the 20th century and new paschal limits in the 19 year cycle or golden number (Mijatović and Trajkovska, 2001).

Immediately after the publishing of Trpković's project came laudatory opinions, first by Jelenko Mihailović (1900), by Uzun-Mirković (1900), by T. Radivojević (1900) and then by Ces. Tondini de Quarenghi in the journal "Revue general des sciences" from February 28 1901 (translation by Vujanović, 1901), who, among others, said that the proposal of Trpković was "a culmination of the sharp mind, a true masterpiece".

In his reminiscences of the intellectuals who prepared and accomplished the national union Lazarević (1935) writes about Maksim (Maksa) Trpković: "Trpković, a good mathematician, was seriously interested in the solving of mathematical problems. The question of calendar reform was discussed by him from a scientific point of view. His articles from this field published in "Glas srpske crkve" ("Voice of the

Serbian Church”) draw the attention of scientists. He was contacted through letters by professors from foreign universities and by some astronomers. All of them recognised the correctness of his views and agreed with his concept of the calendar reform. Modest Maksa Trpković does not boast, does not brag of the results achieved thanks to his serious work, does not boast of the compliments he got by persons of world reputation in mathematics”. Lazarević describes Trpković as a good-natured person beloved by his pupils and colleagues.

In 1902 Constantinople Patriarch Joakim III sent a message to the Orthodox Churches asking them to send their opinions concerning the calendar reform. The Serbian Church in 1903 adopted Trpković’s proposal for the calendar reform as the most reasonable ”both from the point of view of time reckoning and from the religious standpoint concerning the christian calendar” (”Vesnik”, 1906).

3. MODIFICATION OF TRPKOVIĆ’S PROPOSAL AND OUTCOME OF THE REFORM

After the adoption of the Gregorian calendar in the administration of the Kingdom of Serbs, Croats and Slovenes the interest in the calendar reform was intensified. In addition to the International Union Commission for Calendar Reform the League of Nations (Advisory and Technical Commission for Transport and Transit) also joined in the solving of the calendar question, as well as various associations and institutions. A Yugoslav association for the League of Nations (Calendar-Reform Committee) was also formed (Vidojković, 1931; Mišković, 1966).

At the Pan-Orthodox Congress in Constantinople, in May 1923, at which the question of calendar reform was solved, the official proposal of the Serbian Orthodox Church was Maksim Trpković’s project. Among its delegates Milutin Milanković (1879-1958), as the only scientist present, proposed to the Congress under his own name a modified variant of Trpković’s project¹ which was finally adopted by the Congress after a long debate, due to Milanković’s insisting and authority. As written later on by various authors (Živković (1927), Vukičević (1932), Mišković (1966), Janković (1985), Kečkić (2001)) Trpković’s solution was better than Milanković’s. Kečkić thinks that Milanković’s attitude towards Trpković was not correct since he says that Trpković’s procedure ”is not strictly scientific” and that Trpković’s calculations ”are wrong”, whereas, on the other hand, Milanković adopts the basic idea of Trpković’s project but changes the intercalation rule only to read: secular years will be leap years only if the number of their centuries divided by 9 yields the rest 2 or 6. This, as Kečkić says, ”is a work lasting less than ten minutes”.

Milanković joined the calendar-reform activity somewhat before the Pan-Orthodox Congress (April 1923) and he published a few papers dealing with the calendar question. In the present author’s opinion a paper by an author signed as M. M. (1919) in the classification and the bibliographical description by B. A. Cisarž (1991), ascribed to Milutin Milanković, could not be Milanković’s paper because the style and the contents do not correspond to him. Besides, Milanković (1952) in his own memoirs wrote that he had joined the calendar-reform study in 1923 only, at the time of the Pan-Orthodox Congress. Such a paper, from 1919, was not listed in Milanković’s own paper list, especially when borne in mind that he was very careful in this matter. In

¹i.e. Trpković’s project slightly modified by Milanković

that paper by M. M. the author speaks in favour of the radical point of view that the Serbian Orthodox Church should adopt Trpković's project without consulting other Orthodox Churches because these after some time will become aware of the correctness of Trpković's solution.

Also J. Živković (1919, 1922)² advocating a radical trend in the calendar reform issue came forward in favour of Trpković's proposal and recommended it to be adopted by the Serbian Orthodox Church regardless of other Orthodox Churches. These, after the mentioned Congress, each one separately, solved the calendar question in its own way - in Živković's words - "quite erroneously: the Greek Church adopted the Gregorian Calendar and preserved Paschalia which can in no way be put in accordance with each other, the Romanian Church formed its calendar following the decision of the Constantinople Pan-Orthodox Congress in 1923 which vitiated (mutilated) the good Serbian reform ..."

Futhermore in his addressing the Holy Archiereus Synod of the Serbian Church of November 27, 1927 Živković writes: "When the Pan-Orthodox Congress adopted badly modified Trpković's project, it is to expect our Holy Synod to accept the quite good original" and "our Church and our people can be proud of Trpković's project, instead of avoiding this and letting it to be damaged by others, and being proud of it as something belonging to them, would mean a treason to Serbian Culture".

In the same year (Živković, 1927) he considered the advantages of Trpković's reform compared to the Gregorian one and its Pan-Orthodox-Congress modification in "Vesnik" ("Herald"). As a disadvantage of Milanković's solution he mentions Milanković's effort to be in accordance with the Gregorian calendar as much as possible because this calendar is also incorrect and, consequently, in both calendars the vernal equinox occurs more frequently on March 20 thus being discordant with the Church requirements concerning the date for Easter, unlike Trpković's proposal according to which this occurs much more rarely amounting to a few hours only. V. V. Mišković's reproach to Milanković's solution also concerns the condition that the two calendars (Milanković's and Gregorian) should agree as long as possible. Vukićević (1932) publishes a study concerning the calendar question in which he presents a mathematical consideration of several calendars. In a tabular form he presents the difference of the calendar dates covering a given period compared to the natural dates where it is possible to see that Trpković's solution is the closest to the natural sequence. Vukićević also presents his own proposal offering a higher accuracy than the mentioned calendars, but with a 13 months year.

Especially nowadays some authors (Dimitrijević and Theodossiou, 2002; Petrović, 2002) seized by the "cult of a great scientist" with regard to Milutin Milanković's person glorify his work also in the calendar reform omitting or erroneously interpreting Maksim Trpković's fundamental contribution. For instance, a paper of Dimitrijević and Theodossiou is less devoted to its own topic but more to Milanković's work in general asserting that a proposal of calendar reform was made by Milanković in collaboration with professor Maksim Trpković. The expressions "was made" and "in collaboration" in the present author's opinion, do not correspond to the truth with regard to the historical facts and explanations of several authors indicating that Milanković changed in Trpković's proposal the intercalation only, whereas the basic

²Jovan Živković taught subjects relating to the calendar at the religious school at Sremski Karlovci and was appointed by the Serbian Orthodox Church to deal with the calendar-reform question

idea belongs to Trpković's project. Depending on the assumed intercalation one can come closer or farther to some of the assumed criteria: Trpković wanted with his intercalation to put the vernal-equinox date as closer to March 21 as possible (which is one of the principal requirements of the Church), whereas Milanković achieved an accordance with the Gregorian Calendar over a longer period at the cost of allowing the vernal equinox to occur on March 20 very often.

The Holy Archiereus Council of the Serbian Church adopted in principle the proposal of the Pan-Orthodox Congress, but the reform has never taken effect. In the substance of this problem there are several reasons and they are, in addition to discordant trends within the Church, itself (for instance, partizans of traditional point of view), as well as questioning the validity of the decision of the Pan-Orthodox Congress itself, since not all of the Churches were represented, but, in the present author's opinion, the main reason why the reform was not adopted (especially in the case of the Serbian Church) is an argumented opposing among the scientific and religious circles to the modification of Trpković's proposal.

Trpković's project was acceptable both from the scientific aspect and from that of the canonic rules and it was ready for practical use because it possessed for the Church necessities a sufficiently correct paschal, whereas the modified variant required additional calculations of paschal tables. Both Trpković's proposal and its modification by Milanković had advantages with respect to both Julian and Gregorian Calendars, but, unfortunately, the reform has never taken effect for the given reasons.

Regardless of the fact that even the League of Nations and many experts, as well as various associations, joined the calendar reform, it was not applied because the approaches of how to do this were different and also some groups were reluctant - called partizans of Old Calendar ("Agion Oros Incident", "Thessaloniki Scandal").

Some of the Orthodox Churches (Greek, Romanian, Constantinople, Alexandrian and later Bulgarian) rejected the Julian Calendar (majority of them adopted Gregorian Calendar), whereas the others including Serbian, are still using the Julian Calendar, so that, therefore, the question of calendar reform is still open.

4. CONCLUSION

Although the question of calendar reform, as a delicate one, requires a solution to the benefit of both church and public life, the way of its solving and putting into effect has encountered difficulties. In spite of an intensive campaign and interest expressed in the reform by both specialists and publicity initiated in the second half of the XIX century, which also extended into the first decades of the XX century, it has not been brought to a close yet. In this action Maksim Trpković's proposal, certainly, occupied an important place.

In order to give a social recognition to Maksim Trpković for his important scientific and social contribution which has missed him so far, the present author submitted on September 20, 2002 a proposal to the Secretariate for Culture of the Belgrade City, i. e. to the corresponding Committee to design a commemorative plaque or something equivalent with Maksim Trpković's picture and a street (or a school) in Belgrade to be named after him.

In May 2003, after having been constituted, this Committee decided to include the name of Maksim Trpković in the list for naming squares and streets, whereas the

commemorative plaque would be realised as soon as the finances allowed it.

The present author is of the opinion that one should initiate the establishment of a fund named after Maksim Trpković. The role of this fund would be to award scientists and prospective students of astronomy, possessing also moral qualities.

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