happened to have a very heavy schedule, asked me to receive Professor Ambartsumian in the name of the Academy, and gave me clear instructions. As I did not want politics to intervene with my relations with Ambartsumian, I decided that we would first have a nice dinner (fish of course, in memory of Lake Sevan), just between the two of us, and speaking only of astronomy and Armenia. And the day after, we met officially, at the Academy, around a cup of tea (of which I believe he was not more fond of than I was myself), together with interpreters, and officials. Whenever we generally didn't speak English together, Professor Ambartsumian spoke Russian, and I spoke French. In essence, we agreed. He first delivered a message on behalf of the Soviet Academy of Sciences: more cooperation in science between our two countries is needed and wanted. I could not but fully agree with him. Had I not prepared, some years before, the space bilateral agreements, in Moscow? However, I had now to stress the fact that this cooperation was not at present unanimously wanted; and that it could be effective only at the expense of more freedom to the circulation of scientists, between the two countries, in the spirit of ICSU recommendations.

I can only express here the hope that the conditions might soon become such as allowing indeed a better cooperation between the scientists of the two countries, and in particular a cooperation involving our colleagues of the Armenian Soviet Republic.

I have elsewhere ("Problems of Physics and Evolution of the Universe") expressed my admiration for the scientific imagination and rigor of Professor Ambartsumian. Let this paper be witness to the admiration I have for him when dealing with many problems of astropolitics. We are of course not always sharing the same points of view, and I just gave an example of these disagreements. But can we expect from all protagonists in a debate to agree with each other in every respect? It would not be anymore a debate; and it would look very artificial indeed. At least, the debate may soon transform opponents into friends. They do not necessarily agree with each other; but they respect each other.

The old days of our common work within IAU have built up a very solid friendship indeed, and a mutual respect. The wise, quite humorous attitude of Professor Ambartsumian cannot be forgotten; he had a very strong influence on world astropolitics. All the astronomers of my generation remember this period with a sort of nostalgia and also with pleasure — including Lake Sevan. Some of the most happy days of my life as an astronomer are certainly associated with my work under Victor Hamazaspi Ambartsumian as President of the IAU.

ENCOUNTERS WITH VICTOR AMBARTSUMIAN ONE AFTERNOON AT THE SAN LAZZARO DEGLI ARMENI ISLAND AT VENICE

Leonida Rosino

I do not recall when I had the occasion to meet Professor Ambartsumian for the first time. His name was already known to me as one of the greatest astrophysicists as early as in 1939 at the beginning of my career as an astronomer. I believe however that I was introduced to Professor Ambartsumian a few years after the end of the war, at one of the General Assemblies of the IAU, either at Zurich in 1948 or at Rome in 1952. Later the occasions for our encounters increased, both in Padua and in Yerevan, Armenia.

I remember in 1966 at a meeting on "Active Galaxies" organized by the Byurakan Observatory, I had the opportunity during an excursion to Lake Sevan to discuss with him our common research programs. I was occupied then with the variable stars of the Orion Nebula and, in particular, the "flare stars" that are found in great numbers there. I was extending the search of such stars to the Pleiades, Hyades, and other open clusters. This work followed the research initiated at Tonantzintla by Guillermo Haro and at Byurakan under the leadership of Professor Ambartsumian. We had the occasion to speak of these enigmatic stars with a view towards future collaboration in this area.

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Other ocassions for mutual encounters were not lacking in the following years. I want to dwell for a moment on the visit that Professor Ambartsumian made to Padua in 1969, where we had invited him to give a seminar in the course of one of his visits to Italy. He had expressed the wish to visit Venice, the Island of San Lazzaro Degli Armeni, a charming place in the Lagoon, where the convent of the Padri Armeni Mechitaristi is located. It was found two and a half centuries ago by the Armenian Pietro de Mansig (called Mechitar) with the purpose of assisting the Armenians, numerous at that time in Venice, who had fallen in distress from poverty and illness. After some time the convent became quite prosperous and today it is conducted by the Armenian priests called "Mechitarists." It is one of the most important Centers of Armenian art, culture and education; a real pearl of the Orient in Lagoon.

It was Saturday and on the next day, after a telephone call to the Island to announce the visit, we went from Padua to Venice and from there, in the afternoon, to the Lido. A gondola was waiting there to take us to the Island. As we were approaching San Lazzaro Island we were surprised to see a crowd of people on the walls surrounding the island. They appeared to be cheering towards us. The crowd was composed of Armenian friars, seminarists and students, living in the convent. The fame of Professor Ambartsumian and his work on behalf of his countrymen, as the President of the Armenian Academy of Sciences, was well known to the Mechitarist Fathers. The announcement of his visit was therefore received with the greatest pleasure and Professor Ambartsumian was welcomed as a most distinguished guest by the Rector and the entire Armenian Community. There was a solemn reception in the Central Hall with an exchange of complimentary speeches (in the Armenian language). A parchment was offered to Professor Ambartsumian in memory of his visit. Under the guidance of the Fathers we were then conducted on a tour of the treasures of the Island: the wonderful gardens and the ancient Convent. Especially impressive was the Library, so rich in Armenian books, of incunabula and of more than two thousand Armenian manuscripts decorated with beautiful miniatures, real masterpieces of the 9—11th centuries. We also saw many other documents concerning the History of Ancient Armenia.

I well remember that Professor Ambartsumian was much moved by the demonstration of esteem and affection offered by his countrymen, living in this remote outpost of Armenia Culture. The people were far from their own country, mostly in consequence of the dreadful Turkish persecutions of 1915 and the "Diaspora" which followed. The Armenians are always and everywhere united by the common love for their ancient country, far above any political or religious differences. The visit of Professor Ambartsumian was absolutely unexpected and yet all appeared as if it were awaited for a long time.

The hours were passing rapidly and finally in the late afternoon we were taken by a motorboat from San Lazzaro to Venice to visit the Armenian College of the Mechitarist Fathers in Palazzo Zenobio at Carmini. The College is frequented by young Armenian students coming from every part of the world to complete their classical studies and learn the language and the history of Armenia. There was again great excitement concerning the visit of Professor Ambartsumian and a reception by the Director of the College was held in his honor. And there was also another surprise: in one of the beautiful rooms of the Palazzo we saw a portrait of Professor Ambartsumian hanging on one of the walls close to that of the great Armenian composer Aram Khachaturian.

It was an unforgettable day and we returned to Padua late in the evening.

Since that time occasions for meeting Professor Ambartsumian were relatively frequent. In 1967 he was elected Foreign Member of the Academy of Lincei, the most prestigious Academy of Sciences and Letters in Italy. I met him in Samos on the occasion of of the celebration of the 23rd century since the birth of Aristarchus. He invited me to visit the Byurakan Observatory and so I had the opportunity of seeing some of the most picturesque localities in Armenia and, at the same time, getting better acquainted with research carried out at the Byurakan Observatory. This was an occasion to create, under the auspices of the Academy of Sciences of the Soviet Union and the Academy of Lincei, a convention for a common program of research and exchange of astronomers between the Observatory of Asiago and that of Byurakan. This coordination has been very fruitful.

What else shall I say. I will recall here the important studies made by Professor Ambartsumian and his collaborators, under his strong impulse, on "flare stars" in nebulae,

associations and open clusters, those on the "fuors," the enigmatic variables of the FU Orionis-type and on the nebular variables. He has not only proposed original interpretations of the phenomena occurring in these young stars, but has solved with an ingenious statistical treatment the problem of revealing, with yet uncomplete data of observation, the total number of flare stars probably present in a given cluster. This is really a marginal aspect of the researches of Professor Ambartsumian. Other colleagues will certainly relate in this issue his fundamental contributions in all of fields of physical and mathematical astronomy, from binary stars to planetary nebulae, from stellar statistics to celestial mechanics, from theoretical astrophysics to cosmology.

In conclusion, I am happy to convey, in the name of my Italian colleagues, their best wishes to Professor Ambartsumian on the occasion of his 80th birthday for a long, happy and active life. Besides his high scientific merits I shall always remember his human qualities, his amiability, kindness and goodness towards all his collegaues and disciples.

AN OBSERVATIONAL APPROACH TO STELLAR EVOLUTION

Guillermo Haro (deceased)

As a natural consequence of the 17th century Newton's physical ideas, some fundamental assumptions emerge regarding the formation of stars out of interstellar dense clouds. Helmholtz and Kelvin postulated more than a century ago the formation of stellar objects through a gravitational contraction mechanism. Of course and as far as I know, the Angloamerican astrophysical H. N. Russell was the first to describe qualitatively the early stages of star formation. He wrote in 1913: "Such [a contracting star], when it began to shine, would be red of low surface brightness, but of very low density and great surface, so that its total line emission would be large. As it contracted it would grow smaller, hotter, whiter and increased in surface brightness so that its light-emission would not change much." Then he described the initial stage of a star as a sphere of very rarefied gas and larger diameter, with central temperature of a few thousand degrees contracting very rapidly, drawing upon its gravitational energy. A star of great initial mass, according to Russell, would evolve crossing the [M_{bol} vs. spectral class] diagram near its top and joining the main sequence at class O, B or A. The ones with smaller masses might arrive at F, G, K or M types.

The present theoretical investigations of the contraction process follow, at a more or less sophisticated way, Russell's main ideas. I do not intend to follow the modern arguments of the supposed contraction formation process; but I just want to indicate that, to my knowledge, there are not convincing tests for this kind of a theoretical approach to star formation. Probably it will be of interest to quote again a paragraph written by Sir Arthur Stanley Eddington (in Background to Modern Science pp. 128 and 142, Cambridge University Press, 1938): "... To return to historical order... the next big sensation in stellar astronomy was the Giant and Dwarf Theory put forward by Hertzsprung and Russell, which came into prominence about 1913. In 1900 we were supposed to understand thoroughly the course of stellar evolution... But whereas in most branches our knowledge has greatly advanced, our knowledge of stellar evolution seems to have diminished, until now it is represented approximately by the symbol 0... ."

For many years and in relation to the photometric studies of very young clusters, great emphasis was given to the stars lying above the normal (V vs. B—V) main sequence. This was and perhaps still is considered as a very strong observational support of the gravitational contraction theory for the formation of stars. The color-magnitude diagrams of Walker and Johnson published for the NGC 2264 and Orion aggregates clearly show that starting at a given point in the disgrams of these two stellar aggregates the star members — mainly T. Tauri and T-Tauri like objects — lie high above the main sequence up to the visual magnitude approximately 15.

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