In Memoriam — Djordje Živanović

On November 21 of this year [1995] it will be ten years since our colleague and friend, researcher and professor of physics Dr. Djordje Živanović, has been no longer with us. He belongs to those people who have, through their life's work, extended their earthly existence, continuing to influence the community through the memories of those who knew him.

Reflecting on those who are no longer among us, on their human and professional qualities, makes a community more aware of itself, of its human and professional identity, which is a more humane stage of its existence. Such reflections bring us to moments of sincere and open confrontation with ourselves and with those around us, to a sense of professional and human belonging to this community, to a growth in life optimism, and to the creation of an atmosphere in which one can work more effectively and live more humanely.

Djordje Živanović was born on April 11, 1934, in Bjelovar. He graduated in 1956 from the Faculty of Science and Mathematics in Belgrade, majoring in physics, and earned his doctorate in 1964. From 1956 to 1976 he worked at the Institute of Nuclear Sciences in Vinča. He spent two years on professional training in France and one year in Canada. In 1976, he moved from Vinča to the Department of Physics at the Faculty of Science and Mathematics in Belgrade, where he taught several courses in quantum physics and gravitation. He served as vice president of the Society of Mathematicians, Physicists, and Astronomers of Serbia. He passed away on November 21, 1985.

The main areas of his scientific work were atomic and nuclear physics, quantum mechanics, and the theory of gravitation. His work in atomic and nuclear physics was extraordinarily professional; his understanding of the physical essence of problems and of solution methods was deep and effective. And yet, despite the undoubted success and recognition that this research brought him, it would be wrong to conclude that this was the main area of his scientific interests. For him, the central areas of physics were:

(1) the foundations of quantum mechanics, and

(2) the construction of a consistent theory of gravitation.

Djordje Živanović was, in an unusual way, emotionally tied to these two areas of modern physics. They represented a powerful challenge not only for him as a physicist but also for his entire rational and emotional being. No matter how much other obligations might occasionally take him away from these problems, he would always return to them and continue to think about and discuss them with even greater passion. At times it seemed to me as if these problems were an inseparable part of his being; it was entirely natural that wherever he appeared, a discussion on these topics would begin.

These facts point to an unconventional approach that led him to leave relatively secure paths and set off on a new road that, for some reason, brought him more satisfaction. It is hard to say whether this was courage or whether Djordje was simply following some inner call of his being. What he himself thought about this, in moments of confrontation with himself, will remain his secret.

In all conversations Djordje showed openness, sincerity, and directness, yet without ever becoming intrusive. In this way, he greatly facilitated his contact with younger people. In 1969, I enrolled in postgraduate studies in physics and began working in the theoretical physics group at the Vinča Institute. Djordje Živanović became the person who oversaw the progress of my MS studies. At that time, I had the privilege of talking with him almost daily about gravitation, for he always made time for it. Many younger members of the theoretical group in Vinča at that time surely remember attending summer schools in physics, where we socialized with Djordje and enjoyed his unconventional comments.

Djordje Živanović was certainly one of the most deserving individuals for introducing gravitation into the research life of our community. In 1973, with the support of a group of researchers, he

introduced the first official course on gravitation in postgraduate physics studies in Belgrade. At that time, gravitation as a field was not considered interesting to researchers in elementary particle physics. A decade later, the situation had changed considerably, and knowledge of gravitation became professionally very useful to us.

In the late 1970s, Djordje Zivanović took part in yet another "assault" on the fortress of gravitation. At that time, a group of researchers spontaneously formed with the aim of working on problems in gravitation. Every Friday, for over a year, we held seminars at the Institute of Physics in which we tried to understand modern research problems in gravitation. During these seminars, our first joint paper on gravitation was produced and published in Nuovo Cim. B 62, 257 (1981). At the time, we did not even realize that a new research discipline had been born in our community.

I would also like to mention another activity in which Djordje Živanović was a true artist: the popularization of science. In the halls of the Student Cultural Center, "Kolarac", the Youth Center, and many other venues, Djordje conveyed his understanding of modern physics with passion and sincerity rarely encountered. His television appearances will be remembered for the erudition and suggestiveness of his presentation, for his ability to grasp the essence of any question raised in a discussion in a fraction of a second, and to offer his judgment on it.

He was a man of broad interests and knowledge also in philosophy, culture, and history. Often we would hear from him when an idea first appeared in the history of human thought; he would quote Greek or medieval philosophers effortlessly, speak in great detail about tortures during the Inquisition, or explain Democritus's ideas on the structure of matter. It seemed as though he held in front of him some book in which all the wisdom and knowledge of this world were written, and from which he could easily find the answer to any question. Sometimes people who know a great deal are not liked in their surroundings, because their knowledge — intentionally or not — reveals how limited the knowledge of others is. With Djordje, this was certainly not the case. In conversation with him one felt that, for him, the search for truth was paramount, and that questions of personal merit were far less important. His philosophy often reflected on the transience of human life, yet this did not stop him from loving that life in his own way.

It is not easy to condense someone's life into a single sentence. If I were nevertheless asked to do so for Djordje, I would say: "He was a man who sought the truth."

I will conclude this remembrance with a quotation from Ivo Andrić (Signs by the Roadside, Sarajevo, 1961, p. 126):

"Every man seeks and expects something, and does so all his life — or, better said, as long as there is life's strength in him. In this lies the sign of man's greatness and the source of his greatest suffering, the foundation of that life tragedy that belongs only to man. And the better a man is and the finer the fabric from which he is made, the rarer and more precious is what he seeks, and the harder it is to find. ... And whoever seeks something, no matter how foolish or futile it may seem, has inscribed himself in the book of life, and something of his efforts and of his unfulfilled glory will always live on in the discoveries of those who, after him, worked and sought with more luck and success."

Milutin Blagojević, Belgrade, November 1995