

SCIENCE AND CONSCIENCE
OCTAV ONICESCU, AS I HAVE KNOWN HIM

Mihai Botez

Professor Octav Onicescu (1892-1983) has been a singular personality in the 20th Century Romanian culture. I had the privilege of substantiating this almost trivial remark in 1978, when the Professor asked me to supervise a TV documentary aimed at presenting his 'role model' life for the Romanian public. I had, therefore, unobstructed access to the written (and unwritten) files of his long and distinguished career, and the results were quite astonishing, even for a devotee like me, accustomed to seeing only the academic or Apollinic - to use Spengler's metaphor - side of his personality.

But what a life I discovered! Obviously, a part of it was well known. For instance, I was aware that O. Onicescu, a former student of T. Levi-Civittà and G. Castelnuovo and probably the last survivor of H. Poincaré's seminars, remained one of the few mathematicians who refused the glorious 'specialization', so natural in our age. In fact, a partial list of his theoretical contributions contains such diverse issues as Holotopic Functions in Complex Analysis, Chains with Complete Connections (as extension of Markov Chains) in Stochastic Processes (with G. Mihoc), Sum-Functions in Probability Theory, Information Energy and Correlation in Information Theory, Information Statistics in Applied Statistics, Information Econometrics in Econometrics (with M. Botez), Random Automata in Automata Theory (with S. Guiasu), Anti-Minkovskian Universes in Relativity Theory, or Invariantive Mechanics in Mechanics. I was also aware that his interests for the applications of mathematical methods included such apparently disparate fields

as Psychology and Demoeconomics. And, in order to understand the profound, structural unity of these preoccupations, I felt obliged to appeal to O. Onicescu's own description: "I am not a mathematician. I am an investigator of nature and life with mathematical tools." What a superb definition of his understanding of science! But etymologists know that the origin of 'theory' is the Greek word 'theoros' meaning spectator. And, surprisingly for me, the life I have discovered was extremely different from that of a calm contemplator and reclusive scientist. A part of it was totally unknown to me, and I presume most of his former students. Professor O. Onicescu was not only a spectator; he was an active actor in Romanian troubled public life for most of this century. I was thus able to see the other-than-Appolinic, let's say the Dyonisiac - to use once more Spengler's language - side of Onicescu's complex personality. But action implies conscience, not only science. That is the subject I will elaborate on: the relationships between science and conscience and their evolution in the long career of our beloved Professor, as a Socrates-like figure in Romanian culture.

In the pre-Communist Romania, these relationships have been dominated, I believe, by his national conscience, seen as total commitment to the modernization of his country. That is not to deny his genuine interests and great achievements in science. But in the 30's O. Onicescu was much more than an ordinary university professor; he was a national institution, trying to establish bridges between the 'world of knowledge' and the 'world of (political) action'. In the academic life, he was especially interested in establishing 'national scientific schools' (nonexistent before him) - in his view, able to assure both high quality of education and societal applications of science. The justification of such 'national schools' was more pragmatic than nationalistic. O. Onicescu thought that in order to participate with

dignity in the world scientific dialogue, it is necessary to produce something, and not only to consume (and disseminate) the production of foreigners. The so-called 'Romanian school' of probability theory fully illustrates this view. He lectured for the first time in Romania on Probability Theory and Markov Chains and, together with his spiritual son, G. Mihoc, opened new directions of research, encouraging other Romanian and foreign mathematicians to approach this promising field. (The list of contributions to the 'chains with complete connections', introduced in the 30's, is today, after half a century, impressive and contains names like R. Fortet, W. Doeblin, C. T. Ionescu Tulcea, G. Marinescu, G. Ciucu, R. Theodorescu, H. Cohn, M. Iosifcescu, G. H. Popescu, S. Grigorescu, Z. Sidak, M. F. Norman and others.) But, beyond his academic interests, O. Onicescu tried to promote scientific accuracy and to encourage real meritocracy in the Romanian life as a whole. The list of societal institutions he founded (or co-founded) and directed as well as the list of societal institutions he contributed to - personally or through his students - is also long and impressive. I will mention here only the School of Statistics in the late 30's - in fact, a multi-disciplinary and even trans-disciplinary team dealing with the socio-economic problems of Romanian development strategies and involving experts of the level of N. Georgescu-Roegen, considered by O. Onicescu his most brilliant disciple. It is to be also noted that, in the 30's, Onicescu was a 'public figure'; he was often invited to the Royal Palace for state dinners or other events, and the list of his personal friends included influential politicians from all political parties, leaders of the spiritual life - like the controversial philosopher Nae Ionescu or the great composer George Enesco - and even people like philanthropist-industrialist N. Malaxa (persuaded by the Professor to sponsor scientific events, including an international award for mathematicians). O. Onicescu was

also an extremely active columnist; his pertinent comments on the political life, on the economic options and on the social dilemmas were printed and largely discussed by the press, and probably had also some influence on the decision makers of those days. O. Onicescu was therefore an extremely successful establishment-oriented intellectual; he was also elected a corresponding member of the Romanian Royal Academy.

After the Communist takeover, not surprisingly, O. Onicescu - like his friends and colleagues, mathematicians Dan Barbilian and V. Valcovici - was slightly marginalized. (Due to the beneficial influence of some mathematicians aligned to the Communist regime, like S. Stoilow, G. Moisil and G. Mihoc, few mathematicians were really prosecuted or jailed.) Thus, he was not re-elected in the new Romanian Communist-controlled Academy in 1948; but he kept his position at the University. In the 50's O. Onicescu's interests were purely scientific. I can only presume that his conscience didn't accept any political compromise; that explains why he did not become a public figure. However, the list of his purely scientific publications is impressive.

The new "independent" Romanian policy - after the split with Moscow in the early 60's - has had as a second-order implication a re-assessment of the Romanian culture, and naturally of the survivors of the purges of the 50's. The new political atmosphere was apparently dominated by the spirit of national reconciliation. Two generous mathematicians with political influence, Miron Nicolescu and G. Mihoc, finally succeeded in rehabilitating their unfairly marginalized professors, O. Onicescu and V. Valcovici. As a result, O. Onicescu rejoined the Romanian Academy, even if he was forced to retirement from the University (due to his age).

For Octav Onicescu a new period began. He became once more a public

figure. He started his weekly public seminars - at the Central Direction of Statistics, at the Institute of Mathematics, and at the University. But it is difficult to say that he was back as an establishment-oriented intellectual, in the spirit of the 30's. Then, devotion toward the Romanian culture and toward the Romanian State were practically inseparable. Now, in the late 60's, he was only committed to the Romanian culture, and largely indifferent to the Romanian Communist State. However, he received with interest - even with some skepticism - the calls for competence and technocracy then coming from the national-communist leadership of N. Ceausescu.

It is well known that 1970-71 marked the complete change in the evolution of the Communist system in Romania. After visiting Mao's China and Kim's North Korea, Ceausescu conducted a minicultural revolution, completely reversing the earlier developments. The Stalinist language of the 50's came back; the new man, the new society, the ideological loyalty as a supreme value were rediscovered, and illiterate apparatchiki took over the Romanian culture. As part of this crazy new scientific policy, the Institute of Mathematics was practically destroyed, and many brilliant mathematicians - including some of Onicescu's disciples - left the country.

That is the period I became closer to Professor O. Onicescu. We all were aware of the dangers threatening the Romanian culture - and, in particular, the Romanian mathematics. But what was to be done?

And his conscience guided O. Onicescu toward a new attitude. He became not politically indifferent, but quite critical. His seminars were still tolerated by the authorities, but their content was almost subversive, promoting serious scientific approaches in a cynical milieu saturated by ideological dogmas. And his house became an island of intellectual freedom,

where independent thinkers of different professions and ages were always welcomed. An incomplete list of those I have met in O. Onicescu's house could suggest the level of our never ended intellectual debates in these difficult 70's. Among the mathematicians, I thus remember his older students, G. Mihoc and G. Galbura, but also his beloved followers, I. Cuculescu (considered as his dauphin), the highly-esteemed M. Iosifescu, his favorite S. Guiasu, and some others who were not exactly his disciples - like S. Teleman or S. Marcus - but were attracted by the intellectual atmosphere created by the host. Among the nonmathematicians, I will mention the logician A. Dumitriu, the psychologist G. Zapan, the physician G. Placinteanu, the composer M. Barberis, the economists V. Bulgaru and M. C. Demetrescu, the economist-poet Paul Sterian, the architect M. Celac, the philosopher M. Sora, the statistician I. Negura, and the demographer V. Trebici. What a series of distinguished names!

After 1977, a dissident movement, justified by the protection of human rights (according to the 1974 Helsinki 'Third Basket' Agreements), occurred in Romania (writer Paul Goma being the 'founding father'). Professor Onicescu didn't openly join this movement, like A. Sakharov in Russia; but, unlike the overwhelming majority of his colleagues in the Academy or University, he tried to use his immense prestige and position in order to help and even protect the dissidents, taking considerable risks for those days. It seems to me that such a courageous attitude should not be forgotten. Some examples will illustrate this singular position among the leading Romanian intellectuals. O. Onicescu personally invited historian-dissident Vlad Georgescu, then recently freed from jail, to present in his weekly seminar organized at the central Direction of Statistics the uncanonical results of a research officially blamed by the Communist authorities*; and the seminar took place.

After I joined openly the dissident movement**, O. Onicescu also invited

me several times to lecture in his seminar - generously offering me the cover of his name as first author, and guessing correctly that, anyway, it was impossible for communist authorities to censure a respected member of the Romanian Academy. Further, when it was officially forbidden to quote and even mention defectors/emigrants (considered 'traitors' by the Communist regime), O. Onicescu was openly speaking, in his seminars, about the excellency of some Romanian-born mathematicians - like C. T. Ionescu Tulcea, A. Bellow, N. Dinculeanu, C. Corduneanu, I. Dragan, C. Foias, D. Voiculescu, P. Hammer and many others. And, finally, he managed to publish an anthology containing many of his papers of the 30's, as well as a first volume of his Memoirs, describing the pre-Communist Romania. For the early 80's, these books looked like 'samizdat' literature: they were speaking about a beautiful country, a civilized society, and a normal science, in a devastating comparison with the then-contemporary Romania ruined by the Communist dictatorship. Reviewing these volumes for the listeners of "Free Europe", Virgil Ierunca mentioned their political dimension and called the author "an exemplary alliance between science and conscience".

I am sure that Octav Onicescu, as I have known him, fully deserves these words.

* These results were later published in the West, and received the Special Award of the American-Romanian Academy in 1988.

** The reader interested in the motivation of such a bizarre attitude can consult my brochure "Romanians About Themselves", Ed. Litera, Bucharest, 1992 (in Romanian).