



**THE UNIVERSITY AT THE CROSS-ROADS: THE CASE OF YUGOSLAVIA**

by

**Ljubiša Rakić**  
Head, Research Department  
University Clinical Center  
Belgrade, YUGOSLAVIA

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The enormous development of science and consequent technical-technological development and progress are accompanied by an increased interest in all forms of education, particularly in university education. The university has found itself unprepared for adaptation to these changes, torn between its traditional organization intended for a small number of the chosen and a large army of the young who besiege it looking for a place in its auditoriums. The dilemma imposed upon us in this context makes us think that lasting solutions cannot be partial adaptations of the university to new demands but in radical changes of the whole system of education. The creation of national wealth is becoming less and less dependent on working hours and the quantity of the work done, and more and more on the level of development of science and progress of technology. Increase in the level of education of employees, as indicated by numerous analyses, is in direct proportion to the increase in productivity of labour and the consequent increase in national income.

Nowadays university education has already become a form of mass education. For the past 120 years the number of university students in Europe has been increased exponentially at a rate of 2.9 per cent annually, which represents a total increase in the number of students for about 20 times. Not more

than during the past two decades the rate of increase has been about 10 per cent per year. While in 1950 there were 6.6 million students in the world (3 per cent of the population in the age of 20-24 years), in 1980 their number amounted to 60 million,<sup>4</sup> and as this trend continued, in 1990 we had about 115 million students, and thus 24 per cent of the population at the age of 20-24 years had the status of university students. Yugoslavia (and the countries of the former Yugoslavia) considerably followed this trend comprised of 16.970 students in 1937, 424.000 in 1978, 350.234 in 1990. Simultaneously and almost proportionally, with lower or higher oscillations, the number of university professors and professor assistants has been growing - from 1408 before World War II up to 19.839, what was the number in 1990. Shortly before World War II, there were 3 universities with 26 faculties in Yugoslavia, and today we have 19 universities with 382 faculties.

Such a development of higher education is the result of an action of several factors in which individual aspirations are interwoven with the social needs, both often being in discrepancy. University education, taken globally, has civilizing, productive and social functions. Modern civilization is characterized by a consciousness of the values of knowledge, culture, as of goods which are gaining more respect in their own right. The desire for education is becoming a fundamental personal need of the man in our time.<sup>5</sup>

It is the result of the formation of the "Guttenberg Galaxy"

in which man lives his life: the development of the press, radio, television, informatics, the universal urban culture. No one concurs to being a person belonging to an inferior category - a modern pariah confined in the ghetto of no education. Everyone strives to cross cultural barriers, to free himself from an inferior position. Administrative utopia is the standpoint that the stopping of this live force, which does not subordinate itself exclusively to the requirements of technology and politics, could be programmed. Although this great human aspiration is being distorted into a struggle on the battle-field of prestige, the race for diplomas for "technician of social success", education nevertheless bears a great potential within. Human abilities are becoming the most important productive force of our times and it is becoming increasingly difficult to push them into the old Prokrust bed of profiteer logic and bureaucratic organization, which sterilize them. Societies which would not adjust shall go through great disorganization and shocks.

The knowledge is gaining a strategic role among the factors of general social and economic progress. Technical transformations during this century illustrate the aforementioned statement; while in the era of classical mechanization, unqualified workers (and partly qualified) made 95% of total number of employees, intermediate-trained workers 4%, and university-level made only 1%, the era of complete automatization requires 35% of university-level workers, 60% of intermediate-trained ones accompanied with a symbolic number of semi-qualified and unqualified employees.

Subsequently, the extensive spreading of higher education in an integral part of the wave of the scientific and technological revolution, of modern society's need for qualified manpower. However, the productive function also clashes with the narrow framework of an economy based upon the profiteering use of cheap labour, as well as with a bureaucratic organization of work which more easily manipulates and rules over less educated people. Both one and the other devalue it, conserve a lack of knowledge and skills, and preserve the unemployment of educated people. There is much more creative force than society knows how to make use of it. At the university these contradictions are intensified; it does part of society's dirty work and becomes a place to delay the difficulties of the younger generation to find an employment.

The education is viewed as a remedy which could mitigate the social division of society and lead to social equality. What used to be a privilege is now considered as a right of all citizens: if a person has no education, he belongs to a lower social group. On the other side there is a current which turns higher education into a great new mechanism for creating social inequalities and into basic ground for stratification. Inequality becomes legitimate and is maintained through education. Monopoly in education becomes the road which leads to economic privileges and power, and to a higher social status. Chances for entering well-paid, high-prestige professions are becoming increasingly dependent upon education, as the most important legacy one could leave to one's children.

The crisis of the traditional form of university affects the entire planet: from the highly developed countries to the Third World.<sup>8</sup> It expresses the internal irrationality of university, but also the explosive contradictions of contemporary society, being one of the aspects of the crisis of civilization. It is not possible to resolve them by essentially restricting the possibilities for entering the university. It is not the right solution because the accessibility of higher education is an expression of the democratic tendency to diminish social differences and because it is a question of engaging the productive powers of society. The industrial powers of the world which have made the greatest breakthrough also have the biggest number of highly educated people. The percentage of young people going to institutions of higher education in the USA amounted to 49% (college-students were included in this number); in the USSR - 28%; in Japan - 26%; in France - 15.9%; in Poland - 14.9%; in Yugoslavia - 13.5%. At the other end are Iran - 3.5%, Indonesia - 2%, Nigeria - 0.1%. The world education map shows a terrible gap - differences which amount to 1:500.

Fundamentally different visions and strategies of the development of education come as a reaction to existing contradictions. Grave contradictions, irrationalities and the economic crisis bring about a form of technocratic "rationalization" of education. That is the road of administrative restriction, stopping the growth of education - more strictly limiting the number of students, keeping the same number of teachers, depriving the faculties of systematic scientific and scholarly

work, turning them into some kind of higher secondary schools. However, rationalization cannot be avoided if only restrictions are applied, without opening new roads, new perspectives. Although an education includes a series of grade irrationalities it is not possible to restrict and stop access to higher education in an administrative manner.

The society has been also faced with the facts that the industrial worker was deprived of the intellectual component of work, and as a contrast there emerged a professor, a manager, an artist, a bureaucrat, technocrat, expertocrat, as separate social strata. In this sense the social function of the university has not changed even under what it is known today as developed society, in spite of data telling of mass studies and "tales" that studies have been democratized, that the university is open to all and offers everyone equal chances of rising in the society and making a career. Narrow specialization, the automatization of work into infinitesimal parts, appointed to the individual worker, the "partial worker" repetition at work do not stem from technological rationality, they are not determined by nature of machines and engineering, they stem from the need of economy for productivity: the objective is to extract from the employees the maximum of surplus labour. The contemporary society has done little to change the function of university training by having the university enter into the production process, not in order to contribute to the production of a relative surplus value, but on the contrary, in order to contribute to the integration of labour and education and to abolish the division into intel-

lectual and physical labour, into "experts" and "non-experts".

The old university cannot be "patched up" and "improved". It has to be changed. And in order to change the old university and a new one to be born, the following is required:

The educational process and scientific work at the university must be linked up with the material and spiritual production of the society, in order to implement the rights and possibilities of both young generations and working people, namely to educate themselves in the course of work, or along with the work. The university and the industry and economy are connected, and even merge, but not for the mere purchase and sale of educational and scientific services and certificates and diplomas, or only to increase profits and earnings in the factory and university, but in order to effect the joint advancement of production and science, the integration of knowledge and work, the humanization of work and life, making the highest levels of education accessible to all, so that the work of every employee also has a spiritual component. University education should become a part of the working obligation of all those who want to be educated and have previously proved that they have the necessary knowledge and ability to join in this kind of education.

The new university should not be a training ground only for "narrow" experts. It should offer a broad range of general knowledge, it should introduce the students to the fundamental sciences and educate experts for basic branches without spe-



cialist atomization. More precise specialization would be acquired on the spot, in the hospitals, museums, factories, farms, etc., based on the links between theoretical education acquired at lectures and in the laboratories and practical work at the future job, in the case of those working and studying at the same time, at the jobs they are already doing. At the new university the characteristics of education should be: guided specialization just before graduating, specialization by means of practical work on the job, occasional or frequent post-graduate courses, the implementation of principle of "return" education and the constant links between graduates and the university.

It is of special importance that the new university should not repeat the division into the socialized technical intelligence which, most often, does not take into consideration the social and human aspects and effects of their work, and the so-called humanistic intelligence which frequently plays the role of a spiritual aristocracy and which limits its function to the doctrinarian and contemplative dispute of the existing course of events in the society.<sup>8</sup>

The university should not allow to train pragmatic technicians who do not know how to think beyond their own special branch, who are incapable of giving a social and human aspect of their branch, priority over its scientific and purely technical aspects. Equally, the university should not only train "humanists" who are proud of being ignorant of technical and natural sciences, and who are only superior critics in the role

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of sages speaking from the rostrum, and elite considering itself the exceptional owner of riches of the mind, as opposed to the "ignorant" technicians, and even more to the "uneducated" majority engaged in material production and other "prosaic" work. A man trained at the university should have a non-conformist spirit and views, and at the same time developed creative abilities in his branch whatever it may be, and which he is engaged in in the interest of the society's progress and at the same time with humanistic intentions.

The new university must finally do away with the medieval rules of the transfer, adoption and testing of knowledge. The division into professors, dozenten and assistants is an echo of the medieval division of artists into master craftsmen, apprentices and errand boys. The professor who holds a chair is the emanation of the *pater familias*, in whatever form a family enterprise. The socialized academic freedoms are restricted to the relative freedom at attending (or not attending) lectures and taking part in seminar debates. All other things are subordinated to the authoritative superiority of the teachers. The gifted, just as those of modest skills, must adjust to the average. There is no spirit of research. The student is no researcher. He is asked to acquire knowledge without checking it, without developing his own research and analytical abilities. The university should become a research-analytical community of students and teachers, the former no longer being reduced to the status of mere objects, or the latter being raised to the pedestal of undisputed authority.

The education is no longer the sum of ultimate knowledge which was attained once and for all. It must be organized in such a way so as to enable people of any age to return and improve the knowledge they have in the field they are working in, to gain a higher education, or to change their profession altogether. A chance is offered to those who could not afford a higher education, or who had to drop out, or were not successful because of a minimum difference in grades. Permanent education becomes an organizational, practical form of studies for people who are employed. The door of education is opened to new age groups - those with working experience. The period of time thus spent at institutions of higher education should be counted as work and include a right to receive a pay. Universities are gradually organized as centres for permanent education. The curriculum, the length of courses, crash courses, entrance criteria, correspondence courses with return information, summer schools, evening classes, greater emphasis on self-education, new pedagogy which takes professional experience into account - all of these become central topics in the discussion on education throughout life.

Interesting are the observations of *E.G. Edwards*<sup>2</sup> about the significance of interaction between an education and technological progress in transformation of scientific and technological revolution, and they will be shortly summarized in this paper.

The economy of developed countries in the first six decades

of the century was characterized by increasing productivity in industries mainly defined as major branches at the end of the nineteenth century. An improved technical and production organization was mainly based on applied science, including managing skills for analysis and improvement of production process developed empirically earlier. The primary industry maintained its supreme role in developed countries as well, in spite of the fact that its share in the national product has been taken by the secondary industry. Both primary and secondary industry were characterized by a trend of permanent increase of the fixed capital as compared to the variable ones.

In this period the relation between high education and economy was marked by increasingly stronger demands to subject high education to the economic needs. E.g., technical, economic and managing studies overscored liberal arts. Apparent continuity of exponential increase trend of high education in the first half of the century may be explained by demand prompted by realizing that long-term capacity for student training is determined by the population of students already involved in economic processes. Neglecting of the autokatalytic factor in increased demand for graduates was possibly the basic source of failure to determine future need for graduates. In this period high education products have grown into the most important power of decision making in developed industry, government and major social institutions in general. It has become a techno-structure with aims, methods and plans not entirely dependent on production relations characteristic

of the beginning of the period.

In the last two decades changes in the attitudes of high education towards economy and social needs have begun. While high education used to be pressurized by economic and social needs, an opposite tendency is on the rise: economic, industrial and social development will be asked to keep pace with updates promoted by high education. This change is accompanied by the change in the increase rate of high education.

The so-called tertiary industry (production and implementation of knowledge) has started growing faster than the secondary industry. For example, increase of computer industry is associated with even faster increase of both production and sales of software. While new industries of the nineteenth century were usually located round coal and raw material centres, contemporary fastest growing industries are usually centered round universities. For example, the process of improvement of existing materials has been replaced by scientifically based material design. Industries which fail to utilize updates reported by university centres become economically inferior.

The permanent trend of exponential rise of high education in this century may not serve as a reliable indicator of trends in decades to come.<sup>6</sup> Even in the U.S., where a share of relevant age groups attending colleges and universities has already exceeded 50%, the exponential rise index is still increasing. Since the knowledge industry has become dominant in

all developed countries, it can be expected to become a general phenomenon. This will be expressed not only in the increase of a number of students in certain age groups, but also in the period of active life devoted to high education. In fact, shift of knowledge industry towards the centre of economy has resulted in erasure of difference between high education and working life.

The fall of communism opened new possibilities for creating global and universal conceptions on the role and tasks of the universities in the world in future, because it removed the ideological confrontations which strongly strained the humanity in this century. Likewise, it brought new problems especially in the region of Central and Eastern Europe that required collective international engagement. The first steps were made by the Council of Europe which, at the Conference held in Strasbourg in September 19-20, 1991, formed the Action Plan in Higher Education<sup>1</sup> that in practical and pragmatic way created the conditions for immediate and long-term activities and reform in this field. One issue should be pointed out particularly: the prime responsibility of the countries themselves for reform, with the assistance of Western European countries in making available their own experience; the need for partnership rather than one-way aid; and the desirability of action at the regional and sub-regional level on problems shared by several countries. This reform has to provide the restoration of academic freedom and institutional autonomy as an essential component of the restoration of democracy and has to be closely linked to the reforms of other parts of the

educational system, for example, through teacher training and broader access to educational opportunities.

It is worth stressing that many universities in Central and Eastern Europe succeeded in maintaining the appropriate links to the true tradition of higher education and their academic standards reached full international level. Also, there is a dense network of personal and institutional contacts, in which many higher educational institutions in Western Europe have been active long before recent political changes. The capacity for self-renewal of university education in Central and Eastern Europe is therefore potentially high and this could be an important contribution to the European-university community in general. The main efforts in this cooperation have to be the reform of the legislative and regulatory network and the content of teaching in some of areas important for better understanding and unity in the future, as: economics, management and business studies, international law and human rights, political sciences and European studies, environmental sciences, life sciences and human survival.

Universities are given a new role - not only to fulfill economic and social needs, but to incite new economic and social progress. The role, aims and motivation of current technostucture (managers, technologists, civil servants, decision makers) do not depend on production relations (property structure, politics vs. industry relation) characteristic of the beginning of the century. Similarly, aims, intentions and motivation of individuals in the tertiary industry (lead by

high education) will not necessarily be determined by inter-relations in the managerial society in which it has begun to develop.

Means used for discoveries and transfer of new knowledge necessarily influence targets and motivation of people involved in the process. For example, discovery and spread of knowledge are based on identification of internationally accepted methods of research. The process of discovery is inseparably linked to the international exchange of knowledge.

If dynamics of research, focused by high education, is to be maintained in the period in which the economy is to focus high education, then the international character of discovery will, most probably, continue to play a major role in motivation of university staff. Therefore, university reform should involve making a new pedagogy, which is an extremely complex, multi-disciplinary research project.<sup>7</sup>

Teaching as an integral part of the academic life and, in most universities, forms one of the academic promotional triad (research, training and administrative service) on which professional advancement is based. Unfortunately, it also seems to provide one of the major frustrations for the young academician who sees every activity other than research as unproductive and a hindrance to personal progress. In today's highly competitive scientific environment, the pressures for maximum output, early publication and precedence seem almost overwhelming in their urgency. Many universities are trying



to counter this pattern by publicly placing more emphasis on the teaching activities, and by limiting required evidence of productivity to a small number of one's best (or paradigm) papers when promotion time comes around. These steps are in the right direction but I believe they will be of little help until our basic attitudes towards teaching also change.

History documents the power of the teacher. It is hard to imagine greater permanent impacts on mankind than those left by Moses, Jesus, Confucius, Mohammed and Gandhi - all teachers. Most of us can remember one or more teachers who permanently affected our lives and the work we do. We may have forgotten many of the things they told us, but the way they told us and the things they seemed to represent, their principles and attitudes, their enthusiasms and "peeves" almost certainly have accompanied us throughout our lives. You may notice that these persistent qualities seem more limbic than of neocortical derivation. We could arguably claim that human kind is "human" first and only secondarily rational and that we are still in the process of trying to learn how to use the several thousand square millimeters of cerebral neocortex which each of us maintains. It was true of ourselves and is certainly true of our students.

Teaching is essentially an alliance between those who come to learn and those who have specialized to help them to learn. It involves the agreement to pass on some aspects of our culture, since being the teachers we are the bearers of culture for the next generation - the carriers of the torch - the

"Lampedorphi" of an ancient Greece. Our students come to us at a very exciting and critical time. Having made their individual decisions, they are now committed to the crowning venture of their lives, developing their professional selves. What a privilege and challenge to be able to help shape the knowledge base and the working and living patterns of these young people, these culture-bearers of the next generation.

Nowadays, in the era of mass education, on a universal level, we are faced with one of unwanted dilemmas: is it possible to achieve and maintain a high level and quality of teaching in these conditions, when necessary improvements in space, equipment and staff are not always associated?

Although reliable means of quality determination are missing, we have little evidence that permanent exponential rise would lead to quality deterioration. For example, an increase in postgraduate studies in the U.S. has always been associated with higher exponential index than the exponential index of high education in general for the whole century (doubling period was about nine years). *Robins Report (1963)*<sup>6</sup> concludes that post-war increase of high education in the United Kingdom has not been associated with any detectable quality deterioration (as measured by grades of graduates and percentage of high-score students). The exponential process includes possible automatism in high education increase; the factor determining the increase rate would be based on the existing population of students, on the condition that economy gets stronger sufficiently quickly to be able to cover the in-

creased expenses. The increase of high education in some social-economic milieux characteristic of developed industrialized societies may be an almost autonomous process, independent of temporary changes in demands of current economy.

Amidst all that, I wish to focus briefly on the problem of the relationship between the autonomy of the university and its social responsibility in the contemporary society.

This is a concept that is as old as universities themselves. We might recall the origins of the university as a community teachers and students who meet together simply to pass on knowledge and know-how. Through the centuries a second element came in to give the universities their later characteristics: community of teachers and students would not only pass on knowledge but would also concern itself with research. Research found fertile ground within the university and with this came some measure of academic freedom. These university communities naturally attracted the best elements in society, becoming somewhat elitist. They gradually acquired a posture totally remote from the real problems of society. But over and above the functions of teaching and research, a new function came to light: that of extending the range of university activities to involve interaction with society.

The modern university has become a kind of expanded system whose redefined functions appear to have varied little from the traditional ones of the development of human potential and personality, the creation and protection of independent

intellect, and the generation of new knowledge and its systematic diffusion. However, increasing egalitarianism has led to a greater social awareness, just as increasing social turbulence has required new forms of adjustment and managerial skills. New directions for change raise new areas of concern: the university's place in society, the concept of service, university structures in relation to community needs, and the traditional freedoms of the university.

The role of the university in society involves an irreducible conflicts: the social system looks to the university to preserve its independence from it, yet demands it be accountable; society criticizes the university as an ivory tower, but expects it to be just that. The above dilemma often appears when the university addresses the question of its own social meaning. The university is established by society to deal with the problems of knowledge - its extension and transmission. To fill that role, the university must be isolated from inappropriate pressures and claim so that it can deal with the problems of knowledge freely and objectively. At the same time, the university cannot be isolated from the society of which it is a part and where much of the knowledge is rooted and finds its meaning. The risk remains that the more the university turns to society's problems, the more it will be subject to the strains and conflicts of society. As new functions of the university are considered, and as new relationships with societal institutions are formulated, this dilemma will continually reappear and its elements will have to be kept in balance.

The university, like justice, is a fragile institution, which largely owes its existence to the desire of the community to have at its disposal an objective and "absolute" system of reference, independent of transitory trends and influences<sup>9</sup>.

When the university deepens its engagement with surrounding communities, questions are often raised about risks to academic freedom and autonomy. It is particularly when the university joins with other parties in defining problems that the university will work on, and in constructing solutions in which the university may participate, that these matters of basic freedoms of the university come into bold relief. But, there is confusion in terminology that may lead to specious arguments. Academic freedom is sometimes confused with institutional autonomy: academic freedom has to do with individuals - their opinions, work and research - and is actually an extension of individual freedom in a democratic society; university autonomy is an attribute of an institution, referring to the notion that while the university is dependent in whole or partly on public funds and provides public service, it is the university that controls the decisions to the extent to which and the methods by which it will engage in such activities. Independence may be confused with autonomy. Independence is relative, and implies freedom from various pressures from the political and social environment. Autonomy is not independence; indeed, interactions with the community can be seen as reinforcing autonomy, whereby the university might move from a situation of freedom without power to a partnership for social change.

University has to build up an active concepts of its role in society, as it was mentioned above, since it offers direct response to current social and economic needs. High education is a source of changes in social and economic processes. At the same time, it comprises increasingly larger number of people - majority of population in developed countries. The position of university in the society does not imply demands for privileged position of intellectuals and science, but inferior, passive position should not be permitted either and the role of one receiving orders and demands from all patrons (state, technocratic structures) should be avoided at any cost. Education and science are not only a service or an administrative chain but one of the basis of modern society. The steering of high education has become a hot spot in many discussions within university community. There are many interesting views on the vexed and incongruously important issue. Recently, *Gay Neave*<sup>3</sup> in the *International Association of University Bulletins* has pointed out two prong strategies. The first prong is supposedly the loosening up of close government control over higher education, the encouragement of greater initiative, of self-evaluation and the drawing up of medium-term strategic plans by individual university. The second prong, as a counter-point of "self-regulation" is the setting up of a whole array of national indicators to see how the fruit of individual initiative falls within the government strategy for higher education. The importance lies in the fact that at the very moment when such policy is presented as symbolic of the new move towards "the freedom of market forces", higher education finds itself increasingly in the toils of

what is, to all intents and purposes, a species of indirectly commanded economy.

Universities appear to be involved in a dual crisis. First, they are caught in a worldwide economic recession that has impinged on virtually every facet of higher education. Secondly, they are turning to a closer examination of their relationship with society, both because of an insistence by the public on financial accountability and in response to their own sense of concern that fiscal pragmatism should be balanced with a clearer view of their own social meaning. Thus, despite stringent economic constraints, universities in many parts of the world are exploring new relationships with communities, industry, government and other institutions, new structural forms within the university itself, and changes in traditional educational, research and service programmes.

At the end of the second millennium the university asks for changes in order to be able to adjust to its future role and new responsibilities. Realistic radicalism, which is neither a bad utopia nor unscrupulous pragmatism, is the way. The reform cannot be completed soon, it is a long-term process providing solutions during all stages of transformation, making an international collaboration a *conditio sine qua non* any success. Universities of the world have made an international community for gaining knowledge. They find their primary challenge to be creation of international concepts of new, global, social and cultural aims. Shall we succeed?

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