Science plays an extremely important role in predicting the future of social phenomena, including pedagogy and andragogy. Research in these areas must be based on an interdisciplinary, multidisciplinary, systemic, and structural approach that is based on the assumption that upbringing and education are specific phenomena in which human praxis—conscious and creative human activity—plays a prominent role. Value-normative statements must be differentiated from cognitive statements of upbringing and education so as to differentiate between the methodological approach of "exploration of the future" and that of "creating and modeling the future." Future research in pedagogy and andragogy should be based on the fact that education can give to the Marxist- Socialist system and all its subsystems all that ensues from its authentic nature and functionality. Researchers could then use the methodological set of instruments and orientation that can foresee such development in the future. When dealing with the adult education concept of lifelong education, researchers should shift their focus from "education for the future" to "education and the future." Croatia's system and model of formal education must be broadened; nonformal and informal education must be promoted and better organized; and adult education must be enriched with modern methods, forms, and technology. (22 references) (MN)
METHODOLOGICAL SUSPICIONS IN THE FUTURE STUDY OF ADULT EDUCATION

Science plays an extremely important role in predicting social phenomena (manifestations and processes) and for that there are certain theoretical and practical reasons. Basically there are three fundamental and global tasks of science and scientific perception: first, universal and correct description and discovery of a subject examined, second, explanation of the subject of examination, and third, prediction of the subject, that is the phenomenon that is being examined.

Both the value of scientific notion and the cognitive ability in science are expressed in the accuracy of descriptions, degree of accuracy and authenticity of scientific perception, thoroughness of explanations as well as in the sort and the quality of scientific prediction of what is being examined. The process of perceiving and discovery of scientific perception itself depends on the specific quality of the subject of perception, the degree to which the theory and methodology of science have developed, to what the subject of perception refers. It depends on the establishment of methodology, explicitness and verification of what is being examined. Every scientific prediction proceeds from certain facts,
laws, patterns and lawful tendencies. They serve as the basis for setting up scientific hypothesis which is about comprehending new facts, laws, patterns and lawful tendencies.\textsuperscript{1} When predicting social manifestations and processes certain problems occur regarding possibilities and adequacy of choosing the facts which are in direct relation to certain manifestation or process. Furthermore, there are also questions of discovering cause-and-effect relationships, analysis and explanation of the facts in the manifestation and process complexity, that is the social phenomenon that is being predicted.

Connected to that is the question of setting up scientific hypothesis when predicting social manifestations and processes that are yet to happen. Prediction, occurrence of manifestation is dealt with on the principle of possibility, basing it on the most probable hypothesis. Understandably, the right criterion of truthfulness of the occurrence of the social phenomenon is the social practice. Education as a social phenomenon, and as a subject of pedagogy analysis (and not only pedagogy) is the subject of scientific prediction. In other words, education is, by its nature, always in the realms of the past, present and future: of the real and the existing on one hand, and the expected, wanted and projected on the other.\textsuperscript{2}

The dialectics of educational continuacy as a subjects of the study of pedagogy and andragogy, the orientation toward the future, what creates and directs pedagogical and andragogical studies. This is the futurological component of pedagogical and andragogical studies. Despite that, futurological components together with the scientific predictions of pedagogical and andragogical phenomena are the weaker

\textsuperscript{1} B. Sešić: Osnovi metodologije društvenih nauka, Beograd 1978. str. 327.
\textsuperscript{2} N. Potkonjak: Teorijsko metodološki problemi pedagogije, Beograd 1977. str. 140.
side of pedagogy and andragogy. Why is it so? There are numerous reasons for that, and some of them will be listed here. In the scientific prediction of education certain difficulties occur (difficulties that otherwise occur in predicting other complex social phenomena, manifestations and processes), in other words, this is where objective-subjective laws and lawful tendencies, thus, complex laws of dialectic cause-effect in various forms dominate. According to that, Franković has the point when he says: “that in predicting the future we are sure only of its one dimension; it comes after the present.”

Nonetheless, the risk and uncertainty in studying future does not mean that predicting the future of social phenomena, human activities as well as education has, as Reichenbach claimed, the meaning of betting and not comprehending the future. In the scientific prediction of educational activity, of all aspects of education as human activity and phenomenon, present state is taken as a starting point. Here the educational components are analysed and the factors that will cause such phenomenon in the future are predicted, in other words, the structure of interactive factors, which determine whether such phenomena will be realised and whether its realisation is possible at all, is predicted.

Of course, the degree of probability of realizing the predicted phenomenon depends on an analysis and foundation of components and conditional factors of predicted phenomenon. The identical thing is with upbringing and education or one of its aspects. Even here it is necessary to analyse and establish the components of this multidimensional process and factors which influence this phenomenon. For scientific prediction of upbringing and education, it is essential to predict the progress of these.

components, their transformation and the net of factors for which is probable to assume that they will condition the development of upbringing and education on the whole or some of its aspects. The problem appears on the level of establishing the components that make for the basis, the essence of upbringing and education. The problem complicates in the choice of factors which influence or which are supposed to influence upbringing and education on the whole or on some of its factors. In predicting of pedagogical and andragogical phenomena, there is an important question when we want to predict the components of upbringing and education in the future and factors that will influence the phenomenon. In methotological sense, everybody who predicts the future of upbringing and education, relies mostly on the well tested methods: analogy, extrapolation and continuity, and it is clear that these methods, despite the fact that all futurological research is based on them, have many limitations. Sudden turns are very possible and probable when it comes to the question of complex social phenomenon such is upbringing and education. In that sense, future is “like a mirror image of the present and past in twisted mirror; but we are not aware of the parameters of its twistedness”.

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Namely, it is hard to predict the future components of upbringing and education, moreover, for the fact that “every age sees its components; nowadays it is, in the first place, scientific and technical-technological component, informational, ecological, and the component of enabling the students to live in a society that comprehends the world as a unity”. And many futurological research of upbringing and education (adult education) are based on on these components and in the first place on scientific and technical-technological component. Foundind the future of

upbringing and education (adult education) on technical-technological component and sometimes fashionable insisting on computers and things like that can be only onesided prediction of upbringing and education, which distracts our attention from important problems of upbringing and education as primarily as a realtionship between people. In reasoning and looking closely at the issue of upbringing and education, in determining of components and factors of this multidimensional process, there are antropologically-critical and apocaliptic approaches, reasonings, predictions and warnings based on socio-economical, moral, ecological and other problems and contradictions which exist in the present but show inclinations to worsen in future. Even if we neglect such gloomy critical and apocaliptical predictions, we are still left with all these problems that, in either way, influence or are assumed to influence the upbringing and education (adult education) in the future and for the future. In pedagogical reasearch we are always inclined toward the research for the future, even when this research is on the present, actual problems. Namely, the results of pedagogical and andragogical research, even applied immediately, can have influence in near or further future. In that sense, the object of pedagogical research – the upbringing and education is always the future “that already started”.

Therefore, the results of pedagogical research are oriented on the future time. The only problem is in the view on the future of upbringing and education, in which degree is the research scientifically based, and how much is it a “storm” of ideas, nice wishes of what is and what should be with upbringing and education, and not what in future will be. In futurological research and in those that incline to be oriented in that way, there is often a mix of things that exist and the things that should be ( are

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2 V. Švajcer; (Same text – pg. 16)
3 M. Pečuljić: Future Already Begun, Beograd, pg. 150
desirable to exist). There are often the equality between desirable things that project into the things that exist in reality or they are projected without any direct relation to the things in reality. However, these research are just a bunch of nice wishes which are not in the “connection” with reality. The results of such research which predict the realisation, or unrealisation, is justified with the fact that certain conditions in which the predicted could come into reality are not predicted or created.

In that sense, anticipations in futurological researches that do not count on conditions in which it will be realized are inadequate. In futurological pedagogical researches it is essential to start with the observation of any aspects of that research in the complexity of its components and subcomponents which make or will create that phenomenon in the future, as well as with the perception of complexity of factors that will determine it. Therefore, it is vital that these researches are based on interdisciplinary and multidisciplinary approaches. Moreover, a systemic and structural approach should be present in their methodological basis. These approaches, as is known, enable thorough and complex understanding and acknowledgement of complex phenomena such as upbringing and education (adult education), or any of their aspects. In doing so, we assume that upbringing and education, or any of their aspects, are specific phenomena in which human praxis – conscious and creative human activity - plays a prominent role. This means that in the anticipation of upbringing and education, we assume that people, in their social praxis, can acquire proficiency not only in natural and social conditions but also in sociohistorical praxis and subjective facts, which is attained by active, conscious, organized, planned and creative human activity. Therefore, in the anticipation of upbringing and education for and in the future, it is necessary to approach the designing of their part if human praxis in
creative manner, that is, to influence the future aspects of upbringing and education and not to peacefully wait for the future to come which is emphasized in many studies. The process of the anticipation of the phenomena of upbringing and education is not easy to establish in theoretical-methodological and epistemological manner. The very theoretical-methodological well-foundedness, as well as pedagogical researches' and pedagogy’s orientation is its drawback. There are many reasons for that. They lie in the underdevelopment of both theoretical-methodological basis and apparatus for futurological researches. Moreover, they rise from the very subject-complexity of the phenomena of upbringing and education (adult education), structural components, and factors of determination. Such orientation of futurological researches in pedagogy and andragogy starts from what it is and transforms into what it should be. The thing which is projected identifies with what it really is; or the desired and expected is considered to be the reality. In the subject-methodological orientation of pedagogical and andragogical researches the starting position is that upbringing and education (their components and factors of determination) in social macrostructure plays role of dependant variable. In other words, all subsystems of macrosocial system in relation with upbringing and education have role of independent variables.

Contrary to all subsystems of global social systems that sporadically encounter crises and demand radical changes, the subsystem of upbringing and education, despite of all disturbances in functioning (crises), reflect the role of adaptation of young people to older generations and their intellectual, social, political, ideological and other needs. This adaptable position of upbringing and education (adult education) is the outcome of past continuous result of development and

\[8 \text{ N. Potkonjak: Metodološki problemi sistemskih istraživanja, Beograd, 1987.} \]
there are no significant differences between 'backward' and 'progressive' social systems of modern world. The adaptable function of upbringing and education has its repercussions on the subject-well-foundedness of the pedagogical and andragogical researches that are oriented towards value-normative problem area, on what it should be (not on what it is and what it might be), on things that are based on empirical facts of the phenomena of upbringing and education and things that stem from the very nature of these phenomena — from the processes that develop and release all human potentials. Therefore, the reconstruction of the knowledge of upbringing and education lies in subject-aims of pedagogical and andragogical researches, in this matter the phenomena of upbringing and education are studied in the light of their authentic nature of other independent phenomena. In methodological sense, it is necessary to differentiate value-normative from cognitive statements of upbringing and education, that is, to make distinction between the methodological approach 'the exploration of the future' and the methodological approach 'the creating and modeling of the future'. It is hard to found futurological researches in pedagogy and andragogy that is not 'the promised future' without the recognition of the subject-aims of upbringing and education as a complex, dynamic and growing phenomena in which the adaptable function is brought down to the level necessary for proper functioning of the system of a different methodological set of instruments and copy such line of development which doesn’t represent a new quality. In the new millennium, this subject-foundation of pedagogical and andragogical research should be drastically changed. That is, the future research in pedagogy and andragogy should be based on the fact that education can give to the marx-socialistic system and all its subsystems all that ensues from its authentic nature and functionality. In the subject-foundation of the future research in the field of pedagogy and andragogy, what should
be changed is the orientation so that the education phenomena can be viewed as adaptable systems and subsystems of the global social system. Then, accordingly, the researchers could use the methodological set of instruments and orientation which could foresee such development in the future. On the contrary, the education phenomena in the future researches encompasses also the orientation which will take over the more or less constant position of adjustment. In this context of the future researches in pedagogy and andragogy, it is necessary to change the syntagm 'the future of education' into 'education and future', regarding education as a factor of future. It is already conditio sin qua non of the crises in which man finds himself today, not able to 'master' the macro and micro systems of life and work, which is the condition for his survival, existence and development. Provided they follow authentic needs, the human potential (of both a child and a grown-up), a man’s role in search for his own identity, his need and the possibility to live and create his own future and the future of society, the future research in pedagogy and andragogy will not fall into the trap of the ‘optimism of the enlightenment movement’, the misconceptions about future being predicted by technological rationality or seeing the egzistential problems of a person’s forming and self-forming in the short or long term prognoses of social changes and adaptation of a person and the society to the technological development. For the future pedagogical and andragogical research another factor is of great importance, namely the methodological points of those who consider the questions of future to be dealing not only with how to provide the material welfare and economic prosperity, but also how to find the meaning and potential of the life of an individual as a free entity, who will create the future instead of being just a passive observer of ‘the future to come’. The educational process had its place in this field in the past, it has now, and it will certainly have it in the future.
Education, as a creative activity (action) leaves one behin, and also its internal logic, its necessity, but this logic is not manifested as an immanent law of 'things', according to the logic of necessity as a mechanical event. In the theoretical-methodological sense, for the future research of education it is important to know the inner logic and structure of the essence of educational phenomena, 'the whole and its parts'. Some methodological sources of systematic-structural analysis, processes in studying the educational problems are necessary for establishment of future researches in the field of pedagogy and andragogy. However, not only a great number of pedagogical and andragogical researches are not directed to the future and deal with educational problems non-systematically, but they are also based on a difficult to accept attitude that 'the theoretical realizations have their meaning if they can produce hypothesis which can be checked (and confirmed)' and they also claim that in pedagogical and andragogical research a hypothesis is given which should confirm a 'theoretical' base.

'The claim that the hypothesis about future can be checked only when the future comes is completely trivial.' It seems that the future research in pedagogy and andragogy faces problems not only in choosing the facts and the data about educational phenomena, but also in the interpretation of the whole of these data. In this sense, the 'frame' for the future research in pedagogy and andragogy is subject and methodological foundation which will study the educational phenomena through anthropological role of education as a development phenomenon in the society and as a process which sets one's potentials free, liberates one form misconceptions about manipulation with man and his society.

Therefore, the future of education can appear as distorted picture in the mirror whose parameters of distortion are unknown. After all, there are many proofs for this in futurological examinations. The adult-
education from the futurological aspect is interesting from at least two aspects: the adults are interested for the future of their education in the context of the “learning society”, and the adults are creators of the future and the future of education. Therefore, when dealing with the adult-education in the concept of the all-life-lasting education the “education for the future” should be transformed into the “education and the future”, meaning the preorientation of the education as the future factor. Even today, it is necessary condition for changing the position of people in the conditions of crisis when they cannot control micro and macro conditions of their life and work, which is essential for their essence and existence. Although it is an unthankful and insecure task, because when forecasting the future we can be sure only about one, and that is: future comes after the present; (futurists -pessimists would say: “we’re not sure in that either”), but we will try just to mention what is necessary to be done on the plan of the adult-education in transitional changes for the future.

Adult-education in Croatia should be given the status of the public activity which, at least in the beginning, won’t be left to free market, but will be financially supported by the state and companies, just like the formal school education. Moreover, the systemic and legal regulation should be introduced if that activity is expected to function as a componential strategy and concept of the education throughout life. Furthermore, it is necessary to broaden the system and model of the formal adult-education, but also to promote nonformal and informal ways of education which should be well organised and available to the interested users. Models and ways of adult-education should be enriched with modernisation of methods, forms and technology in working with adults, and particularly with the systemic training of the program-performers of adult-education, in order to avoid voluntarism and pragmatism. It is questionable whether the transitional countries should
wait on the economic, political and entire social development, to make bases for the changes on the plan of adult-education. It is obvious that education, even if it is the education of adults, doesn’t develop from the social changes, but it has to be the constituent part and factor of transitional changes. Many transitional countries are aware of that, which is necessary for all, for Croatia as well, the sooner the better.

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