# Classical curriculum and Socratic dialogue: education in the 21st century

by Anno Hellenbroich

This paper was presented to the Education Commission of the Russian Duma on May 21. It has been translated from the German, and subheads have been added. Mr. Hellenbroich also gave a brief oral summary of the papers by himself and by Helga Zepp LaRouche.

If we are to successfully meet the challenges of the twenty-first century, we will have to make huge strides forward in science, technology, and the utilization of new technologies. But this will only happen, if, at the same time, we initiate a "renaissance in education and instruction."

In order to guarantee the future survival of human civilization (i.e., to guarantee a future for the 5.2 billion inhabitants of our planet), we need a radical transformation of the world economy, based on a "third industrial revolution." The future technology drivers proceeding from the development of space techologies, include controlled thermonuclear fusion; the industrial application of high-energy lasers, microwaves, and nuclear particle technologies; the development of technologies utilizing extremely hot plasmas and plasmas at extremely low temperatures (superconductors); overland transport systems for passengers and goods, based on the principles of magnetic levitation technology; and revolutionary new biophysical methods applied in agriculture and medicine.

Among the most important tasks in a global reconstruction of the world economy, is the infrastructural opening-up and development of Eurasia—a region where two-thirds of humankind lives today. The development of Eurasia as a common goal of all mankind, is, in turn, only realizable on the basis of a "renaissance in education" that goes hand in hand with the application of the very latest technologies.

This, however, is premised upon a return to the fundamentals of the Classical curriculum, a universal education built upon the groundwork of the Socratic method.

The methodological problem of education today, lies in the fact that it places much too much emphasis on encyclopedic "learning" (in accordance with the Aristotelian-deductive method), and too little emphasis on the Socratic transmission of knowledge. The Platonic method builds upon the "principle of hypothesis," namely, that the content of knowledge is "discovery," whereby such discovery is presented in the form of a metaphor, of a "Platonic idea."

The central feature of a Classical curriculum oriented to-

ward the "Socratic principle," is what Plato, Leibniz, Humboldt, and Schiller considered to be at the heart of all Classical education: universal education. Every citizen, regardless of profession, has the right to universal education; this was the chief demand raised by Wilhelm von Humboldt, the architect of the Classical humanist education system. According to him, the essence of education lies not in the imparting of specific skills; rather, it focusses on the formation of the student's character, his or her personality: that which enables each individual to discover important ideas on his own, while at the same time recognizing the universal significance of his own existence for all of humanity and history.

The major emphasis of a new Classical curriculum (and, of course, of its textbooks), should be upon the imparting of capacities enabling the student to replicate, or rediscover, on his own, the most important discoveries (hypotheses) that have been made in the course of human history in the domains of the physical sciences, philology, art, etc., and, thus, to become conversant with the three most important human "languages":

A. Spoken language—both the mother tongue, and other modern and ancient languages;

B. The *language of hearing*, which, in the domain of musical education, encompasses the hearing of Classical polyphony;

C. The *language of vision*, which brings into play both education in the physical sciences, as well as aesthetical education in the plastic arts.

A Classical curriculum must revolve around the following four central subjects:

#### 1. Education in the natural sciences

The guideline here, is the replication of the greatest scientific discoveries in the history of mathematics, physics, biology, astrophysics, and so forth. The methodological emphasis must generally be less on arithmetic and logical learning, so that all the more attention can be devoted to the "constructive geometric" method (e.g., construction of geometric models, and replication of discoveries with the aid of original writings, so that the "method of discovery," the *ars inveniendi*, can be instilled).

Lyndon LaRouche, in a 1992 memorandum written for the Schiller Institute, pointed to six discoveries of new scien-

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tific hypotheses which are particularly well-suited for introducing students into the "secrets" of this method:

- a) Nicolaus of Cusa's work on the problem of the squaring of the circle, and his demonstration of why no linear construction can possibly square a (transcendental) circle;
- b) Leonardo da Vinci's insight into the mathematicalphysical significance of harmonic orderings and proportions in nature:
- c) Kepler's application of Leonardo's hypothesis of the "Golden Section" as the starting-point for the development of a comprehensive mathematical physics;
- d) the discovery of cycloids and non-algebraic functions (isochronicity and brachystochronicity) by Huyghens, Leibniz, and the Bernoulli brothers;
- e) the discovery of transcendental function theory in the nineteenth century, through the work of Monge, Carnot,

Gauss, Dirichlet, Riemann, and Weierstrass;

f) the further development of the line of hypothesis started by Cusa, through the discoveries presented in 1890 by Georg Cantor in the domain of transfinite functions.

Scientific education in Russia, for example, should pick up on the scientific method of Vernadsky and Mendeleyev.

#### 2. Language

a) Spoken language: This includes, most emphatically, a thorough understanding and mastery of one's own mother tongue. In addition to the necessary modern requirement of learning at least two foreign languages (English and so forth), which should begin in elementary school, there must also be, as Leibniz and Humboldt correctly emphasized, instruction in ancient languages such as Greek, Sanskrit, and Latin. This includes readings of the original texts by such authors as

## George Soros's cultural offensive against Russia

Schiller Institute representative Anno Hellenbroich, in his oral presentation to the Duma on May 21, summarizing the written papers submitted by himself and Helga Zepp LaRouche, added a criticism of "the shameless buy-out of Russia's scientific intelligentsia by such people as George Soros (who proudly lists his profession as 'speculator')." Soros's \$260 million financing for new schoolbooks in Moscow, said Hellenbroich, and of New Age utopias at Russian universities networked with information superhighways, "will only destroy any true educational renaissance."

Hellenbroich continued: "George Soros, a propagandist of the 'virtual reality' of the information society, is a typical representative of the New Age movement, which, under the banner of 'freedom and democracy,' pushes its own agenda, which involves a quasi-subversion of the modern nation-state. In Italy, Soros is currently the target of preliminary investigations into possible violation of the lira stability laws in the course of his speculative devaluation attacks."

We provide here additional information on Soros and his "education program."

President of the Soros Fund and adviser to the \$12 billion-plus Quantum Fund, George Soros was born in Budapest in 1930, graduated in 1952 from the London School of Economics, and went, in 1956, to the United States. In 1979, he founded the Open Society Fund; in 1984, the Soros Foundation-Hungary; and, in 1987, the

Soros Foundation-U.S.S.R. At present, the Soros foundations work in 24 countries in central and eastern Europe, in South Africa, and in the United States. Since 1988, Soros has been a member of the board of the Institute for Human Sciences, which annually sponsors a speech by a renowned (or perhaps more precisely, notorious) individual. In 1989, it was former U.S. National Security Adviser Zbigniew Brzezinski; in 1992, French deconstructionist author Jacques Derrida. In 1995, Soros himself was the speaker.

The Soros Fund provided \$260 million to the independent Moscow "Culture Initiative" fund, to put together and print schoolbooks. The result was some 200 new textbooks in philosophy, science, religion, and language instruction. A most significant project for the future, is \$8 million being provided for the development of new curricula for central and eastern Europe, as reported by the April 29, 1995 Salzburger Nachrichten.

#### The Central European University

Such activity must be viewed side by side, with the vast array of Soros-related activities in the East, through the agency of the Central European University (CEU), the which he established in 1990. The CEU is now headquartered primarily in Budapest, with important branches in Prague and Warsaw, and with tentacles stretching throughout eastern and central Europe. It is the key cultural/"intellectual" arm of the Soros empire, its activities overlapping and/or bankrolled by such Soros entities as the Open Society Institute and the Open Media Research Institute. For a student to apply for enrollment in the CEU, he or she must apply through the Soros Foundation located in that person's country of origin. The CEU has been awarded a provisional university charter under the regulations of the Regents of the University of the State of New York, and is

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Aeschylos, Plato, and Cicero. As Humboldt correctly recognized, the learning of ancient languages is equivalent to "geometric training" for constructive thought; all great nineteenth-century discoverers were fully conversant in the ancient languages.

In order to master one's mother tongue, and be able to express ideas in the form of metaphor, one must be fully acquainted with one's own Classical national poetry, as well as being on intimate terms with Classical European literature. A language curriculum which is oriented toward the Socratic method, must therefore lay great importance on familiarity with the literature of the Renaissance, in which "Socratic dialogue" plays a central role (as was recognized, for example, by Alexander Pushkin in his own creative work). This includes the works of Dante, Shakespeare, Rabelais, Cervantes, and Erasmus of Rotterdam, who were followed, later, by the

expected to get a full university charter in 1997.

The CEU brings together an array of British and Anglophile-American influentials. The chairman of the Board of Trustees is Soros. Other trustees include Dr. Colin Campbell of the New York-based Rockefeller Brothers Fund; Lord Ralf Dahrendorf of St. Antony's College, Oxford; and Dr. William Newton-Smith. The latter is a member of the very exclusive Hebdomadal Council, the ruling body of Oxford University. The academics involved in the CEU are, in most cases, directly affiliated with Oxford, the London School of Economics, the Royal Institute of International Affairs, or other British institutions. As noted, Soros himself is a graduate of the LSE, where he studied under the late Sir Karl Popper.

The CEU curriculum focusses on various positivist and neo-Nietzschean "deconstructionist" themes, including various themes popularized by the so-called Frankfurt School of Theodor Adorno, Hannah Arendt, et al. In recent years, Jacques Derrida was a visiting scholar of the CEU. One of the ironies is, that in pushing such curricular offerings as the ideas of the Frankfurt School, Soros's operation is sponsoring exactly those ideas which produced communism in the first place—such as those of Soros's fellow Hungarian Georg Lukacs.

The curriculum systematically eliminates all ideas in history which run counter to the worldview being inculcated. For example, one course offered at the CEU-affiliated Centre for the Study of Nationalism, in Prague, describes the "distinct Western traditions" to be offered to people in eastern Europe as "Hegelian, positivist, phenomenological, Durkheimian." A course at CEU's Political Science Department in Budapest is entitled, "Early Modern Political Philosophy: Hobbes, Locke, Rousseau, Kant, Hegel."—Mark Burdman

Classicists Schiller, Pushkin, Heine, and others.

b) The language of hearing: The most neglected and ruined category of modern education, is the requirement of a thorough Classical musical education. Man's sovereign, creative potential, the wellspring of all creative discovery, is also the chief source of all creativity in art in general, and particularly so in music.

The root of all Classical polyphony in music is Classical poetry, reaching back into the ancient poetic strophic forms. Classical music is based on the principle of *bel canto* vocalization; already by the early sixteenth century, Leonardo da Vinci had proven scientifically, that the strength of the human voice increases in accordance with certain biological characteristics of the human voice, and its differentiation into definite registers. For every Classical composer, knowledge of these laws was elementary.

Teaching of Classical compositional method must also introduce the *Motivführung*, or motivic thorough-composition, of Haydn, of Mozart (including his study of Bach), and of Beethoven, who revolutionized the *Motivführung* principle.

A few years ago, the Schiller Institute published A Manual on the Rudiments of Tuning and Registration, as a suggestion for what a Classically oriented music education curriculum would include. In order to produce this book—which now exists in English, Italian, and German editions—the entire original literature of the bel canto tradition was combed through; at the same time, discussions were held with the world's best singers and instrumentalists on the problem of excessively high tuning, and on the adequate interpretation of the Classical Lied and other forms. Among those consulted were the singers Placido Domingo and Carlo Bergonzi, who, along with many others, signed a petition for a campaign for lowering the standard tuning-pitch, as well as Prof. Norbert Brainin, formerly of the Amadeus Quartet.

The book describes the six species of human singing-voice, as these emerge from sung poetry and Classical musical composition. It is thus an exemplar of the kind of textbooks that we ought to produce in the other fields—natural sciences, history, geography, and language. A second volume of the *Manual*, currently in preparation, will deal with the registers in the Classical musical instruments as these are derived from the human singing-voice, and also with *Motivführung* as a Classical musical compositional method. Both volumes include copious citations from the compositions of the past 500 years, and attempt to give a pedagogically effective presentation of the most significant discoveries in the history of musical polyphony.

c) The language of sight: Under the first point above, I already referred to the significance of "assimilation and replication" of the crucial discoveries in the domains of mathematics and physics (geometry). But the language of sight also includes the domain of the graphic arts and painting. The study of perspective, whose discovery represented a milestone in human history, is therefore particularly well-suited

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Author Anno
Hellenbroich conducts a
rehearsal for a Schiller
Institute performance of
Bach's St. John Passion,
in Munich, Germany,
March 1996. "The most
neglected and ruined
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for familiarizing the student with the representation of space, and with making the beauty (metaphor) of a work of art intelligible, while, at the same time, something fundamental is expressed about the workings of the human mind. Important examples of this can be found in the perspective studies for Renaissance paintings, such as those of Leonardo da Vinci, Raphael, Dürer, and, later, Rembrandt.

#### 3. Philosophy

A major area of emphasis must be the study of ancient Greek philosophy, and the two resulting, opposed epistemological currents of thought in the history of philosophy: Aristotelian logic, empiricism, positivism, and existentialism on the one side, and, on the other, Plato's conceptual method, and the development of the Platonic current of throught, stretching from St. Augustine to Leibniz. Basic readings are, for example, the works of Augustine, Nicolaus of Cusa, G.W. Leibniz (who conceived of the humanities and the natural sciences as a single domain), and the subsequent conflict with the Enlightenment, such as in Immanuel Kant's writings against Leibniz.

#### 4. History

History must be considered from the standpoint of the demographic, technological, and cultural development of human societies and civilizations. Of crucial importance, is the measurement function of "potential population density"

(LaRouche) as a measure of a civilization's success or failure.

With the aid of this method, the teaching of history should demonstrate what invariant principle has always led to the collapse of civilizations; and likewise, through study of the eras of greatest blossoming, it should demonstrate what invariant principle (from the standpoint of statecraft, culture, science, and the image of man) constitutes the foundations of humanity's renaissance periods. The social models studied should include oligarchical ones, such as Babylon, Sumer, and the many other empires throughout history, and, on the other hand, renaissance periods, such as the high-points of Egyptian, Ionian, Carolingian, and Arab culture, and the European Renaissance in the fifteenth century.

It would be useful if the study of the military sciences, and the thinking of great military strategists on such subjects as the principle of the "flank," also flowed into such a curriculum.

Friedrich Schiller's address on universal history is a good point of reference for what should be understood under this rubric. The task is to focus on the two contrary, opposing concepts of nation-state and empire. This should include the study of various states' theories of state and law, such as, for example, Plato's theory of the state, as opposed to that of Hobbes. The particular areas of study should include the formation of the first sovereign nation-state under Louis XI of France in the fifteenth century, and the emergence of the

United States as the first modern republic based on Christian natural law. It would also be fitting to include selections from the relevant diplomatic correspondence, so that, on the basis of "living, replicatable" history—down to the decisions of a single person, who must decide whether there shall be war, or peace—current strategic events can be made intelligible to the student.

Another point of emphasis must be the study of the *eco-nomic sciences*:

- a) Early forms of Cameralism: the economic school of Naples, Colbertism in France; Leibniz as founder of the modern school of physical economy;
- b) The "American System" of Hamilton, Carey, and Clay, in opposition to the physiocratic model and the British free-trade system of Adam Smith et al. (which includes the problems of Marxian economics);
- c) The principles of physical economy in Europe: the work of Friedrich List, Sergei Witte, et al.;
- d) Successful economic models in the nineteenth and twentieth centuries: e.g., de Gaulle's "indicative planning," the Japanese MITI project, Roosevelt's New Deal, and shining examples from Russia's economic history—Witte, Podolinsky, and others;
- e) Economic models for the twenty-first century: the LaRouche-Riemann model, and its included emphasis on the *science-driver* principle (scientific and technological progress as the economy's "motor") for the construction of modern nation-states.

#### The heritage of Leibniz

In conclusion, I would like to add a reference to the spiritual father of physical economy, Gottfried Leibniz, in order to hold up the mirror, as it were, of his fascinating proposals of 350 years ago, before our present challenges. During the devastating years immediately following the Thirty Years' War, Leibniz, guided by his vision of collaboration among Europe, China, and Russia, set down the foundations of a modern Europe. He recognized that the key to this, was the infrastructural opening and development of Eurasia, especially of Russia and China. This, in his view, would be attainable only if it went hand-in-hand with an educational and cultural renaissance—i.e., if it were possible to successfully impart to the individual, the entire sum of knowledge and invention of all humanity, and, thereby, to instill within him the art of invention (*ars inveniendi*) itself.

To that end, humanity's very best knowledge, from ancient times onward, must be rediscovered anew, Leibniz wrote to Czar Peter I in a 1716 memorandum. This knowledge, and these discoveries, should be so ordered, "that from it, one could see *origines inventionum*, that is, how human beings arrived, or how they were able to arrive, at inventions and sciences; for, such a type of teaching would also be a marker showing the path toward improving our science and new inventions."

### Soros under investigation

The following are samples of the press coverage of the investigation in Italy into George Soros's role in speculating against the lira in September 1992. Paolo Raimondi, president of the International Civil Rights Movement Solidarity, presented a legal paper to the state prosecutor in Milan on Oct. 27, 1995, and later in Rome, Naples, and Florence, asking them to investigate Soros's financial activities.

Atti Parlamentari, Nov. 6, 1995, the official record of the Italian Chamber of Deputies reports on the legal paper against Soros presented to the prime minister and the justice minister by deputies Parlato and Gasparri.

Italia Oggi, Milan-based economic daily, front page, Nov. 1, 1995: "Soros Does Not Deserve to Receive the Honorary Economic Degree." The Solidarity Movement protested against the decision of Prof. Romano Prodi to give an award to Soros at Bologna University on Oct. 30. Prodi, who enjoyed the support of speculator Soros, won election on April 22, 1996 as the leader of the former Communist Party-controlled left coalition. Later, Prodi was named prime minister.

*Il Secolo d'Italia*, daily of the main conservative party, National Alliance, Feb. 2, 1996: "He Speculated Against the Lira: Soros Under Suspicion."

*Il Tempo*, leading Rome daily, front page, Feb. 3, 1996: "Soros, 'the Vulture of the Lira,' Under Investigation."

Il Giornale, national conservative daily published in Milan, Feb. 4, 1996: "For the Civil Rights Movement Solidarity, the Financier Collapsed the Lira: Exchanges, Soros Denounced."

*Il Giornale*, March 5, 1996: "Speculation: Soros Under Investigation."

Corriere della Sera, main Italian daily published in Milan, March 5, 1996: "The Big Speculation of '92: Soros Investigated by Greco" (Milan deputy state prosecutor).

*Il Mondo Economico*, main Italian economic weekly, March 3, 1996: "Put Soros Under Scrutiny."

La Stampa, daily owned by the Agnelli family, March 11, 1996: "Trains, Steel, and Tribunals: the Comeback of Mr. Soros."

*L'Espresso*, main Italian weekly, March 15, 1996: "Soros in Italy: Buys up Steel and the State Prosecutor Looks On."

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According to Leibniz, the education of a nation comprises three things: 1) obtaining the means to improve the arts and sciences, 2) educating people into science, and 3) gathering new information on scientific progress. For this, Leibniz called for the establishment of printing houses, bookshops, and especially libraries, which would gather together books and manuscripts "in Slavonic, German, Latin, and living European languages, i.e., English, French, Welsh, Spanish, and also Greek, literary and vulgar Hebrew, Arabic, Syriac, Chaldean, Ethiopian, Coptic, Armenian, and Chinese: humanity's best knowledge and most important discoveries. A central library should be of such quality that as many people as possible could find complete information on all histories, countries, languages, natural and artificial things, businesses, sciences, foods, and professions, so that the entire treasury of human knowledge, to the extent that this has been put down on paper, is available there."

Leibniz further encouraged the establishment of a science museum, where the most important discoveries of the age, all "optical, astronomical, architectural, military, nautical, mechanical, and other inventions" would be presented. This was to be complemented by a technology museum (*Theatrum naturae et artis*), to which would belong "an observatory, laboratory, armory, and munitions depot . . . where, also, relatively large-scale models of all sorts of useful inventions

would be located—especially all sorts of milling devices, levers, waterworks, and many types of machines used for mining."

In still earlier memoranda dating back to 1697, Leibniz repeatedly spoke of the significance of building up a national educational system, which would begin with elementary school and extend beyond the university to the academy, and would combat the population's ignorance and backwardness. For him, the key to national education was to develop the character of the individual, and to impart knowledge to him. Alongside religious instruction and a comprehensive scientific education in mathematics, physics, etc., Leibniz repeatedly stressed the significance of learning many languages, regardless of the person's profession, be it craftsman, salesman, statesman, military, or academic.

If, today, on the threshold of the twenty-first century, we succeed in presenting anew the best fruits of the Platonic-Leibnizian tradition to the coming generation; if we succeed in establishing a "Classical educational pathway," then citizens will be able to use their assimilation and transmission of old discoveries, and their creation of new ones, to successfully shape the future of our human family, whose number is fast reaching the 10 billion mark. And then, a new high age of humanity could spring forth from the tragic ashes of the present century.

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