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the key strategic issue**



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EIR

From the Editor

For the new year, we offer a "Collector's Edition," grouping together articles which address the fundamental conflict at the root of the present strategic crisis.

Some of the articles printed here have never appeared elsewhere—including a precious gem, Lyndon LaRouche's 1976 "Laughter, Music, and Creativity." Others, like the transcript of LaRouche's taped speech to the September 1990 conference of the International Caucus of Labor Committees, and the new translation of Nicolaus of Cusa's ecumenical dialogue *De pace fidei*, have previously been published in *New Federalist* newspaper, and we give them here a more permanent form. The selections by Cusa and Leibniz are included so as to document the tradition of Christian civilization which LaRouche evokes in the introductory piece. A substantial section is devoted to classical music, because it is the most universally accessible form of that culture which is under assault by the satanic, neo-malthusian exponents of the rock-sex-drug counterculture.

As 1990 draws to a close, it has never been more evident that LaRouche's forecast of the doom of the United States under the policies that have prevailed since the death of John F. Kennedy in 1963, was right, and that all of his enemies and detractors were wrong. U.S. financial institutions skid toward collapse. The spectre of economic depression is everywhere around us. War is at the gate in the Persian Gulf, as President Bush has boxed himself into an insane stance foreordained by the Anglo-American oligarchy's decision to deny development to the undeveloped or under-industrialized countries of the "South." A "Third Rome" imperialist faction is insurgent in Moscow, and unless LaRouche's solution of turning the Berlin-Paris-Vienna triangle into an industrial locomotive for world economic recovery is enacted, there will be world war, or a holocaust even worse than war.

This is a revolutionary era. As the poet Shelley expressed it, "The most unfailing herald, companion, and follower of the awakening of a great people to work a beneficial change in opinion or institution, is poetry. At such periods there is an accumulation of the power of communicating and receiving intense and impassioned conceptions respecting man and nature." And so to poetry, taken in the widest sense, we dedicate this issue.

Nora Hamerman

On the subject of Christian civilization

by Lyndon H. LaRouche, Jr.

Lyndon LaRouche delivered the following keynote address via audiotape to the Sept. 1-2, 1990 conference of the Schiller Institute in Crystal City, Virginia. LaRouche, who has been a federal prisoner in the United States since his conviction in late 1988 on a series of trumped-up conspiracy charges, of which he is absolutely innocent, is chairman of the International Caucus of Labor Committees, an international philosophical association.

I. The strategic focus of this global crisis

Let us consider first, the strategic focus of this present global crisis.

We assemble this day, under the darkening shadow of a global strategic crisis, a crisis which is reaching toward the remotest corners of our planet, and into the most jealously guarded, most private places, where deluded persons might seek physical and mental refuge from awareness of unpleasant truths.

We are sitting presently, in a process leading toward the possibility of a new world war. On the surface, it is the heirs of Britain's evil Castlereagh who are orchestrating such a war, in the same geopolitical fashion they caused World War I.

Events in the Middle East cockpit are being orchestrated by British intelligence and diplomacy, to the purpose of pitting France and Moscow against Germany, and against Japan: all leading toward a later, nuclear conflict between Moscow and the Anglo-Americans.

If such a war comes, it will degenerate, as the 1618-1648 Thirty Years War in Central Europe degenerated.

To be specific, it will degenerate into a form of total war, which history usually associates with so-called religious wars. The character of any future world wars of this present time frame, the period ahead, would indeed be derived from the fact that the root from the present, global strategic crisis is a presently, most visible



Stuart Lewis



Bob Ingraham



Phillip Ulanovsky

Prince Philip of Edinburgh, leading promoter of causes that amount to the attempt to exterminate Christianity from this planet, such as (from left): the depopulation lobby; "Earth First" environmentalists demonstrating for the spotted owl; and the "punk" counter-culture.

effort by some to eradicate Christianity from this planet. It is to that deepest, axiomatic feature of the crisis, that I address my present remarks.

Before proceeding to that specific undertaking, it is of more than a little practical importance that I identify a few ground rules for the discussion which I am provoking.

We assembled represent an international philosophical association, ecumenical in its composition. Thus, whenever we address matters of religion, as we are obliged to do that here, we allow no proposition to be presented, either as premise or topic of discussion, unless the truthfulness or error of that proposition, is to be subjected to those tests of truthfulness, which I associate with the term "intelligible representation."

For convenience, I reference the definitions of such intelligible representation supplied in the texts of *In Defense of Common Sense*, and *Project A*.*

That said, we reference the fact, that the essence of the present global crisis is typified by the fact, that the British Royal household's Prince Philip, the Duke of Edinburgh, has taken a leading, public position, in his words and in his corresponding practice, in promoting causes amounting to the attempt to exterminate Christianity from this planet.

Strong words, but true words. *There is no exaggeration*

**In Defense of Common Sense*, by Lyndon H. LaRouche, Jr., Schiller Institute, Washington, D.C., 1989. " 'Project A': LaRouche discusses his solution to the 'riddle of the ages,' the Parmenides paradox of Plato," *EIR*, Oct. 26, 1990.

in that. The Prince's own words are clear. That factual observation situates the following proposition which we shall consider here.

Why must an informed Vedantist, Jew, Buddhist, or Muslim, view Prince Philip's expression of pro-bestial hatred of Christianity as representing a threat to the continued existence of the human species?

It is implicitly obvious, that that form of proposition pertains directly to the concept of successful or durable survival, treated in my text, *In Defense of Common Sense*, and also treated more extensively in *Project A*. Thus, we are putting this question, although it is a religious question, in a rigorous, scientific setting. We are treating it as a scientific question. Thus, what some religion says, whether Christian, Jewish, or others, or seems to say, according to some putative authority, is irrelevant here, except that that proposition is sustained on the same basis of method, which I employ as typified by the outline of method in the two texts referenced.

So when we say, as I shall, in conclusion of this report, that Christian civilization is the highest form of social order yet obtained by man, and thus must be defended by all humanity, as in the vital interests of all humanity, I am stating a scientific proposition with conclusive scientific proof, which does not rely upon the arbitrary assertions of any interpretation of a religious text in the fundamentalist, or kindred, sense.

The essential proofs of Christianity, in any case, have always been contended to be, by the leading Christian theolo-

gians, truths which were evident, *even if no text existed to assert them*. As Christ says in the Gospel (St. Luke 19:40): "The very stones might speak." Indeed, the stones and stars, as we know, do sometimes speak, in their own way, as they bespeak perceivable natural law, susceptible of intelligible representation by aid of the creative powers of reason of mankind.

The conflict we face can be more broadly described in the following terms.

For the past 2,600 years, European civilization has meant essentially, at foundation, the opposition of Athens, as well as the Ionian city-state republics, to the usury-practicing culture of Babylon, of Mesopotamia, and has meant the overthrow of the usurers at Athens, by the so-called constitutional reforms effected by Solon of Athens.

We trace European civilization thus from Solon, in those terms of approximation. We trace that civilization through the exemplary work of Socrates and Plato. We thereafter treat Socrates and Plato as they would treat themselves, had they been converted posthumously to Christianity: as Augustine, and as Cardinal Nicolaus of Cusa, for example, exemplify Christianity.

We thus treat Christian civilization as an anti-oligarchical, anti-usury culture, extended as Christian civilization, implicitly, from Solon of Athens, overturning of usury in Athens, through to the present time.

The chief adversary, over most of the 2,600 years to date of Christianity, has been pagan Rome: the pagan Rome which we identify, sufficiently, with such names as the anti-Christ, the Emperor Tiberius, the Emperor Nero, the Emperor Di-

ocletian. These are the enemy.

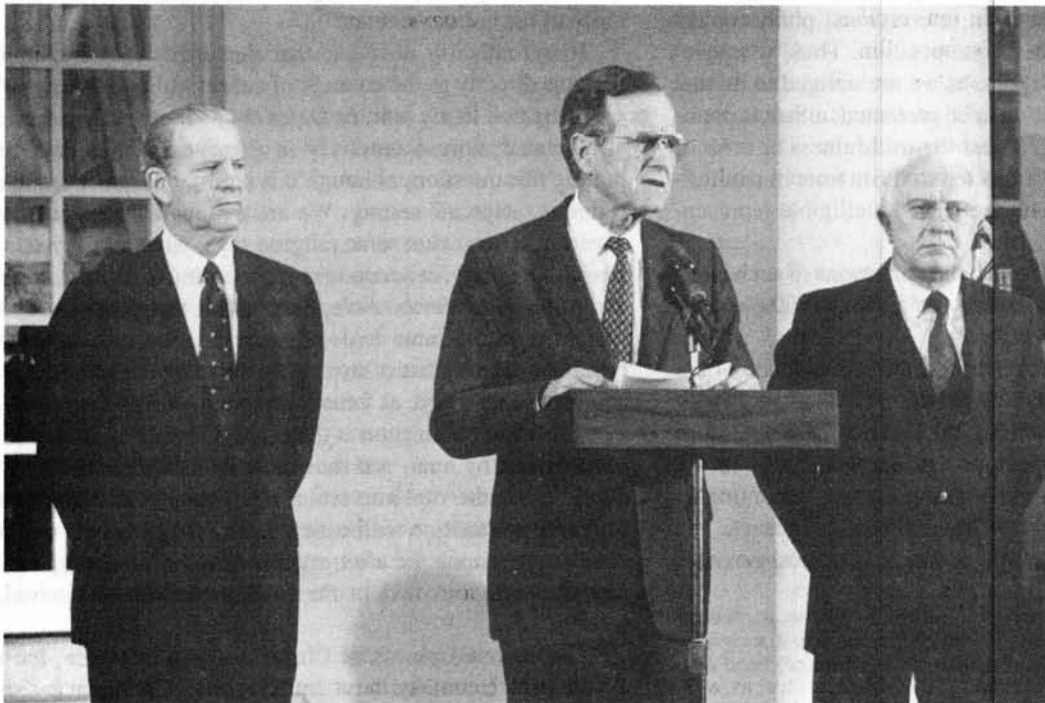
In more recent times, the enemy of Christianity within Europe, or the chief enemy, has been an oligarchy, which is characterized by its promotion of the licensing or practice of usury, and which has recurrently turned to pagan Rome for models as to law, as to social custom, and as to relations among states.

The most relevant case, for our present purposes, is the rise of what is called Romanticism, together with British liberalism, which is the same thing as Romanticism, in Britain and on the continent, during the eighteenth century. Examples of Romanticism on the continent, of course, are Voltaire, and all of his friends: Montesquieu, Rousseau. In Britain, David Hume and Adam Smith are examples of Romanticism, as well as Gibbon, or Jacques Necker, the man who ruined France in the eighteenth century, or his daughter, who spread the virus of Romanticism into Germany so prolifically: the Madame de Staël.

Romanticism is the modern form of the enemy, which leads to a second form to which I'll come in a moment, a second expression of Romanticism: the Dionysiac form.

Romanticism proposes essentially to uphold pagan imperial Rome, and the idea of a global one-world empire, a Pax Romana, so to speak, modeled upon pagan imperial Rome, as the hero; and Moses, and the Christianity associated with Moses, as the arch-enemy.

It is not Judaism as such which is the target of paganism, but rather, Mosaic theology; the ancient Judaism of Moses, rather than something which is mixed with Babylonian myths such as cabbalism, a pseudo-Mosaic concoction,



President George Bush flanked by James Baker III and Eduard Shevardnadze following a meeting on the Gulf crisis at the White House on Dec. 12, 1990. Events in the Middle East cockpit are being orchestrated by British intelligence . . . toward a later, nuclear conflict between Moscow and the Anglo-Americans.

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cooked up since..

Thus, in modern times, especially since the eighteenth century, since the time of the enemy of Christianity, the first Duke of Marlborough, and his success in enthroning liberalism under the new United Kingdom, it is Romanticism, and its successor, modernism, which have been the enemies of Christianity, the enemies of Christian civilization.

Thus, we have the picture.

Within Europe itself, and the Americas, of course, by extension, we have two European civilizations: one is the basic civilization, whose achievements all rest upon what we might call the republican current, or Christian current, as identified with Solon, Socrates, and Plato, in the manner I indicated.

The second, is oligarchical Europe: the oligarchy, the aristocracy, the nobility, who practice usury, or who promote it; and who turn to the model of pagan imperial Rome, to the model of Tiberius, of Augustus, of Nero, of Diocletian, and their policies, as the antidote to anti-usury republicanism.

Now, in this time, we've come to a conflict which flows from that conflict within European civilization. The oligarchy, the pro-usury oligarchy, the pagans, represent the standpoint of the British empire, for example. The British empire was explicitly devised as a concept, during the eighteenth century, developed by the Romantics, as an empire based upon the pagan imperial Roman model. Napoleon Bonaparte, for example, later, was an instance of the pagan imperial Roman model introduced as a cult idea, into the politics of France.

The pagan imperial Roman model was adopted by the Russians, as early as Philotheus of Pskov, in 1510 A.D.

But, out of this imperial design, typified again in 1815 and thereafter by the Holy Alliance, calling itself Christian, but actually based on a *pagan* model, pagan imperial Roman model, we have emerging the idea of the management of the balance of power, as a way of crushing out of existence the form of statecraft which reflects the Christian republican tradition.

This led to World War I. The British, working against Gabriel Hanotaux of France, Sergei Witte of Russia, and others, connived with others, *to prevent* economic cooperation from developing among France, Germany, and Russia, among others, with the view that if these three powers collaborated, and, in turn, collaborated with Japan, and against British interests in China, that the Eurasian continent, so dominated by economic development, would become an unbeatable force, from the standpoint of Britain. Thus, Britain connived, in its so-called Great Game, to pit Russia and France against Germany, and to utilize the decay of the Ottoman empire, with the attendant Balkan crisis, to create what became World War I.

Britain then acted, following World War I in the 1930s, to recreate that circumstance, with British interests, as well

as the Harriman interests in the United States, working to bring Adolf Hitler to power, for that purpose: to launch and create World War II, which, however much they may have regretted later, they caused.

So today, forces in Britain seeing the rise of a reunified Germany, and a shattered Russian empire's *dependency* upon economic cooperation with Germany for its own mere survival, fear again that the continent of Europe, dealing with the crisis of the development of Russia, and reaching out to nations of the rest of Asia, and other parts of the world, would present a powerful economic force, which British imperialism, in its new form, or Anglo-American imperialism, could no longer dominate.

And thus, today, again, Britain, through a certain faction in the tradition of the evil Castlereagh, has moved, with the Middle East crisis, to attempt to manipulate Russia through its oil-lever, against continental Europe, with Britain, and thus, to set France and Russia again against Germany, with the ultimate view that this must lead to, not a Germany-Russia war, but a nuclear war between Russia and the Anglo-Americans.

If this war were to occur, the result would be, as I've otherwise indicated, a degeneration of war as occurred in the Thirty Years War, 1618-1648. The proud armies of Wallenstein, coming into the field of battle, might prevail in the initial battle, as U.S. and other forces might prevail if they attack Iraq. *But, in the aftermath of that apparent success, there would be unleashed a form of total war, which we associate, as historians, with the worst and most ferocious, and most embittered of religious wars.*

In that, and related forms, the warfare ignited at one fuse, such as, say, Iraq, would spread across the planet: not all at once, but over days, over weeks, over months. And, the days and the months and the years would pass ever more precipitously, as was the case in the Balkans, as in the period 1910 to 1914. But this time on a global scale, and more bitter, and more profound, until a little spark—and the spreading conflict from that spark, uniting with other sites of conflict and wars—spread around the world, and aligned the whole world in a form of warfare, best described as total war, in which all kinds of weapons, ranging from fists and hands clenched at the throat, and rocks bashing skulls, to the most modern weapons, are deployed with man on man, nose to nose, and knife to back, throughout this planet.

That is the nature of the conflict we face.

So, we have, in organization of the conflict, as I've already indicated, the geopolitical form, with the British and Anglo-American elements attached to the British, attempting to replay the continental Europe balance of power game, as it was played earlier during this century, and, indeed, since the founding, and pre-founding, of the Holy Alliance, back in 1815.

At the same time, these British forces are focused upon a North-South conflict: the attempt to shift (at least temporary-



Marchers at a New York "gay rights" parade in 1983. The rock-drug-sex malthusian counterculture, which has erupted with such increasing force since 1963, came out of the projects of the Frankfurt School.

Stuart Lewis

ly) the conflict from the Cold War conflict of East-West, to North-South: in effect, to conduct population and raw materials wars against those regions of the world, whose populations have skin colors somewhat darker than those the British most admire, to put the point bluntly enough. And thus, the Middle East becomes the cockpit for a world war: not merely because of oil, or because of any other reason. But, precisely because, strategically, it is the crossroads between the East-West and North-South points of conflict. And, that must be prevented.

However, the struggle is not simply a struggle between the Roman pagan imperial idea and Christianity.

Toward the latter part of the nineteenth century, and then into the twentieth, in a second phase, there was the rise of modernism, beyond Romanticism. The reasons generally were very obvious ones.

Romanticism, while it eroded, and damaged, the republican movement greatly, during the period of the eighteenth century and early nineteenth, nonetheless was unable to suppress entirely scientific and technological progress, and unable, thus, to abort the improvement of mind of the general population, an improvement of the mind which caters to political freedom, as it caters to the power of intellectual freedom. And thus, those behind the Romantic idea, had to resort to more desperate means to attempt to uproot Christianity.

We had, thus, the existentialists of the nineteenth century, in which one would include, properly, Ruskin of Oxford University, and so forth. But more notably, people of the

stripe of Friedrich Nietzsche, and Aleister Crowley, and that crowd.

These fellows said explicitly, we must develop a cult, a destructive cult, modeled upon the Phrygian cult of Dionysus, or the Greek cult of Apollo, and counterpose that to Christianity, to use this form of Anti-Christ, to destroy Christianity: to use Dionysus, to use the *Wassermann* (waterman, the cult of Aquarius) to destroy the era of Pisces, Pisces being the symbol in astrological doubletalk for Christianity, and for Socrates.

We had a similar event occur right after World War I.

Bolshevism failed to conquer Western Europe, as it had taken over Russia. This disturbed the Bolsheviks and their sponsors very much. And, to that effect, a fellow called Georg Lukacs appeared in Germany, around circles associated with Max Weber's tradition, on an occasion which Lukacs laid out, what became the program of the Frankfurt School, the Frankfurt Institute for Social Research.

Lukacs said, essentially, that bolshevism had failed to conquer Western Europe, because Western European civilization had an inoculation, an immunological potential, against the virus of bolshevism: That essentially was Christianity, the Christianity in the tradition of a Socrates and Plato converted, posthumously, to Christianity. Therefore, Lukacs proposed, we must *destroy* this Christian immunological trait, this Platonic trait of Christianity, as a precondition for effectively infecting Western Europe with the bolshevik virus.

Out of that, came the projects of the Frankfurt School; out

of that came the rock-drug-sex malthusian counterculture, which has erupted with such increasing force, since the inauspicious year, or auspicious year, 1963.

Since that time, there has been an outright, increasing effort to destroy Christianity per se. In the United States, this erupted to the surface most conspicuously with the work of Supreme Court Justice Hugo Black, in using the mythical argument of Jefferson's supposed moral separation between church and state, to create a vacuum to the effect that, while Christianity is outlawed from our public schools, Satanism is invited in, under law. And, by these attacks upon Christian morality, and the attempt to substitute Roman-style, Pagan ethics for Christian morality, we have at least two generations of young Americans, for example (and in other countries, similar conditions), who are essentially morally destroyed, or disoriented, who have *lost the immunological potential* to resist such viruses as bolshevism, fascism, and so forth and so on.

And thus, when Prince Philip says that man must give way to the rights of the beast, that the human population must be curtailed on this account, one finds that today, what would have been impossible two generations ago, erupts: that we have the animal rights movement, wild terrorists, completely irrational, insane, as insane as maenads, preparing to tear the society down, for the sake of a spotted owl, or a red squirrel, or even some lower variety of species.

And thus, that is the nature of the danger to civilization, on the negative side.

But, on the positive side, there's something else.

Christianity contains something superior to any other form of culture, objectively speaking, which is not a property of Europe, in the strict sense, or of the Americas. *What has been contributed to Christian civilization is the rightful property of every person on the surface of this planet.* And to that, let us turn next.

II. The map of the human mind: rendering policy-making intelligible

Before we look at the specific qualities of Christian civilization, which make it so superior, as well as unique, we have to glance briefly at matters which are covered at some length in the two texts already referenced, but which should be restated at least summarily here, for the benefit of those who may not have read, or may not have studied adequately, the two texts involved.

Very few people, unfortunately, know what the term *mind* ought to mean. At least, they don't know what it ought to mean in any scientific sense.

Most people, for example, would tend to accept, at least as a proposition, the idea that *rational* means *logical*; and by logical, they would mean formal deductive logic.

But, this is not true.

We know today, of course, the embarrassing fact that *machines* can perform deductive logic: computers, for example—at least, a very crude form of deductive logic, and we're able to do more and more in that direction, not exhausting all possibilities in deductive logic, but, going further and further, to the point that the initiates are rather awed by what can be done.

So, it does not seem that deductive logic is very much the quality of the mind, if it's the quality of a machine. Or, perhaps machines will replace men. Such are the things you get into if you don't take into account the fact that there *is* a difference.

But, there is a difference, very easily demonstrated.

Man is able *to change his ideas and behavior*, to the effect of *deliberately* increasing the productive powers of labor. The result is, that mankind is able to sustain more people with less land. And, to not only sustain a person, with less land required, but, at the same time, to increase significantly the standard of living of the person who's sustained. So, it costs less to maintain a person, but that person has more. They have more in terms of life expectancy. They have more in terms of consumption. They have more in terms of leisure, and time for the development of their powers of mind as human beings, and so forth and so on. Child labor is abandoned, and children get into labor at a later point in life, and thus, have more time to develop, and develop more richly.

Only the human species can do this. No animal species can do this, no machine can do it. No computer, no matter how articulate the machine may be, can do that.

And, we find this quality of mind is associated, most obviously, with what we call fundamental scientific discoveries. The human mind is able to discover fundamental laws of nature, and to correct its understanding of those laws, in a very fundamental way.

It is this creative power of the mind, or creative reason, as opposed to logic, which is the essence of human mind.

Let's look at that just briefly again, to make sure we're absolutely clear.

Most people are acquainted with what they think is high school and college physics, for example. And, they think of this physics in terms of a kind of mathematics, which is based on arithmetic, in which geometry may enter, but it's only as a helping device, only as a means of illustrating the point. The algebra they're familiar with, is based on arithmetic—not geometry—and, they assume that everything that physics says, from the standpoint of experiment, can be said in terms of algebras derived from arithmetic, or from deductive logic.

But then, consider the case of any fundamental scientific discovery. By a fundamental scientific discovery, we mean an experiment which overturns, implicitly, the entirety of an existing mathematical physics; which says you have to go back over the entire physics, and change all the so-called

underlying assumptions of physics, and correct all of the theorems to allow for this sudden discovery of this correction of the error.

Now, that process of correcting the error cannot be represented deductively. And yet, all science is based on nothing but fundamental discovery. All scientific progress, all improvement in the condition of man, is based on these kinds of discoveries, which cannot be represented deductively, which nonetheless occur, which are efficient, and which are directed, in the sense that mankind, somehow or other, knows how to seek a discovery which increases man's power, and, if he does it well, a man can actually do what he sets out to do. It does not occur by random evolution, by random selection. It occurs by intent.

Every great inventor discovered things because he *intended* to discover them. He may not have discovered exactly what he intended, but *he intended to discover something which would increase man's power over nature*; and, he ended up doing just that, if he was any good at it. He didn't make a lot of inventions, and then throw them out as random experiments, such that the successful ones survived, and the others didn't. No, it was all done by intent. And, this kind of process, of discovery by intent, cannot be represented by any deductive system.

And, it is precisely this ability *to intend to discover*, or to transmit such a discovery, or to assimilate such a discovery for productive or other practice, which distinguishes the human being from an animal, which sets the human species as a whole apart from all animals, and which sets the human species above all animals.

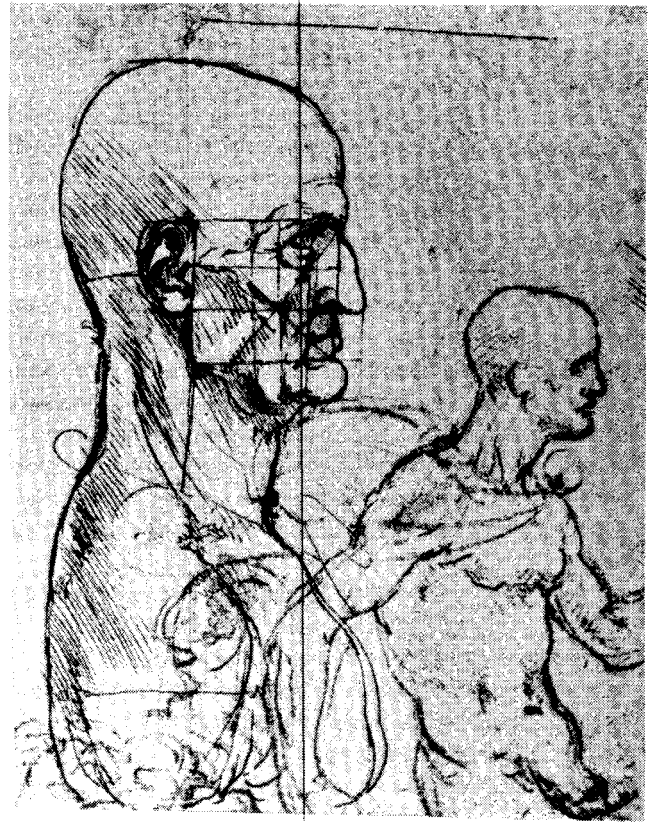
So, the characteristic of the human species, is this quality of mind, which is associated with creative reason.

It is not our purpose here to go into this aspect of the matter, but it is necessary to report the fact, that *we can represent the processes of creative reason, in an intelligible way*—not a deductive way, but an intelligible way, as fully as *rigorous* as one might assume an algebra to be.

We can map these, we can describe this, we can show this. There are methods in geometry, by which we can do that, with increasing precision. But, we cannot do that in deduction.

So, the important thing is to know that this power of the mind exists.

The second thing about this power of the mind is, that it is *sovereign*. No matter how much social influence and suggestions and collaborations and so forth, go into enabling an individual to make a fundamental scientific discovery, in the final analysis, the actual act of discovery, the creation of the idea, is done entirely inside the head of the person who makes the discovery. There is no outside participation in that process itself. There may be outside stimulation, collaboration, input, and so forth. But, in the process itself, there is no outside intervention. It is directly done inside the person. Therefore, it is a *sovereign process* of the individual, as a



Leonardo da Vinci's study of the proportions of the human head, with a sketch of the same model in motion. This kind of science is the secret of Christian civilization, because it is based on creative reason.

necessary person, as an individual.

Now, those are the qualities which we have to deal with. That being the case, it is desirable in society, that that quality of the individual, in every individual case, be developed to the maximum degree possible. You don't get discoveries by the *average* behavior of individuals. You get discoveries by developing the individual *as an individual*.

Now, it's more than just the individual scientist that makes the individual discovery.

In order to have a discovery work, in society, it cannot be confined to the mind of the original discoverer alone, or to a few scientists. It must be *transmitted* to teachers, and others. So, these people must be educated, and developed to the point they can *assimilate* the discovery, and, go through, in a sense, a process of *retracing the discovery*, as made by the original discoverer: through their own mind, their own sovereign powers of creative reasoning, in their own sovereign minds. These people, in turn, must transmit this to others, who receive it, as people who work with these ideas, in machine-tool shops, or other ways. These persons, too, must go through the process of retracing, at least to some degree of approximation, the kinds of mental processes rep-



National Gallery of Canada, Ottawa

A satirical illustration by William Hogarth pokes fun (indirectly) at the Aristotelian brand of "science" practiced in England around 1725, under the influence of the pagan Duke of Marlborough.

resented by the scientist's discovery.

And thus, to have this kind of progress, we must educate all people in society, more or less. We must develop the *sovereign creative powers of reason, of each and every child*, and foster that quality in each and every adult.

This will give us the highest possible rate of discovery, and the highest rate of improvement, in both the productive powers of labor as such, that is, the ability to produce more for human need, and the ability to produce that more, with less land required to do it. This relationship, this happy result, we call an increase in the potential population density. I won't go more into that right at this point, because that's covered in a textbook of mine which has been published, which covers some of the complexities of this process. *But, that particular quality of mankind is key.*

Now, let's look at another aspect of this quality.

What does that mean? What does it mean, when mankind, through an individual, has discovered a law of the universe? What that means, is that in discovering a law of the universe, at least, getting to know it, less imperfectly, the human mind is converging upon the truthful actual form of that lawful arrangement in the universe. And, in that degree, the mind of the individual person is converging upon agreement with the mind of the Creator, with the mind of God, and, with the will of God.

Thus, within these creative powers of reason, if they are sufficiently developed in the individual, that individual mind *approximates a map of the lawful organizing of the universe*

as a whole. That is the wonderful thing.

Thus, we the minimum, the little small thing, the indivisible smallness of the universe, our little intellect, is, in that respect, in a direct relationship with the total organization of the universe, and is, implicitly, potentially, a map of the whole universe.

So, the largest and the smallest are thus unified, sort of projectively, as having one character, through the exercise of creative reason. And, through that faculty, it is possible for man to know the Creator—in that respect, and to that degree, and with those limitations. It is possible for man to say that everything he or she knows, he or she knows by means of the possibility of intelligible representation, i.e., as by construction of any valid idea.

It is not necessary to assert anything arbitrarily. We can find an intelligible representation, which shows us whether the idea is a truthful one, or false one. That is the nature of the situation; and, those are things which are covered with many more things as well, in the two reference works which I've cited.

III. What we mean by the superiority of Christian civilization

When we say that Christian civilization is the highest form of civilization devised by man, with the references I've given at the outset, as to what that means, we are saying,

On the concept of divine love

Charity is universal benevolence, and benevolence is the habit of loving. Moreover, to love is to take delight in the happiness of another, or, what amounts to the same thing, it is to regard another's happiness as one's own. Whence the difficult knot, which is also of great moment in theology, is untied, how there can be a disinterested love which is free from hope and from fear, and from regard of personal advantage; it is evident that the joy of those whose joy enters into our own delights us, for those things which delight are sought for their own sake. And just as the contemplation of beautiful objects is itself agreeable, and a painting by Raphael affects him who understands it, even if it brings no riches, in such a way that it

is kept before his eyes and regarded with delight, as a symbol of love; so when the beautiful object is at the same time also capable of happiness, his affection passes over into true love. But the divine love surpasses other loves because God can be loved with the greatest results, since nothing is at once happier than God, and nothing more beautiful or more worthy of happiness can be known than he. And since he also possesses the highest power and wisdom, his happiness does not only enter into ours (if we are wise, that is love him), but it also constitutes it. Since, moreover, wisdom ought to direct charity, there will be need of defining it also. I think, however, that the notions of man are best satisfied if we say that wisdom is nothing else than the very science of happiness.—by Gottfried Leibniz (source: Codex Juris Gentium Diplomaticus, 1693).



National Gallery of Art, Washington, D.C.

Raphael's painting of the Madonna and Child with the Infant Baptist, ca. 1510 ("Alba Madonna").

scientifically, that Christian civilization affords society the *highest rates of growth* of potential population density, the *highest rate of development of the human mind*, and the *most concentrated and effective kind of development of that mind*.

The crucial feature of Christianity, in this account, is something which is summed up by an emphasis applied to the Christian Credo, by St. Augustine: what is called in Latin the *Filioque*, that Christ is both the Son of God, and God, such that the Holy Spirit flows from Him, as from the Godhead.

What this signifies, without going through the whole is-

sue, is that through this view of Christ, and through this intermediating role of Christ, the individual human being is able to recognize, efficiently, his or her identity as *imago viva Dei*: as a living being in the image of a living God—not some king, not some arbitrary monarch, but the Creator as the Creator, not some petty tyrant like Zeus, spitting from some mountaintop, playing tricks upon men, but a true loving Creator, in whose image we are.

In what sense are we in God's image?

We are in God's image, by virtue of creative reason, and nothing but creative reason. We are in God's image in terms

of that potential creative reason, which makes us the minimum, in correspondence, efficiently so, with the maximum: a lawful universe and its ordering, as a whole.

It is that image of individual man, the Christian image of individual man, as being born with the divine spark, this potential for creative reason, this quality like that of the Deity, like God, in the image of God, which makes Christian civilization work. It is the secret of Christian civilization, its power, which is why Christian civilization is based on creative reason, rather than arbitrary teaching of revealed, arbitrary dogma.

Thus, Christianity and science go together—not the kind of image of science we associate with Newton, or Descartes, or the deductionists generally, or with Aristotle: not *that* kind of science; more the kind of science we associate with Nicolaus of Cusa, if we're familiar with his work, or with Leonardo da Vinci, or Johannes Kepler, Blaise Pascal, or, above all, Gottfried Leibniz. That kind of science.

That kind of science was created by Christianity. It really didn't exist before Christianity, even though there was a portent of it in some of the Greeks, especially through the work of Socrates and Plato, and, to some degree, Archimedes, of course, as well. Of course, the rudiments of science exist in many cultures. We are much indebted, as a matter of practice, in Europe, to contributions of other cultures, in this and many other respects. But the idea of a science, a universal knowledge, of the lawfulness of the universe, in a manner totally subject to intelligible representation, as I've indicated: That is something peculiar to Christian European civilization. And, it is peculiar in its actual development, to what was founded as a scientific method, during the fifteenth century, or so-called Golden Renaissance, particularly the influence of Cusa, and others drawn around Cusa in that period.

This is the essence of the the practical power of Christian civilization: its ability to foster productivity; because mankind, in Christian civilization, is not a traditionalist, in terms of economy. Mankind does not accept being like the brute beast, working in the field as his father and his father's father before him. Under Christian civilization, man must use that quality, which places him in the image of the living God, or the living image of the living God. He must use his reason. His work must flow from reason, not from ox-like, repetitive toil—not the work of a beast. He must innovate, constantly, and must innovate in a way which corresponds to reason, to lessening the imperfections of his work, to increasing the *power* of his work, and the *power* in terms of benefits for mankind—*power* in terms of benefits, as measured in the development of the minds of his children, and so forth. That drive for progress so defined, as being necessary to the interior of the work of the individual, as rejecting so-called traditionalist forms of labor, in favor of technological and scientific progress, has a twofold impact on civilization.

First of all, it creates the necessary preconditions for the development, to the full extent, of the moral potentialities of the character of the individual. And secondly, it provides the means for solving all of the problems we associate with material want and misery, insofar as these afflict society, and lead to great evils.

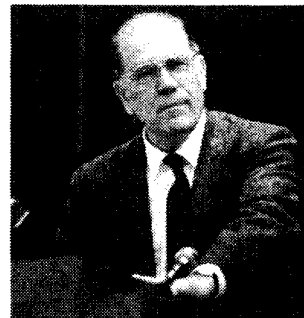
We in European civilization have thus acquired a great treasure, which, since it is a gift of the Creator, belongs not to us, but is entrusted to us, to our care, as the common property of all mankind. And whether mankind in general is willing to come forth, to embrace Christianity on this account or not, makes a difference, but not a difference in this respect: that we hold that in trust. We hold that in trust for all mankind. And, whoever knocks at our door, so to speak, and seeks that, must receive it. Because it is not ours to withhold. It is only ours in trust, to bequeath. That is our power. And, that is precisely why, from an ecumenical standpoint, my proposition is a true one, that the Vedantist, the Jew, the Buddhist, and the Muslim, must join with us, in defense of Christian civilization, against that bestialist, satanic movement, the attempt to destroy Christianity, and Christian civilization, with which, unfortunately, the British Royal Household's Prince Philip has lately associated himself.

'From the prison in which the politician's career expires, the influence of the statesman is raised toward the summits of his life's providential course. Since Solon, the Socratic method has become the mark of the great Western statesman. Without the reemergence of that leadership, our imperiled civilization will not survive this century's waning years.'

—Lyndon H. LaRouche, Jr.

IN DEFENSE OF COMMON SENSE

by Lyndon H. LaRouche, Jr.



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Leibniz's first writing on 'Society and Economy'

Lyndon H. LaRouche, Jr., in his book *So, You Wish to Learn All About Economics?* (New York, the New Benjamin Franklin House, 1984) wrote that Gottfried Wilhelm Leibniz (1646-1716) was the "first economic scientist, in the strict modern sense of science." We reproduce here Leibniz's earliest writing on political economy, the essay "Society and Economy" written in 1671. The translation from the German edition, is by John Chambliss.

Monopoly is avoided, since this Society always desires to give commodities at their fair price, or even more cheaply in many cases, by causing manufactured goods to be produced locally rather than having them imported. It will especially preclude the formation of any monopoly of merchants or a cartel of artisans, along with any excessive accumulation of wealth by the merchants or excessive poverty of the artisans—which is particularly the case in Holland, where the majority of merchants are riding high, whereas the artisans are kept in continual poverty and toil. This is harmful to the republic, since even Aristotle maintains that artisanship ought to be one of the worthiest occupations. *Nam Mercaturæ transfert tantum, Manufacturæ gignit.* [For trade can carry only as much as the factories produce.] And why, indeed, should so many people be poor and miserable for the benefit of such a small handful? After all, is not the entire purpose of Society to release the artisan from his misery? The farmer is not in need, since he is sure of his bread, and the merchant has more than enough. The remaining people are either destitute or government servants. Society can likewise satisfy all the farmer's own needs, providing it always buys from him at a reliably fair price, whether that be cheap or dear. We can thereby ensure for all eternity against natural food shortages, since Society can then have what amounts to a general grain reserve.

Through establishment of such a Society, we eliminate a deep-seated drawback within many republics, which consists in allowing each and all to sustain themselves as they please, allowing one individual to become rich at the expense of a hundred others, or allowing him to collapse, dragging down with him the hundreds who have put themselves under his care. An individual may or may not ruin his own family, and then may or may not run through his own and others' funds.

Objection: Should money be invested in other countries? By no means. Each country shall, on the contrary, supply

itself with those necessary commodities and manufactured goods which previously came from abroad, so that it will not have to procure from others what it can have for itself; each country shall be shown how properly to use its own domestic resources. In a country which has sufficient wool, manufacturing shall be established for the preparation of cloth; a country with an abundance of flax shall occupy its populace with the production of clothing; and so forth. And thus no country among those which permit Society the proper degree of freedom, will be favored over the other; rather, each shall be made to flourish in those areas in which God and Nature have allowed it to excel.

Manufacturing, therefore, shall always take place at the commodities' point of origin; whereas commerce, in accordance with its nature, shall be located at the rivers and oceans—an arrangement which only becomes disrupted (manufacturing being placed near commercial centers, far from its raw materials) when the necessary Society and cohesiveness is lacking in many locations, especially where there are no republics.

A great drawback of many republics and countries is that many places have more scholars (not to mention idle people) than they have artisans. But this Society has something for everyone to do, and it needs its scholars for continual conferences and joyous discoveries. This Society can have others adopt the profession of assuming responsibility for providing for unfortunates—e.g., the confinement of criminals, which is of great benefit to the republic.

One might object that artisans today work out of necessity; if all their needs were satisfied, then they would do no work at all. I, however, maintain the contrary, that they would be glad to do more than they now do out of necessity. For, first of all, if a man is unsure of his sustenance, he has neither the heart nor the spirit for anything, will only produce as much as he expects to sell (which is not very much given his few customers), concerns himself with trivialities, and does not have the heart to undertake anything new and important. He thus earns little, must often drink to excess merely in order to dull his own sense of desperation and drown his sorrows, and is tormented by the malice of his journeymen. But it will be different there: Each will be glad to work, because he knows what he has to do. Never will he be involuntarily idle, as he is now, since no one will work for himself, but rather jointly; and if one has too much and the other not



Munich, Alte Pinakotek



In 17th-century Holland, a few merchants became fabulously rich (like Willem van Heythuysen, left, portrayed by Frans Hals), while ever-growing numbers of artisans were reduced to beggary (as in Rembrandt's etching). Leibniz (above) criticized this "free market" model of economy.



enough, then one will give to the other. On the other hand, no artisan will be suddenly obliged—as he sometimes is now—to torture himself and his men half to death with excessive work, since the amount of work will always remain more or less the same. The journeymen will work together, joyously vying with one another in the public factories, the masters themselves taking care of the work that requires more understanding. No master need be annoyed that an intelligent journeyman might desire to become a master himself, for how does this harm the master? Journeymen's room, board, and necessities will be provided free to all workers. No master will need to worry about how he is to provide for his children or marry them off respectably. The education of children will be taken care of by Society; parents shall be relieved of the task of educating their own children: All children, while they are small, shall be rigorously brought up by women in public facilities. And scrupulous attention will be paid that they do not become overcrowded, are kept clean, and that no diseases arise. How could anyone live more happily than that? Artisans will work together happily in the company's large rooms, singing and conversing, except for those whose work requires more concentration.

Most of the work will be done in the morning. Pains will be taken to provide for pleasures other than drinking—for example, discussions of their craft and the telling of all sorts

of funny stories, whereby they must be provided with something to quench their thirst, such as *acida*. There is no greater pleasure for a thoughtful man, or indeed for any man once he becomes accustomed, than being in a company where pleasant and useful things are being discussed; and thus every group, including the artisans, should have someone to write down any useful remarks that may be made. But the Society's highest rule shall be to foster true love and trustfulness among its members, and not to express anything irritating, scornful, or insulting to others. Indeed, even rulers should eschew all insults unless nothing else is effective, since such behavior precludes the establishment of trust. No man shall be derided for a mistake, even if it be a serious one; rather, he should be gently admonished in a brotherly way, and at the same time, immediately and appropriately punished. Punishment shall consist in increased and heavier work, such as making a master work like a journeyman, or a journeyman like an apprentice.

The moral virtues shall be promulgated to their utmost and, as far as possible, according to the principle *Octavii Pisani per gradus* [of Octavius Pisa, by steps]. If it is observed that two people cannot settle their own dispute, they shall be separated. Lies will also be punished. *Sed haec non omnia statim initio publicanda*. [Let this, even though uncompleted, be published as a beginning.]

Nicolaus of Cusa and the Council of Florence

by Helga Zepp-LaRouche

Schiller Institute founder Helga Zepp-LaRouche delivered this speech to the conference commemorating the 550th anniversary of the Council of Florence, which was held in Rome, Italy on May 5, 1989. The speech was delivered in German and has been translated by John Sigerson.

In a period in which humanity seems to be swept into a maelstrom of irrationality, it is useful to recall those moments in history in which it succeeded in elevating itself from conditions similar to those of today to the maximum clarity of Reason. The 550th anniversary of the Council of Florence is the proper occasion for dealing with the ideas and events which led to such a noble hour in the history of humanity.

The Council of Florence represents the spiritual high point of the Italian Renaissance. Not only did it realize the Union of the Eastern and Western Churches on the basis of the highest common denominator; but also, the various elements which contributed to its success were the same that contributed to overcoming the Dark Age of the fourteenth century. These included such diverse components as the economic policy of the Medici, the philosophical method of Nicolaus of Cusa, and the conceptual discoveries of Brunelleschi, to pick out just a few. But all the geniuses who participated in the Council of Florence and were caught up by its spirit had one thing in common: their love for humanity, inspired by their love of God, and a boundless cultural optimism which derived from it.

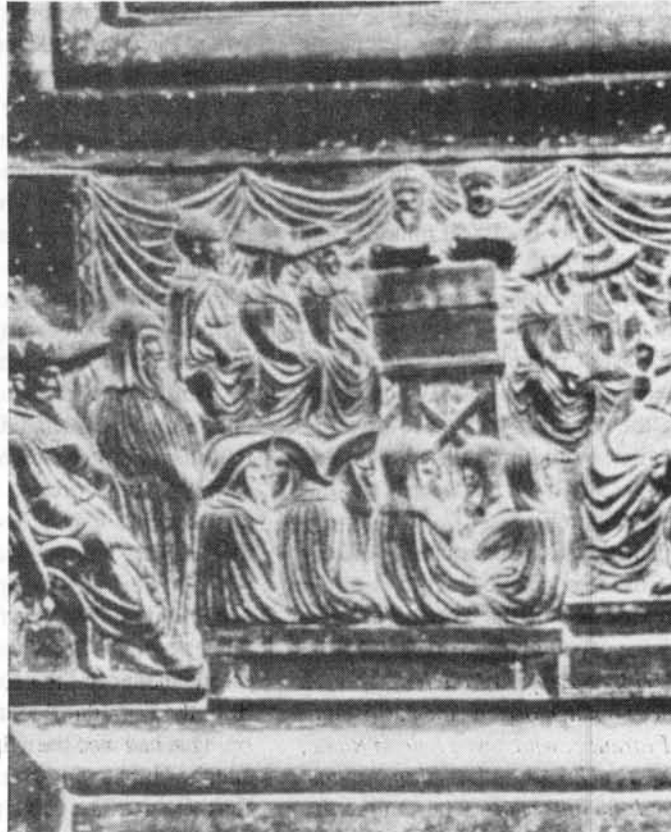
We would do well to orient ourselves according to this optimism, which is born of an unshakable faith in Man in the image of God. For, the dangers threatening us today in a near-apocalyptic manner, are even greater than those which devastated civilization in the fourteenth century. Then, the dangers were the collapse of production and trade, the Black

Death, belief in the occult, and schisms in the Church. Today, they are the threat that entire continents in the developing sector will be wiped out by hunger, the increasingly species-threatening AIDS pandemic, Satanism's blatant offensive, and an unexampled process of moral decay. The parallels are all too evident, yet this has not halted our headlong rush today into an age even darker than the fourteenth century. The principal problem arises when Man abandons God and the search for a life inspired by this aim. As Nicolaus of Cusa said, the finite being is evil to the degree that he forgets that he is finite, believes with satanic pride that he is sufficient unto himself, and lapses into a lethargy which prevents him from developing all his powers, hence preventing him from discovering within himself the promise of his actual "divine origin." But precisely because the Christian humanist image of Man today is vulnerable to destruction from so many different flanks, it is urgent that we learn from the example of the Council of Florence.

'Concordantia Catholica'

I would like to outline the role which Nicolaus of Cusa played in the Council, in bringing about the Union of the Churches on the basis of the highest common denominator. At the time of the Council's conclusion, Cusa was 38 years old, and therefore, compared to the other Church fathers present, a relatively young man. However, if one takes into consideration Cusa's complete works, by which he became, so to speak, the "gatekeeper to the new era" and the founder of modern natural science, then it is not surprising that he should have contributed so in practice and content, to make the Union of the Churches possible.

In the preface to his most important work, the *Concordantia Catholica*, Cusa speaks of a new epoch in the spiritual



Decree of Union of the Eastern and Western Churches in Florence, July 1439. Nicolaus of Cusa joined the cause of Pope Eugene IV, (left) in order to convince Patriarch Joseph of Constantinople (right) and Byzantine emperor to come to the Council in Italy.

history of humanity. It is fascinating to see how Cusa, elaborating his *Concordantia Catholica*, modified his conciliar viewpoint (at the Council of Basel he had supported the conciliar thesis), and decided to support the thesis of the Pope for the good of the Church. In his work, the basis for human rights and for national sovereignty can be identified, in that Cusa defined the relationship between governor and the governed as a relationship based on natural law. And, although he conceded maximum autonomy to individuals and states, as also to individual churches, he made clear that no lower association can be on the side of reason if it places in jeopardy the interests of all and the union of the universal Church.

Having understood why the Council of Basel had shown itself to be incapable of achieving union, Cusa asked himself how union with the Eastern Church could be achieved. With the schism of the Greeks, the Council of Basel, which presented itself as a universal council, turned out to be only a patriarchal council, which acknowledged the Bishop of Rome only as its "patriarch," considering the Pope only as a representative of the Western Church. But to realize a universal council in which all five patriarchs would participate, it would be necessary for the union with the Eastern Church to take place under the guidance of the Pope. What the reference points for such a union might be, became clear to Cusa when he studied the ancient texts of the preceding councils, an

activity which he had undertaken in order to write the *Concordantia Catholica*.

The Council of Basel fails

When preparations for the theological debate with the Eastern Church began in July 1436, Cusa was assigned several important tasks, also because he was among the few who spoke Greek perfectly; a sermon from the year 1428 or 1430 containing many Greek quotations, demonstrates this. On Oct. 5, 1436, Cusa was elected council "praecognitor" and conservator of the decrees.

When, on May 7, 1437 the schism occurred as a result of disagreements regarding the seat of the Council, and some of the Council delegates left for Avignon, some representatives of the minority current, loyal to the Pope's request that the council be held in the Vatican, left Basel. They were the bishops Digne and Oporto, and Cusa. The Greeks welcomed the minority request, and left Basel with them. This strengthened Pope Eugene IV, who sealed the minority decree with the bull "Sabotoris et Dei nostri," issued on May 30, 1437.

Cusa in Constantinople

Cusa participated in negotiations with Florence, which initially failed due to the opposition of the Emperor Sigismund and of Charles VII of France. The decision on the

seat of the Council was therefore postponed until the Greek delegation was to arrive. Eugene IV then sent a delegation to Constantinople on ships leased in Venice. The delegation was composed of his nephew Antonio Condulmer, Mark, archbishop of Tarantaize, Christoph Gavatori, bishops Digne and Oporto, and Nicolaus of Cusa. The papal delegation reached its destination on Sept. 3, 1437, and the Greek delegate Dishypatos confirmed that only the Basel minority had the authority of the true Council. The delegates, acting as representatives of the Pope and the Council, opened negotiations with the emperor and the patriarch.

Shortly thereafter, the Basel Council delegation arrived in Constantinople, and even Emperor John VII, who had not succeeded in overcoming the conflict, decided to travel to Italy with the papal delegation. With him traveled the Patriarch Joseph II, representatives of all the patriarchs, and numerous fathers of the Eastern Church.

The Greeks were acting on the basis of the same considerations which had brought Cusa to conclude that union would be possible only with the consent of the Pope. This was likewise the gist of the advice offered by the delegates John Dishypatos and Emmanuel Miloti, who had collaborated closely with Cusa in Basel.

The crucial documents

Cusa had made good use of his stay in Constantinople. Before writing the *Concordantia Catholica*, he had collected exhaustive source material on the synods which had taken place earlier in the East. He took with him a Greek manuscript which contained the acts of the Sixth and Seventh Council, the Second and Fourth Council of Constantinople of 680-681 and 869-870, and the Council of Nicea in 787.

He also took the Greek codex of the treatise of Saint Basil against Enomius, which played an important role in the debate over the *Filioque*. Since all the texts procured by Cusa dated back to the period of the schism, they had the effect of debunking the argument of the main Greek speaker, Mark Eugene, according to which the *Filioque* had been introduced only later.

Another decisive indication of the work of Cusa is the Codex Harlaiana, containing the texts of the Apostles and the letters of the New Testament. It becomes clear, that Cusa had personally researched that text, since in a gloss, he noted that the so-called "Comma Johanneum" (I John 5:7), was missing.

Other manuscripts brought back from Constantinople by Cusa, and today preserved in his library at Bernkastel-Kues, are codices No. 8 and No. 9 with the Psalms; No. 18 with an exegesis of the Gospel according to Saint John written by the Greek fathers; No. 47, the prayers of John Chrysostomas; and No. 48, the exposition of the Nicene David Paphlagon on Gregory of Nazianzo. Cusa also acquired a manuscript with the Platonic theology of Proclus, which he then gave to Ambrose Traversari in Ferrara for translation.

It is therefore possible to hypothesize that it was Cusa—whom Piccolpasso described as an "expert in Greek and otherwise quite cultivated and endowed with universal gifts," as well as a "discoverer of many manuscripts and the owner especially of Greek works, including those with Latin commentary and grammatical annotations"—who contributed the essential sources which were to demonstrate the correctness of the Latins' argument on the *Filioque*, thus cementing the union. As early as Oct. 17, 1437, Cardinal Cesarini, speaking with Ambrogio Traversari, had described the manuscripts on the preceding councils as valuable background material for the consultations with the Greeks.

During the discussions which took place during the council, first in Ferrara and then in Florence, the Latins raised the issue according to which the *Filioque* was not an addition but simply a more precise explanation of an affirmation contained in the Credo. Even the fathers of the Second Joint Synod, they argued, considered it not an addition to the Nicene Creed, but a specification. In fact, they said, the *Filioque* is an explanation contained in the words *qui ex Patre procedit*. Since the Son participates in the Father in all essential aspects, the Holy Spirit proceeds necessarily both from the Father and from the Son.

This had also been the argument of St. Basil, who taught that the Father would be unthinkable without the Son and the Holy Spirit. The three persons, he wrote, must always be thought of together: If one thinks only of the Son, one thinks also on the one hand of the Father and on the other, of the Holy Spirit, just as the procession of the Holy Spirit is recognized also from the Son. Everything that the Father has, the Son has as well, except for the fact that the Son is not the Father. For this reason, with that sole exception, everything that the Father affirms, the Son also affirms. According to John 16:15, Christ himself states: "All that which the Father possesseth is mine."

This position was also presented by John of Montenero in the sessions going from March 2-24, 1439, when he spoke eloquently for the Latins. The argument struck the Greeks, particularly Isidor, Bessarion, Dorotheus of Mitilene, and Gregory Melissenos, chaplain of the imperial court. Isidor replied in the name of the Greeks that they needed some time to digest the argument fully, and that they would appreciate receiving it in written form, particularly the quotations from the Latin fathers. After having attentively studied the Patristic texts—in which a crucial role was played by John of Ragusa's comparison of the codex brought by Cusa with the text brought by Mark Eugene—on June 8 they recognized unity in the doctrine of the procession of the Holy Spirit.

The significance of the *Filioque*

Even if the significance of the Union of the Churches over the issue of the *Filioque* is undervalued by the majority of our contemporaries, they are at the very heart of the values of our Christian humanist culture, and the values of the Chris-



Helga Zepp-LaRouche (left) receives applause after delivering the speech printed here, in Rome in May 1989. Next to her, left to right, are Liliana Celani, who translated into Italian, Cardinal Mario Luigi Ciappi, Theologian of the Papal Household to Pope John Paul II, and Giuseppe Matteucci.

tian West. If we lose this knowledge, we will also lose what is most precious, that which is at the basis of our conception of Man.

The emergence of Christianity marks the greatest turning-point in human history. For the first time, by becoming man, Christ broke the cyclical image of history, which had been the leading feature of pre-Christian myths and cults. With Christ, who was at the same time man and God, man made in the image and likeness of God, became *capax Dei*, capable, that is, of participating in God, and thus capable of infinitely increasing self-perfection and approach to God. Only with the Son of God who becomes man, with the Passion and Resurrection, was man's redemption made possible. God's capacity to become man, and man's capacity to participate directly in God, is the basis of the inalienable dignity of every man. No other monotheistic religion contemplates God's becoming man. What Christianity allows man is his liberation, his freedom through necessity.

Nicolaus of Cusa demonstrated passionately the correctness of the *Filioque*, not only through his service to the Church, but also by his teaching of the Trinity and his Christology, which are of immense speculative greatness. For Cusa, Christ is he who gives meaning to the universe, and his followers are those who give meaning to Man. Thus he writes in the beautiful sermon "Confide, filia!" ("Confide, My Daughter") of 1444, "Let us seek in ourselves what Christ is! If we do not find him in ourselves, then we will not find him at all."

Then, he continues with the following observation: "Until such time as Man reaches life in *his own humanity* [*in humanitate sua*], the true cause of every life; in *truth*, cause of all that is true and acceptable; and in the *Good*, cause of all that is good and to which it is right to aspire—he will never reach his aim, he will never have peace [*non quietatur*]."

How true! And how right it is, to affirm that the root of all unhappiness for those who today hastily and restlessly

chase after pleasure, lies in the fact that they believe they can realize their own humanity in some way other than in seeking Christ within themselves.

This is why the *Filioque* is so important for us today. The idea that the Holy Spirit proceeds only from the Father, but *not* from the Son, contains a different relationship between Man and God. It is, in a certain sense, a more impersonal relationship: The Father is more the authority, whom Man must obey, whom man may indeed love, but more from a distance. Man does not participate in equal measure in the process of creation, as is the case if the Holy Spirit also proceeds from the Son.

Microcosm and macrocosm

For Cusa, Man is the microcosm in which all the various elements and lawfulnesses of the macrocosm are united, thus uniting the order of creation. Each man recapitulates within himself in concentrated form, the whole history of evolution, from the inorganic to the spiritual—an incredibly modern idea for a thinker of the fifteenth century!

The fact that no form of life can fully develop its capacities without participating in the next higher form, can be seen with animals, which only fully accentuate their potentialities once they come into contact at some point with that which is human; it can also be seen with Man, who becomes fully Man only if he participates in God. Thus, in Jesus Christ, Man is enhanced to his maximum degree. Christ is, in fact, Man in the most perfect manner, being at once fully God and fully Man. For this, the perfection of Man, and with him the perfection of all creation, are possible only if Man is more than just Man, and if he is at the same time also God. A perfected meaning is given to creation only if it is understood that the divine Logos takes into its possession and service, the primordial creative image of the universe, and of the man who represents it—a man who possessed personally the highest capacity for self-perfection.

Christ, as He who gave a sense to creation—what a wonderfully consoling thought! Yet, this very highest basis of existence is not too elevated for us, nor is it unreachable; it is up to us to open ourselves to this truth.

As Cusa states in his *De Visione Dei (Vision of God)*, Christ is even closer to us than the father, the mother, the brother, or the friend.

Trinity doctrine

Cusa was likewise drawing on Augustine and the school of Chartres, when he stated that Man is in the image and likeness of the triune God. The unity and trinity of God consists in the fact that the three persons, Father, Son, and Holy Spirit, are one single universal principle (*unum universarum principium*) and one Creator.

It is truly fascinating to think that Cusa elaborated his trinitarian doctrine for the first time in *De Docta Ignorantia*, a work which was born of discussions with the best and most cultivated Greeks during his crossing from Constantinople to Venice, which lasted three and a half months. He writes: “Compared to unity in multiplicity, similarity in diversity, and the harmonic order in the universe, God is the first principle, the absolute unity (*unitas*), equality (*aequalitas*), and connection (*connexio*), and therewith the one and triune cause from which the all multiplicity and diversity creatively derive.” He adds that divine unity spawns absolute “equality,” and that “connexione” derives from both.

This speculative manner of understanding the Trinity occupied Cusa for his whole life, and, as emerges particularly from his *De Pace Fidei (On Peace Among the Faiths)*, he saw in it the best method for making the other Church representatives understand that the Christian trinitary concept does not have anything to do with a doctrine of three divinities.

Cusa writes: “Some call the unity ‘Father’; equality, ‘Son’; and connection, ‘the Holy Spirit’; because all the terms—though not in *sensu proprio*, indicate the Trinity conveniently. For, from the Father proceeds the Son, and from unity and equality of the Son, Love or the Spirit. The nature of the Father transforms itself in the Son in equality. Thus, from unity and equality, love and connection derive.”

In another location, Cusa uses the analogical description of the divine Trinity, comparing it to the image of Love—the three elements of the loving, the loved, and Love. We can add that without divine Love, *Agapē*, Man does not understand anything.

The Image of God

Cusa dedicated a later work, *De Coniecturis (On Hypothesis)*, to Cardinal Julian Cesarini. Here, he developed the idea that the intermingling of absolute unity, infinite equality, and connection in God, taken together with the corresponding relationship between God and his Creation, are conjecturally transferred to Man and his relationship to what on various levels man “creates, guides, and receives.”

Cusa wrote a personal letter to Cardinal Cesarini, affirming that the great similarity of Man to God consists in the fact that Man may participate with his insight, his justice, and his love, in divine unity, equality, and connection. In this form, Man encompasses with himself, at the microscopic level, and transcends the entire cosmos, and is, in his own way, simultaneously the receptive and the creative image of the triune God.

This is the essence of our existence.

Of course, Man can choose to reject this fact. But in doing so, he violates the universal laws implicit in the order of Creation, and he cannot do so for long before nature rebels against him and brings about his demise. Or, as Pope John Paul II expressed it in the encyclical *Sollicitudo rei socialis*, nature will no longer recognize Man as its master.

Our knowledge of the essential aim of our existence in God, as creative image of the triune God, is the most precious knowledge that we have. It is precisely this knowledge that we risk losing today. This is the central target of the satanic offensive today in all its convolutions. And precisely because the image of Man thus defined is the focus of their attack, for the first time it is our entire human civilization which is at risk.

What is required, therefore, is an initiative which addresses the most important problem of our time, as the Council of Florence did with theirs. At that time, the problem was to bolster the unity of the Church against the onslaught of the Turks. Even if similar dangers stand out today, the central question of the existence of the human species, the *punctum saliens* of human history, is different today.

Urgent tasks

Today, the lives of billions of human beings are threatened by economic injustice—a problem which was already addressed 22 years ago in the encyclical *Populorum Progressio*. In the time that has elapsed since then, the problem has worsened so dramatically, that only with the immediate realization of the ideas contained in the *Populorum progressio* and the *Sollicitudo rei socialis*, will it be possible to save the human species.

But, as in the Council of Florence, union will be attained only on the same high level as the *Filioque* principle itself. Even to solve the problems currently afflicting humanity, it is necessary to find in Cusa’s works those metaphysical and ontological truths which will necessarily lead to their solution. Only with the development of all microcosms, i.e., of all men on this planet, so that they realize their full, God-given human potential, will it be possible to reach a Concordantia.

Therefore, may this 550th anniversary of the Council of Florence serve as the occasion to revive this grand proof of the capacity of the man’s capacity to act on the basis of reason, with our theme this time being the realization of a plan for the development of all peoples. For, participation in the triune God concerns each and every human being.

'On the Peace of Faith'

by Nicolaus of Cusa

Translation by William F. Wertz, Jr.

How can mankind, separated into different cultures, speaking different languages, and practicing different religions, forever put an end to the sectarian strife and oppression which has characterized relations among the faiths for many centuries? This is the subject of the dialogue, On the Peace of Faith, written by the greatest scientist of his era, Cardinal Nicolaus of Cusa, immediately following the fall of Constantinople to the Ottoman Turks in 1453. The fall of the Paleologue dynasty of Byzantium was a setback to efforts by Cusa, and other leaders of both East and West, to forge an ecumenical alliance, reuniting the Christian church as planned several years earlier at the Council of Florence.

Cusa's reflections on the means available to end genocidal religious warfare are as timely today, at a time when humanity is swept into a maelstrom of religious fanaticism and irrationality, as when they were first written down over 500 years ago. Though posed in theological terms, they speak eloquently to the questions posed by nations struggling for freedom and sovereignty, against the logic of appeasement and pragmatic accommodation to evil which masquerades as peace, but leads to war.

I

News of the atrocities, which have recently been perpetrated by the Turkish king in Constantinople and have now been divulged, has so inflamed a man, who once saw that region, with zeal for God, that amongst many sighs he asked the Creator of all things, if in His goodness He might moderate the persecution, which raged more than ever on account of diverse religious custom. Then it occurred, that after several days—indeed on account of continual daily meditation—a vision was manifested to the deeply moved man, from which he concluded, that it would be possible, through the experience of a few wise men who are well-acquainted with all the diverse practices which are observed in religions across the world, to find a unique and propitious unity, and through this to constitute an eternal peace in religion upon the appropriate and true course.

So that this vision might at some time come to the knowledge of those, who resolve such important things, he has represented it simply and clearly in the following, as far as his memory presented it to him.

He was transported into a certain domain of intellectual altitude, where among those departed from this life in the council of the Heavenly, over which the Almighty presided, the examination of this question was conducted as follows. The King of Heaven and Earth said, that from the kingdom of this world sorrowful messengers have brought to His ears the complaints of the oppressed; that many turn their weapons against each other for the sake of religion and in their power compel men to renounce long-observed doctrines or kill them.

There were very many reports of such complaints, which came from the whole Earth, and the King commanded, that they be brought before the full assembly of the holy. All seemed to be known to the residents of Heaven, since they had been placed from the beginning by the King of the Universe over the individual provinces and religious sects of the Earth. According to their appearance they were not men, but rather intellectual powers.

A leader, the representative of all these ambassadors, spoke the following words: Lord, King of the Universe, what has each creature, that Thou hast not given him? It pleased Thee, to inspire the body of man, formed from the Earth, with rational breath, so that the image of Thine ineffable power would reflect in him. From one man many people have been generated, who occupy the surface of the firm Earth.

Although the intellectual breath, which is sown in the Earth and is absorbed by shadows, does not see the light and the beginning of its origin, Thou hast nonetheless created in him all that, through which he, full of wonder over that which he attains with the senses, is at some time able to elevate his mental eyes to Thee, the Creator of all things and to be united with Thee in the highest charity and thus can finally return to his origin laden with fruit.

Nevertheless Thou knowest, Lord, that a great multitude can not exist without much diversity and that almost all are compelled, to lead a laborious life full of troubles and afflictions and in servile subjugation must be subject to the kings who rule. Hence it has occurred, that only a few of all men have time and leisure, to employ the freedom of their will and to gain knowledge of themselves. They are distracted by many corporeal cares and duties. Thus they can not seek Thee, Thou who art the concealed God.

For this reason Thou hast given Thy people diverse kings and seers, whom one calls prophets, from whom the majority of them instituted cults and laws corresponding to the purpose of their mission in Thy name and thus instructed the uncultivated people. They subsequently accepted these laws, as if Thou, the King of Kings, had spoken with them face to face, and believed they heard not those men, but rather Thee in them.

To the various nations, however, Thou hast sent various prophets and masters, the one for this, the other for another time.

It is a condition of Earthly human nature, to defend as truth longstanding custom, which is regarded as part of nature. And thus no small differences of opinion arise, if any community prefers its beliefs over another's.

Therefore come to our assistance, Thou who alone art powerful. For this strife rages on account of Thee, whom alone all venerate in all that which they seem to worship. For no one desires in everything, of which one sees, that something is desired other than the Good, which Thou art. Also in all intellectual deliberation no one searches for something other than the true, which Thou art. What do the living search for other than life? What do the existing search for other than existence? Thou, therefore, Thou who bestowest life and existence, art that one, who is clearly sought for in the diverse customs and practices and is named with diverse names, since Thou as Thou art, remainest unknown and ineffable for all.

Thou, who art infinite power, art nothing of that, which Thou hast created, nor can the creature comprehend the thought of Thine infinity, since there is no proportional relationship between the finite and the infinite.

Thou, omnipotent God, who art invisible to every mind, canst in the manner thou wishest to be grasped, manifest Thyself visibly to him, to whom Thou wouldst manifest Thyself. Conceal Thyself, therefore, no longer, Lord. Be gracious and manifest Thy countenance and all people will be saved and delivered, who in the future can not desert the source of life and its still so seldomly tasted sweetness. No one departs from Thee, unless he is ignorant of Thee.

If Thou art in goodness willing, to act thus, the sword and the envy of hatred and every evil will yield. Everyone will know that, and in what manner, there is only a single religion in the variety of practices and customs. Indeed, one will not be able to annul this difference of practices and customs, or in any case this will not be beneficial to do, since the difference may bring an increase in devotion, if every land bestows the most vigilant effort upon its ceremonies, which it holds to be, as it were, the most pleasant to Thee, the King; however, at all events just as Thou art only one—there ought to be only a single religion and a single cult of adoration of God.

Be therefore conciliatory, Lord, since Thine anger is kindness and Thine justice is mercy. Spare Thy weak crea-

ture. Thus we, Thy representatives, whom Thou hast given to Thy people as guardians and seest here in this assembly, beseech and pray with the entire strength of our devotion humbly to Thy Majesty.

II

At this solemn supplication of the archangel, all the citizens of Heaven inclined in the same manner toward the highest King and He, who sat upon the throne, spoke: He would have placed man with his free will in the world, and made him able through this will, to hold communion with his fellow-man. However, because the animal and Earthly man is held down under the Prince of Darkness in ignorance and walks across the Earth according to the conditions of that sensible life, which proceeds only from the world of the Prince of Darkness, and not according to the intellectual and inner man, whose life proceeds from the land of his origin, He would have called the errant man back with much care and diligence through various prophets, who were seeing, in comparison with the others.

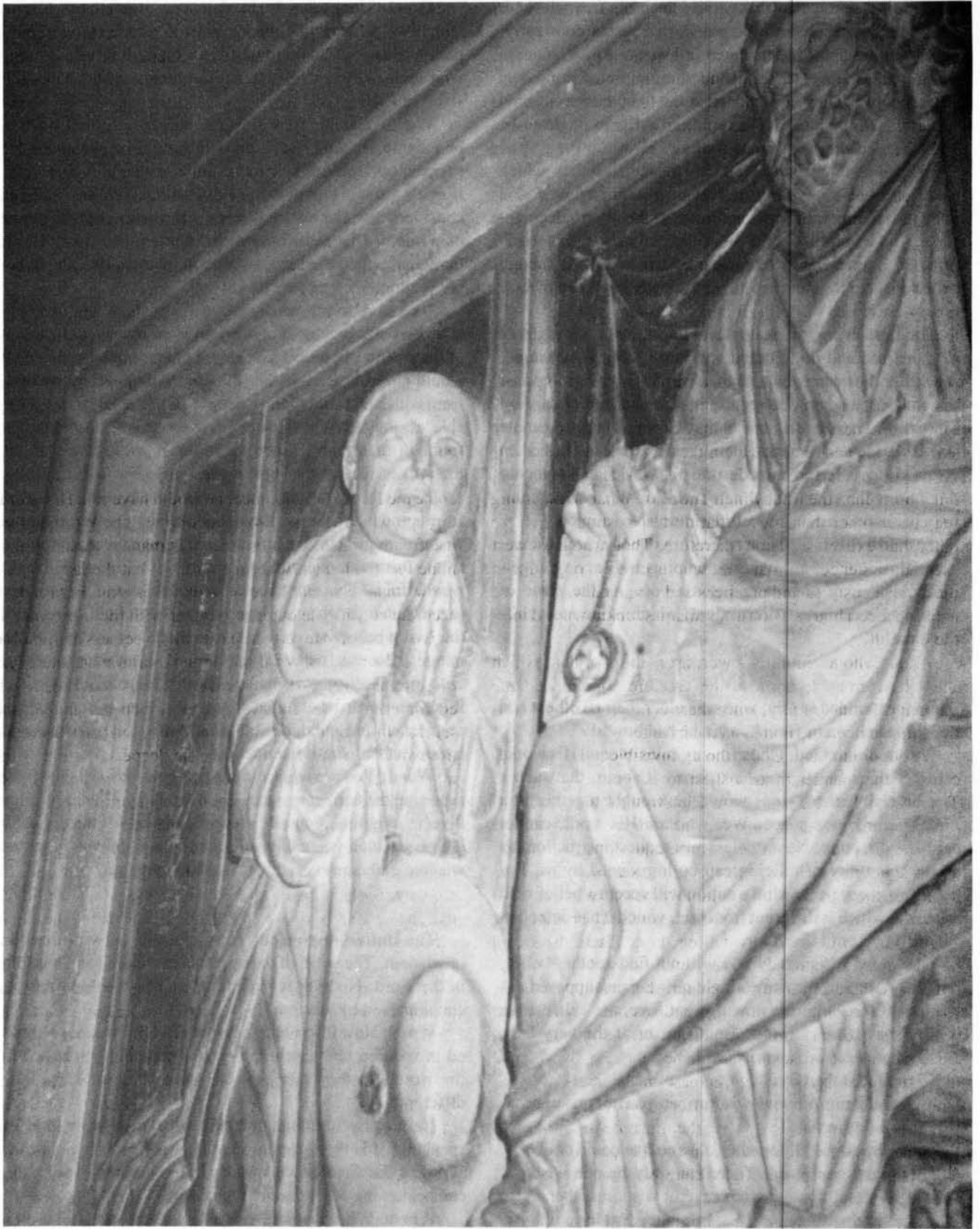
Finally, as all these prophets could not sufficiently overcome the Prince of Ignorance, he would have sent His Word, through which He has also created time. The Word clothed itself with humanity, in order in this manner to finally illumine the docile man with free will, so that the latter would know, that he would have to walk across this Earth not in accordance with the outer, but rather with the inner man, if he would hope, to revert one day to the sweetness of immortal life. And since His Word put on the mortal man, there was evidence in his blood for that truth, that man would be provided for eternal life, for the sake of which his animal and sensible life would be deemed as nothing, and that that eternal life would be nothing other than the deepest longing of the inner man, i.e., the truth, which alone he desires and which, since it is eternal, nourishes the intellect eternally.

This truth, which nourishes the intellect, is nothing other than the Word itself, in which everything is enfolded and by means of which everything is unfolded. It put on human nature, so that no man would have doubt, that according to the choice of his free will in his human nature he could achieve the immortal food of truth in that man, who is also the Word.

And God added thereto: Since this has been done, what then still remains, that could be done and was not done?

III

To this question of the King of Kings, the Word-Become-Flesh, who rules over all the residents of Heaven, answered in the name of all: Father of Mercy! Indeed all Thy works are complete and nothing remains, that must be added to its completion! Nevertheless, human nature requires continual trials, so that the errors, of which there are very many in respect to Thy Word, are extirpated and so the truth may constantly shine forth; this is so, because from the beginning



Cardinal Nicolaus of Cusa kneels by St. Peter, in Andrea Bregno's sculpture on his tomb, Rome, Church of S. Pietro in Vincoli, 1465.

Thou hast decided, that man would keep his free will and, since nothing in the sensible world perseveres constantly, variable opinions and conjectures and likewise also languages and their interpretations alter with time. Since, however, the truth is single and is impossible not to be comprehended by every free intellect, all diversity of religion ought to be brought into a single orthodox faith.

This pleased the King. He called the angels hither, which preside over all the nations and languages, and commanded each, to bring one experienced man to the Word-Become-Flesh. And immediately the most eminent men of this world appeared before the countenance of the Word, as though carried aloft in a state of ecstasy. To them the Word of God spoke as follows:

The Lord, King of Heaven and Earth, heard the sighs of the murdered and the fettered and those led into servitude, who suffer thus on account of the diversity of their religions. And since all who practice or suffer such persecution, are led to it for no other reason than that they believe, thus to promote their salvation and to please their Creator, the Lord has taken pity on His people and agreed to the plan, to lead all diversity of religions through mutual agreement of all men harmoniously back to a single, henceforth inviolable religion.

To fulfill this task, He entrusts to you, the elected men. From His council, He gives you helping and serving angels, who may protect and guide you. As the place of assembly He designated Jerusalem, which is the most suitable therefor.

IV

One responded to this, who was older than all others and as it appeared, was a **Greek**, after he had bowed:

We praise our God, whose mercy rules over all His works and who alone has the power to bring it about, that such a great diversity of religions would be brought together in a single, harmonious peace. We, who are His work, cannot resist His direction. Nevertheless, we request instruction, as to how this unity of religion can be introduced by us. For according to our persuasion a nation will accept a belief with difficulty, which is different from that, which it has defended with its blood until that hour.

The **Word** responded: You will not find another belief, but rather one and the same single religion presupposed everywhere. You, who are now present here, are called wise men by the sharers of your language, or at the very least philosophers or lovers of wisdom.

So it is, said the **Greek**.

If you all therefore love wisdom, do you not presuppose, that this wisdom exists?

They responded all together, that no one could doubt it.

The **Word** continued: There can only be one wisdom. Were it possible, that there are several wisdoms, then these would have to spring from a single one. Namely, unity is prior to all plurality.

Greek: None of us doubt, that there is only one wisdom, which we all love and on account of which we are called philosophers. Because of participation in it there are many wise men, whereas wisdom itself remains simple and undivided in itself.

Word: You therefore all agree, that the simplest wisdom be a single one, and that its power is ineffable. And everyone experiences that ineffable and infinite power in its unfolding. If one's view is turned toward that which is visible and one considers, that that which he sees, has arisen from the power of wisdom—the same obtains for hearing and every single thing that affects the senses—then he affirms, that the invisible wisdom exceeds everything.

Greek: Also we, who practice this profession of philosophy, love the sweetness of wisdom in no other way than that of the previously tasted admiration of sensuous things. Who would not be willing to die, in order to obtain that wisdom, from which all beauty, all sweetness of life, everything desirable emanates? What power of wisdom is reflected in the frame of man: in his limbs, the order of these limbs, in the life infused in him, the harmony of the organs, in his motion, and finally in the rational spirit, which is capable of wonderful arts and is, as it were, the sign of wisdom, in which eternal wisdom, as in a close image and truth as in a close similitude, shines forth over everything. And what is above all still more wonderful is: This reflection of wisdom comes always nearer to the truth through a vehement conversion of the spirit, until the living reflection, which comes from the shadow of the image, becomes constantly truer and more in conformity with true wisdom, even though that absolute wisdom just as it is, can never be attained in another. And in this manner the eternal and inexhaustible wisdom is the perpetual and imperishable food of the intellect.

Word: You are advancing to our goal, toward which we aspire, in the correct manner. Even though you acknowledge diverse religions, you all presuppose in all of this diversity the one, which you call wisdom. But say, does not the one wisdom embrace everything, that can be stated?

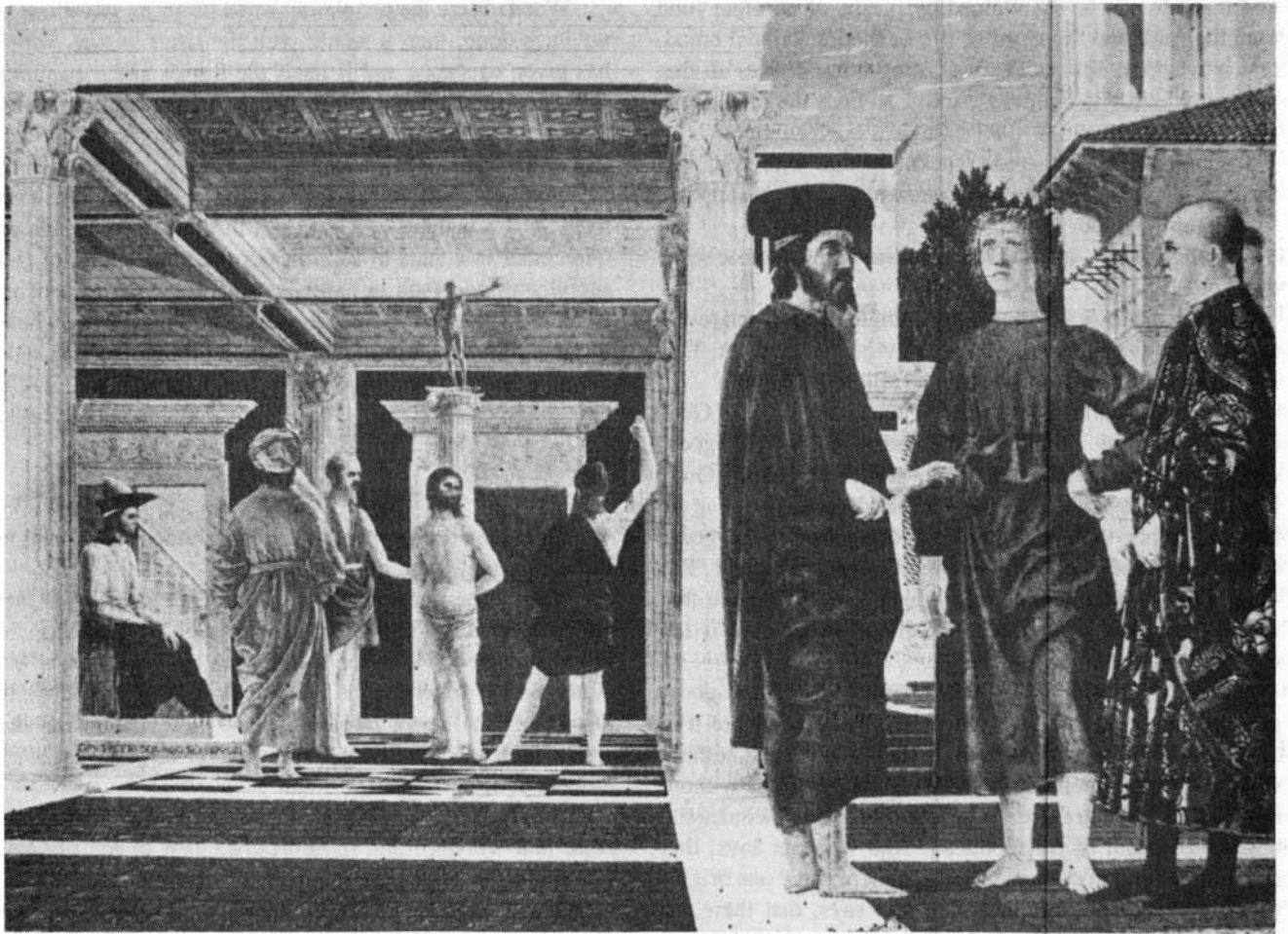
V

The **Italian** responded: Truly, there is no word outside of wisdom. The word of the wisest is in wisdom and wisdom in the word. Nothing is outside of it. The whole infinity is encompassed by wisdom.

Word: Now if someone says, everything would be created in wisdom and another, everything would be created in the word, do they then say the same thing or something different?

Italian: Even though diversity appears in the manner of speaking, it is the same in regards to the meaning. For the Word of the Creator, in which He has created everything, can be nothing other than His wisdom.

Word: What do you think: Is that wisdom God or a creature?



Flagellation of Christ, by Piero della Francesca (after 1453). "The Lord, King of Heaven and Earth, heard the sighs of the murdered and fettered and those led into servitude, who suffer thus on account of the diversity of their religions. . . . As the place of assembly He designated Jerusalem."

Italian: Since God, the Creator, creates everything in wisdom, He Himself is necessarily the wisdom of the created wisdom. That is, prior to every creature there is wisdom, through which everything created is that which it is.

Word: So wisdom is eternal, since it is prior to everything initiated or created.

Italian: No one can deny, that that by which he understands is prior to everything originated, would be eternal.

Word: It is therefore the origin.

Italian: So it is.

Word: Consequently it is also the simplest. Everything composed is originated. The composing can indeed not be after the composed.

Italian: That I recognize.

Word: Wisdom is therefore eternity.

Italian: It can not be otherwise.

Word: It is, however, impossible, that there are several eternities, since unity is prior to all plurality.

Italian: That also no one can deny.

Word: Wisdom is therefore the one, simple, and eternal God, the origin of everything.

Italian: So must it be.

Word: See therefore, how you, the philosophers of various schools of thought, agree in the avowal of the one God, whom you all presupposed in that which you as lovers of wisdom acknowledge.

VI

At this the **Arab** rose and responded: One can say nothing more clearly and truly!

Word: If you recognize one absolute wisdom for the reason that you are a lover of wisdom, do you then believe, that there are men with vigorous intellects, who do not love wisdom?

Arab: I believe with complete certainty, that all men naturally strive for wisdom, for it is the life of the intellect

and this life can be maintained by means of no other food than the truth and the word of life or the intellectual bread, that is wisdom. Just as every existing thing desires all that without which it is not able to exist, so does the intellectual life long for wisdom.

Word: All men therefore acknowledge with you, that there is the one, absolute wisdom, which they presuppose. This is the one God.

Arab: So it is. And no intelligent man can advocate some other one.

Word: There is therefore only a single religion and reverence of God for all those, who are of vigorous intellect. This is presupposed in all the diversity of religious custom.

Arab: Thou art wisdom, since Thou art the Word of God. I ask Thee: How should those, who revere several gods, concur with the philosophers in reverence of a single God? For it can be established, that the philosophers have at no time felt other than that there could not be several gods, above which the one, super-exalted God did not stand. The latter alone is the origin, from which the others have that which they have; He is more excellent by far than is the monad in number.

Word: All, who at any time worshipped several gods, presupposed, that the Godhead exists. They prayed to it in all gods as if they participated in it. That is, as there is nothing white without whiteness, so there also are no gods without the Godhead. The reverence of gods therefore includes the acknowledgment of the Godhead. And whoever says, that there are several gods, says also, that there is the one origin, which precedes all; similarly he, who says, that there are many sacred things admits the sacredness of the sacred things, through the participation of which all other things are sacred. Never was a people so foolish, that it would have believed in several gods, of which each one would have been the prime cause, origin, and creator of the universe.

Arab: I am also of this opinion. That is, one contradicts oneself, if one says, there would be several prime origins. Since the origin can be nothing originated, because it would be originated from itself and thus would exist before it would exist, and reason does not grasp this, thus the origin is eternal. And it is not possible, that there are several eternals, since unity exists prior to all plurality. Consequently, the one must be the origin and cause of the universe. Therefore, until now I have still found no people, that had deviated in this from the road of truth.

Word: If therefore all who revere several gods, looked at that, which they presuppose, i.e., at the Godhead, which is the cause of all, and—as reason commands—also manifestly revered this latter outwardly, just as they do this confusedly in all things, which they name gods—the strife were dissolved.

Arab: This were indeed not difficult. However, to terminate the worship of gods may be difficult. For the people holds firmly, that it is granted support from its worship of the gods and therefore turns to these deities for its salvation.

Word: Were the people informed about its salvation, as we have done, then it would seek the latter in that, which has given existence and is itself the Savior and the infinite salvation, rather than in those, who have nothing from themselves except that which is conceded to them by the Savior. However, if the people seeks refuge among the gods, which are regarded as sacred in the opinion of all, because they lived in the manner of God, and turns to them, as to an intercessor in a state of infirmity or other necessity, or if it supplicates one such in humble reverence or in respect attends to his memory, since he was a friend of God, whose life is to be imitated; then this would not contradict the single religion, so long as it brought the entire reverence of godliness to the one and only God. In this way the people could easily be satisfied.

VII

Thereupon the **Indian** spoke: Then how does it stand in respect to statues and images?

Word: The images, which bring to our knowledge that which is conceded in the true reverence of the one God, are not condemned. However, when they lead away from the cultivation of reverence of the one God, as if a part of the deity be in the stones themselves and were attached to the statue, then, since they deceive and avert from the truth, they deserve to be destroyed.

Indian: It is difficult to lead the people away from inveterate idol worship, and indeed on account of the oracles, which are given by them.

Word: Rarely are these oracles produced other than through priests, who report them as responses of the divinity. Has the question been set before them, then they give the answer pursuant to some art, i.e., the disposition of the Heaven, or they form the answer, which they ascribe to the deity, according to the circumstances, as if the Heaven, or Apollo, or the sun had commanded them to respond. Hence it occurs, that the majority of those answers are ambiguous, so that they do not openly convince by lies, or completely falsely; and if they are occasionally true, then are so accidentally. However, if a priest can conjecture well, then he issues oracles better and his answers come nearer the truth.

Indian: However, it is certain, that frequently a spirit, who is bound to a statue, patently imparts an oracle.

Word: Neither the soul of a man, nor of Apollo, nor of Aesculapius, nor of any other, which is worshipped as God; but rather the evil spirit, the foe of the human species from the inception on, sometimes, however rarely, feigns through the faith placed in him by man, to be bound to a statue and to be coerced into answers, in order thus to deceive. However, after the deception has been detected, he disappears. Therefore, today they have a voice and do not speak. After this deception of the seducer has become known through experience in many lands, idolatry has been condemned in nearly all locations by the wiser men. It will

also not be difficult in the Orient to detect its deception and achieve the invocation of the one God, so that its inhabitants are brought into conformity with the rest of the nations of the Earth.

Indian: Since the evident deceptions were detected and one can establish that, as a result thereof, the prudent Roman and likewise the Greek and Arab destroyed the idols, it is by all means to be hoped, that the idolatrous Indians will act similarly; above all, since they are wise and do not hesitate to acknowledge the necessity of religion in the worship of the one God. If they also thereby venerate their idols in their manner, they will come thus to a peaceful conclusion in respect to the adoration of the one God.

It will, however, be very difficult to achieve agreement from all sides in respect to the triune God. That is, it will appear to all, that the trinity can not be conceived without three gods. If there is a Trinity in the divinity, so there will also be plurality in the deity. However, it was previously said—and in fact, it is necessarily so—that there is only one absolute deity. There is no plurality in the absolute deity, but rather in the participating, who are not God in the absolute, but rather gods through participation.

Word: God, as Creator, is three and one. As infinite He is neither three, nor one, nor anything that can be stated. The names which are attributed to God, are taken from creatures, since He Himself is ineffable in Himself and stands above all that can be named or stated. Those, who worship God, ought to adore Him as the origin of the universe; in this one universe, however, there is a plurality of parts, inequality, and separation—the multitude of stars, trees, men, stones, is evident to the senses—the origin of all multitude, however, is unity; therefore, the origin of multitude is the eternal unity.

In the one universe there is inequality of parts, since no part is similar to the other. However, the inequality derives from the equality of unity. Consequently, eternal equality is prior to every inequality.

In the one universe, distinction or separation of parts is found. Before every distinction, however, is the connection of unity and equality. Separation, or distinction departs from this connection. The connection is therefore eternal.

However, there can not be several eternals. Consequently, in the one eternity is found unity, equality of unity, and the union of unity and equality, or connection. Thus, the most simple origin of the universe is triune, since in the origin the originated must be enfolded. Everything originated, however, signifies that it is thus enfolded in its origin. In everything originated a threefold distinction of this kind can be found in the unity of the essence. And for this reason, the simplest origin of everything must also be threefold and single.

VIII

The Chaldean: Even if the sages are somehow able to grasp this, it nevertheless exceeds the power of the common

man. For as I understand it, it is not true, that there are three gods, but rather it is one God, who is one and threefold. Dost thou not wish thereby to say, that that one is threefold in his power?

Word: God is the absolute power of all powers, since He is omnipotent. If there is, therefore, only a single absolute power, which is the divine essence, then to name this power triune, means nothing other than to say that God is triune. However, the divine power should not be conceived, such that it would be distinguished in opposition to reality, since in God power is reality itself. The same is true of absolute potentiality, which is also power.

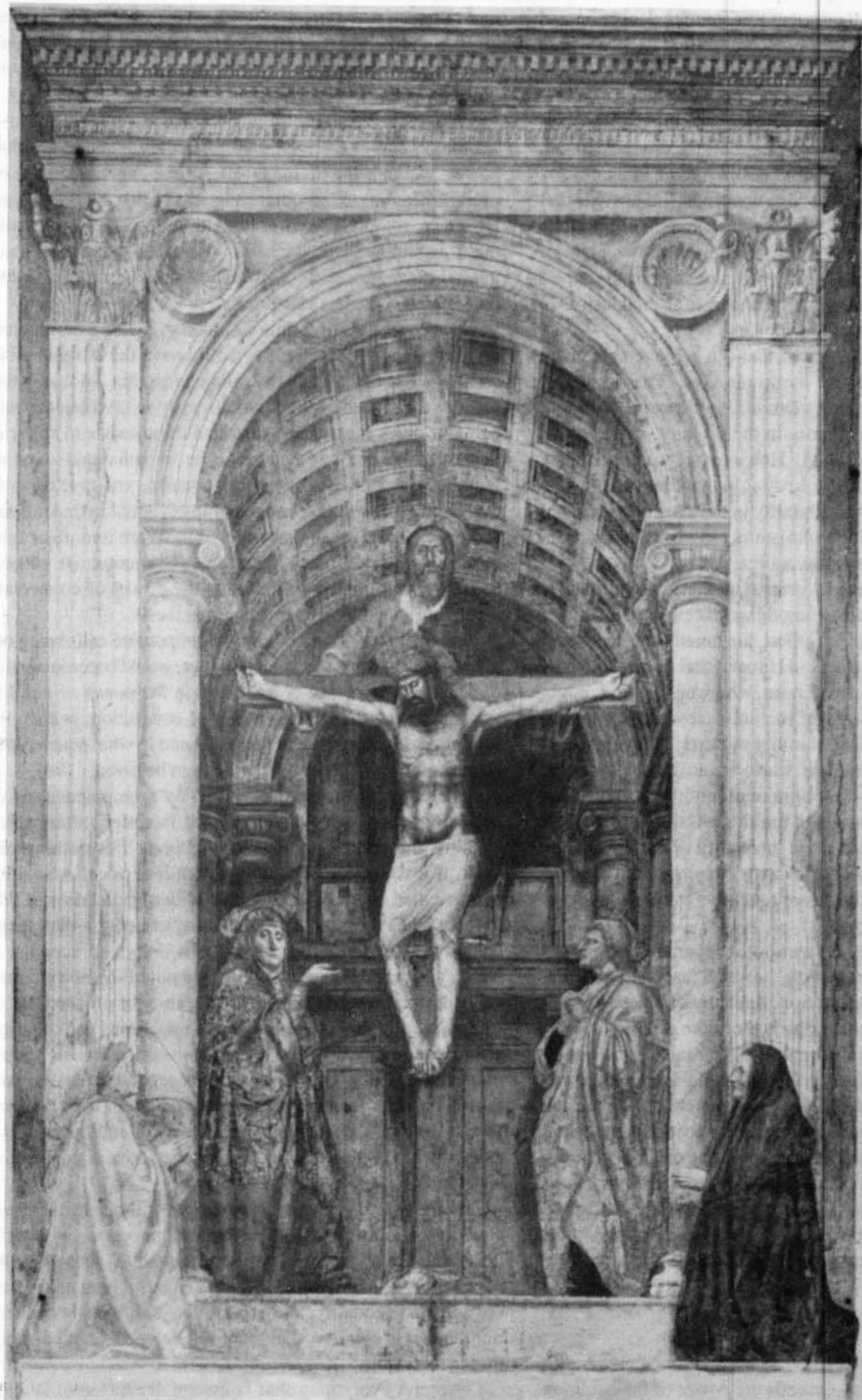
It appears absurd to no one, to say, that the omnipotent divinity, Who is indeed God, would have the unity in Himself, which is being, equality, and connection, so that in this manner the power of unity would unify everything that has being or gives it essence—that is, a thing exists in so far as it is one; the one and being can be interchanged—and so that the power of equality would equalize and give order to everything that exists. That is, a thing is equal in that it is not more and not less than that which it is. Were it more or less, then it would not exist. Therefore, it cannot exist without equality. And finally: so that thus the power of connection would unify and bind everything together.

Hence, in the power of unity, omnipotence calls being out of non-being, so that that which was not, would become capable of being. Omnipotence orders being in the power of equality and binds it together in the power of connection; just so one recognizes in the essence of love, that and in what manner love connects the loving with that, which can be loved.

Therefore, if man can be called by omnipotence out of not-being, then unity arises as first in order, after which equality and then the connection of both. For nothing can exist, if it is not one. The one is therefore prior. And since man is called out of not-being, the unity of man arises as first in order, then the equality of this unity or being—that is, the equality is the unfolding of order in unity, on account of which it is called the unity of man and not of the lion or some other thing. However, the equality can only proceed out of the unity, for not otherness, but rather unity or identity, produces equality. Finally, love or connection proceeds from unity and equality. That is, unity is not separable from equality and the latter from unity. The connection or love is therefore such that, with the positing of unity, equality is posited and with the positing of unity and equality, love or connection is posited.

If, therefore, there is no equality, without it being the equality of unity, and if there is no connection, without it being the connection of unity and equality, such that the connection is in unity and equality, equality is in unity, and the unity is in equality, and unity and equality are in connection, then it is obvious, that there can be no essential distinction in the Trinity.

Namely, everything that is essentially different is such



"Trinity Adored by Donors," life-size fresco by Masaccio and Filippo Brunelleschi, Florence, S. Maria Novella, ca. 1425.

that the one can be, without the other existing. However, because the Trinity exists such that with the positing of unity the equality of unity is also posited and, conversely, and with the positing of unity and equality connection is also posited, and, conversely, it appears not in the essence, but in the relationship, that and in what manner another is unity, another is equality and another is connection.

A numerical distinction is essential. The number two differs essentially from three. With the positing of the number two, three is not posited, and the three does not follow from the existence of two. Therefore the Trinity in God is not composed, plural or numerical, but rather the simplest unity. Whoever believes therefore, that God be one, does not deny, that He be threefold, in so far as he understands that Trinity as not different from the simplest unity, but rather as unity itself, such that that Trinity, were it not in unity, were also not the origin, which is so omnipotent, that it can create the universe and each individual.

The more unified a power is, the more powerful it is; however, the more unified it is, the simpler it is. Therefore, the more powerful or stronger it is, the simpler it is. Hence, if the divine essence is omnipotent, it is completely simple and threefold. For without trinity, it were not the simplest, strongest, and most omnipotent origin.

Chaldean: I am of the opinion, that no one can disagree with this deliberation. However, that God had a Son and participant in His Divinity, this the Arabs and many with them assail.

Word: Some name unity Father, equality Son, and connection the Holy Spirit, since those designations, although they are not really proper, nevertheless correctly designate the Trinity. The Son proceeds from the Father and Love or Spirit from unity and the equality of the Son. That is, the nature of the Father proceeds to the Son in equality. Therefore, love and connection arise out of unity and equality.

Could one find simpler designations they were more suitable, as are, for example, unity, sameness, and identity. These designations seem to unfold the infinitely fecund simplicity of essence better. Also notice, that there is a certain fecundity in the essence of the rational soul, that is, mind, wisdom, and love or will, since the mind can develop intellect or wisdom from itself, and from both proceeds the will or love. This trinity of the unity of essence of the soul is the fecundity which man possesses in his similarity to the infinitely fecund and uncreated Trinity. Likewise every created thing bears the image of creative power in itself and possesses fecundity in its manner in greater or more distant similarity to the infinitely fecund Trinity, which creates everything. It is therefore not so, that the creature would have obtained his being only from divine being, but rather the creature has obtained its triply fecund being in its manner from the infinitely fecund triune Being. Without this fecund Being, neither the world could exist, nor would the creature exist in the best manner, in which it is possible.

IX

To this the Jew responded: The Trinity, exalted above all, which no one can deny, has been explained in the best possible way. One of the prophets revealed it to us briefly, when he said, God would have asked, how He, Who would have given the fecundity of generation, could be sterile. And although the Jews shun the Trinity, because in their eyes it signifies plurality, they will nevertheless willingly agree, as soon as they have seen, that it signifies completely simple fecundity.

Word: Also the Arabs and all wise men will easily see on the basis of these deliberations, that to reject the Trinity means, to deny divine fecundity and creative power and that to acknowledge the Trinity is the renunciation of a plurality and community of gods. That fecundity, which is also a trinity, brings it about, that it is unnecessary, to have several gods, which mutually support each other in the creation of everything, for the one infinite fecundity suffices, to create all that which can be created.

The Arabs can grasp the truth much better in this way, as when they say in their manner, God would have essence and soul, and add thereto, that He would possess word and spirit. For if one says God would have a soul, then this soul cannot be understood except as the reason or Word, which is God. That is, reason is nothing other than the Word. And what is the Holy Spirit of God other than the love, which is God?

Nothing is truly verified about the completely simple God that is not He Himself. If it is true that God has the Word, then it is also true that the Word is God. If it is true that God has spirit, then it is true that the Spirit is God. Having does not befit God in the proper sense, since He Himself is everything; thus having in God is being. Therefore, the Arab does not deny that God is mind and from this the Word or wisdom is generated and from both the Spirit or love proceeds. This is that Trinity which was explained above and is posited by Arabs, even though most of them do not perceive that they acknowledge the Trinity.

Likewise you Jews also find in your prophets that the Heavens are formed by the Word of God and by His spirit. In the manner in which the Arabs and Jews deny the Trinity, it must certainly be denied by all. However, in the manner in which the truth of the Trinity was unfolded above, it must necessarily be accepted by all.

X

To this the Scythian responded: There can be no hesitancy in the adoration of the completely simple Trinity, which even now all those adore, who venerate the gods. The wise men say, God is the creator of both sexes and He is love; thereby they wish to explain the infinitely fecund Trinity of the Creator, as well as they can. Others assert that God, who be exalted above all, would exert the intellect or reason from Himself. They designate Him as God of God and as the Creator-God, since everything created has a cause and rea-

son, as to why it is this and not that.

The one infinite reason of all things is therefore God. However, the reason, which is *logos* or Word, emanates from that which produces it, such that, if the Omnipotent produces the Word, it becomes in the thing that which is enfolded in the Word; likewise if the Omnipotent says: Let there be light, the light enfolded in the Word thus exists actually. This Word of God is intellectual, such that a thing exists in reality, as soon as it is conceived as existing in His intellect.

They furthermore say, that the spirit of connection proceeds third in order. The latter connects all to one, so that there would be unity as the unity of the universe. That is, they posit a world soul or spirit, which connects everything and by means of which every creature obtains participation in the world order, in that it is a part of the universe. It is therefore necessary, that this spirit itself exists in the origin of the origin. Moreover, love connects. Therefore this spirit, whose power is diffused throughout the universe, can be called the love, which is God or charity. Thus, the connection through which the parts are connected to the one or the whole, and without which there would be no perfection, has God as its origin. In this manner one sees clearly, that all wise men touch upon something of the Trinity in unity. Therefore, when they shall hear the same explanation, which we have heard, they shall rejoice and praise God.

The **Gaul** responded: I have also occasionally heard the following argumentation among the learned: Eternity is either ungenerated or generated or neither ungenerated nor generated. I see that ungenerated eternity can rationally be called omnipotent Father, whereas the generated can be called Word or Son, and the neither ungenerated nor generated love or Holy Spirit, since the latter proceeds from both; it is neither ungenerated, since it is not the Father, nor generated, since it is not the Son, but rather proceeds from both.

Eternity is therefore single, and it is threefold and completely simple. The one deity is threefold, the one essence is threefold, the one life is threefold, the one potency is threefold, and the one virtue is threefold. In this deliberation I have now progressed so far, that that which was obscure, is clear as light in respect to the extent of our current understanding.

However, the greatest contradiction still remains in this world, since some assert, the Word would have become flesh, in order to redeem all; the others, however, think otherwise. Therefore it is necessary, to inform ourselves as to how we can attain concord in this difficulty.

Word: The Apostle Peter has undertaken to elucidate this part of our dialogue. Listen to him. He will instruct sufficiently concerning that which is obscure to you.

XI

And **Peter** appeared in their midst and began in the following way:

Peter: All diversity of opinion regarding the incarnation

of the Word seems to be of the following variety: First we have those who say, the Word is not God. This question has previously been answered, since the Word of God can only be God. This Word is reason. That is, the Word means *logos* in Greek, which is reason.

There is no doubt, that God, the creator of all rational souls and spirits, has reason. However this reason of God, as was explained above, is nothing other than God. Having coincides in God with being. That is, that One, from whom everything is, enfolds everything in Himself; He is everything in everything, since He is the Former of everything. Consequently He is the Form of forms. The latter, however, enfolds in Himself all formable forms.

The Word or reason, the infinite cause and the measure of all that can be, is therefore God. Therefore, those who admit that the Word is incarnate or human, must also acknowledge that that man whom they designate as the Word of God, is God.

At this point, the **Persian** spoke and said: Peter, the Word of God is God. How then could God, who is immutable, become not God, but rather a man, the Creator's creature? Nearly everyone denies that, except a few in Europe. And even if there are a few among us, who are called Christians, they agree with us, that it is impossible, that the infinite be finite and the eternal temporal.

Peter: This, i. e., that the eternal be temporal, I resolutely deny together with you. However since all of you, who adhere to Arab law, designate Christ as the Word of God—and you do that correctly—it is necessary, that you also acknowledge Him as God.

Persian: We acknowledge Him as the Word and the spirit of God, since among those, who are or were, no one possessed that excellence of the Word and of the spirit of God. Nevertheless, we do not therefore admit, that He has been God, for the latter knows no participant. So that we do not fall into a plurality of gods, we deny, that the former is God, but confess that he is nearest to God.

Peter: Do you believe in the human nature in Christ?

Persian: We believe and affirm, that this has truly been in Him and persisted.

Peter: Quite right. This nature, which is human, was not divine. And thus in everything which you see in Christ corresponding to His human nature, through which He was similar to other men, you have apprehended not Christ as God, but rather as man.

Persian: So it is.

Peter: Therein is no one of another opinion. Human nature was in Christ most perfectly. Through it He was a real man and mortal just as other men. According to this nature He was not, however, the Word of God. Tell me therefore: What do you intend, if you acknowledge Him as the Word of God?

Persian: We do not look at nature but rather at the grace, that is, we intend, that He has attained this lofty grace, that

God placed His Word in Him.

Peter: Has God not also placed His Word in a similar manner in the other prophets? For they all spoke through the Word of the Lord and were messengers of the Word of God.

Persian: So it is. However Christ is the greatest of all prophets. Therefore, it befits him in the proper manner, to be called the Word of God, like all other prophets. In particular businesses and provinces, several missives contain the word of the king. However, there is only one missive, which contains the word of the king, by which he rules the whole kingdom, that is, because it contains the law and precept, which all must obey.

Peter: It appears, that thou hast given us a good similitude for our purpose; the word of the king is written on various pieces of paper, however, these pieces do not change into another nature. They maintain the same nature, which they had, before the word was inscribed. Thus you say, human nature would be maintained in Christ.

Persian: That we do.

Peter: Very well. But notice the difference which exists between a missive and the heir of the king. In the latter, the king's own word is alive, free, and unlimited, however, not in the missive.

Persian: That I acknowledge. If the king sends his heir to the kingdom, then the latter bears the living and unlimited word of his father.

Peter: Is the Word not the true heir, who is neither messenger nor envoy, neither letter nor missive? And are not all the words of messengers and missives enfolded in the word of the heir? And although the heir of the kingdom is not the father, but rather the son, he is not different from the regal nature; rather, he is the heir on account of this equality.

Persian: I understand very well. However, there remains a difficulty: The king and his son are two different men. Therefore we do not admit, that God possesses a son. That is, the son would be another God than the father, just as the son of the king is another man than the father.

Peter: Thou impugnest the similitude well. It is not correct, if thou attendest to the substituted persons. However, if thou removest the numerical diversity of the substituted persons and reflectest on the potency which lies in the regal dignity of the father and of the son as his heir, then thou seest, that that regal power is one and the same in the father and in the son; in the father it is as in the ungenerated, in the son it is as in the generated or living word of the father.

Persian: Continue!

Peter: Therefore, that absolute regal power is ungenerated and generated, and the ungenerated shall summon to the society of connatural and generated succession, one who is by his nature different, so that the different nature may simultaneously and undividedly possess the kingdom in union with its nature. Then, do not the natural and the graced or adoptive successions concur in the one inheritance?

Persian: It is manifest.

Peter: Likewise, sonship and adoption are also united in the one succession of the one king. However, the succession of adoption does not exist in itself, but rather in succession of sonship. Adoption, which does not achieve succession through its own nature, must, if it would attain succession in the existence of sonship, endeavor to obtain it not in itself, but rather in the existence of that which succeeds through nature. Therefore, if adoption, since it succeeds with sonship in the attainment of the completely simple and indivisible inheritance, obtains succession not from itself, but rather from sonship, the adoptive and the natural successor can not be different, even though the nature of adoption and the natural are different.

How shall both concur in the succession of the indivisible inheritance, if the adoptive son were separated and did not subsist in the one and the same hypostasy with the natural son? We must therefore maintain, that in Christ the human nature is united to the Word or the divine nature, such that the human does not pass over into the latter, but rather adheres thus to it indissolubly, so that it is not separate in itself, but becomes a person in the divine nature; so that the human nature, which is now summoned to the succession of eternal life with the divine, can achieve immortality in the divine.

XII

Persian: I grasp that very well. However, clarify what has already been said, by means of another intelligible example.

Peter: It is impossible to form precise similitudes. However, behold: Is wisdom in itself an accident or substance?

Persian: As it is in itself, it is substance, as it occurs in another, it is an accident.

Peter: In all wise men, all wisdom comes from that which is wisdom per se, since it is God.

Persian: This has been demonstrated.

Peter: Is not one man wiser than another?

Persian: Certainly.

Peter: Whoever is wiser, is closer to wisdom per se, which is the absolute maximum. And whoever is less wise, is more distant from it.

Persian: That I admit.

Peter: However, according to his human nature, a man can never be so wise, that he could not be still wiser. For between contracted wisdom, i.e., human wisdom and wisdom per se, which is divine, maximum, and infinite wisdom, an infinite distance always remains.

Persian: That is similarly evident.

Peter: That is true in like manner of the absolute and of the contracted mastery. In absolute mastery, the art is infinite, in the contracted, the art is finite. Let us suppose, that the intellect of any man, possesses such mastery and such wisdom, that it is not possible, to have greater wisdom or mastery. This intellect then is to such a high degree united with wisdom per se or mastery per se, that this union could

not be greater. Would not this intellect achieve divine strength, in the strength of the united wisdom and mastery, which are maximal and with which it is united? And in a man, who possesses such an intellect, would not the intellectual nature of the man be united immediately with the divine nature or the eternal wisdom, the Word or omnipotent art?

Persian: I acknowledge all that. However, this union would still be one of grace.

Peter: If the union of the inferior nature with the divine were so great that it could not be greater, then it were united to it in personal unity. That is, as long as the inferior nature were not elevated into personal and hypostatic union with the superior, it could be greater. Therefore, as soon as the maximum union is posited, the inferior nature subsists in the superior, such that it adheres to it. That occurs not through nature, but through grace. This grace, however, is the maximum, which can not be greater. It is not separate from nature, since it is united with it. Therefore, even if human nature were united with the divine by means of grace, that grace, since it can not be greater, would nevertheless be immediately enclosed in nature.

Persian: Whatsoever thou mayest have said, to the effect that human nature in any man can be elevated through grace to union with divine nature, the man Christ can no sooner be called God than another saint, even though he is the most sacred among men.

Peter: If thou attendest to the fact that there is in Christ alone that highest height, which can not be greater and that maximum grace, which can not be greater and that maximum sanctity, and thus in respect to the rest; and attendest to the fact, that there can not be more than but one maximum height, which can not be greater—the same is true of grace and sanctity—and thereafter observest, that every height of every one of the prophets, whatsoever degree it may have had, is incomparably distant from that height, which can not be greater, such that for every degree of height these can be infinitely many greater or smaller between it and the sole-highest—the same is true of grace, sanctity, prudence, wisdom, mastery, and every single thing—then thou seest quite clearly, that it can only be Christ, in whom human nature is united in unity with its supposition to the divine nature.

The Arabs also acknowledge the same, although the majority do not fully consider it. They say namely, that in this world and in the future, one Christ is the sole-highest and the Word of God. Even those who describe Christ as God and man, indeed say nothing other than that Christ be the sole-highest man and the Word of God.

Persian: It therefore appears that the Arabs, after they have considered well that union which is necessarily present in the highest, can be led to acceptance of this belief. For the unity of God, which they endeavor to guard with maximum strength, is in no way injured through this belief, but is saved. However, tell us how one can grasp, that that human nature obtains existence not in itself, but rather through its adher-

ence to the divine.

Peter: Listen to the following example, even though it is not very precise. A magnetic stone attracts iron upward. And whilst it adheres to the air around the magnet, the nature of the iron does not subsist in its own weighty nature. Otherwise, that is, it would not hang in the air, but rather, according to its own nature, fall in the direction of the center of the earth. Through adherence to the magnet, the iron hangs in the air by means of the strength of the magnet's nature, not however by means of the strength of its own nature, in consequence of which it could not be there. However, the cause whereby the nature of the iron is thus inclined toward the nature of the magnet, lies in the fact that the iron has the similitude of the magnet's nature in itself, from which it shall have taken its origin. Therefore, if the intellectual human nature were most closely bound to the divine nature, from which it has received its being, it would be inseparably bound to it just as to the source of its life.

Persian: I see that.

Peter: There is still a large group of Arabs, who acknowledge Christ would have raised the dead and created birds from clay and much else, which they expressly say, that Jesus Christ, as He who had the power therefore, would have done. On this basis, they can very easily be won over, since it can not be denied, that He has done this in the strength of the divine nature, to which the human was united in the manner of the supposition. The power of Christ, with which He commanded that that occur which has occurred, according to the Arabs' acknowledgment, could not be according to human nature, unless the human would have been received in union with the divine, in whose power it lies to so command.

Persian: This, and much else that is described in the Koran, the Arabs affirm of Christ. However, it will be more difficult to lead the Jews than all others to the belief in these things, since they expressly admit nothing regarding Christ.

Peter: In their writings they have everything concerning Christ. However, since they follow the literal sense, they do not want to understand. This resistance of the Jews, however, does not impede concord. That is, they are few and can not bring the whole world into disorder with arms.

XIII

The Syrian responded to this: Peter, to begin with, I have heard that greater concord could be obtained among every religious group on the basis of their presuppositions. Tell us now, how this shall be realized in respect to this point.

Peter: I will. However, first tell me: Is not God alone eternal and immortal?

Syrian: I believe so, for everything besides God has originated. Because it therefore has an origin, it will also have an end corresponding to its nature.

Peter: Does not nearly every religion—that of the Jews, the Christians, the Arabs, and of many other men—hold,



The Transfiguration of Christ (detail) by Raphael. "Does not nearly every religion hold that the mortal human nature of every man is resurrected after temporal death to everlasting life?"



*Leonardo da Vinci's
Adoration of the Magi, 1480-
82. Uffizi Gallery, Florence.
"All who believe, that
Christ would have come,
acknowledge, that He is born
of the Virgin Mary."*

that the mortal human nature of every man is resurrected after temporal death to everlasting life?

Syrian: So one believes.

Peter: Therefore, all these religions acknowledge that human nature must be united to the divine and immortal nature. For how else would human nature pass over into immortality, if it did not adhere to the divine in inseparable union?

Syrian: Belief in the Resurrection necessarily presupposes this.

Peter: If the belief therefore bespeaks this, then human nature is united with the divine for the first time in some man. This occurs in that one who is the countenance of all people and the highest Messiah and Christ, as Arabs and Jews call Christ. The latter, however, who in the opinion of all is nearest to God, will be the one in whom human nature is united for the first time with God. He is therefore the savior and mediator of all in whom human nature, which is one and through which all men are men, is united to the divine and immortal nature, so that all men, who are of the same nature, attain resurrection from death.

Syrian: I understand, that thou wouldst say: The belief in the resurrection from death presupposes the union of human nature with the divine, without this union such a belief were impossible. This is the case, so thou assestest, in Christ. Therefore, this belief presupposes him.

Peter: Correct. And from this, one can see how all promises which are found among the Jews are reaffirmed in the belief in the Messiah or mediator. Through him alone could, and can, those promises be fulfilled, as far as they concern eternal life.

Syrian: How is it with other religious bodies?

Peter: Similar. For all men strive and hope for nothing other than eternal life in their human nature. They institute ceremonies to purify souls and sacrifices, in order to be better adapted in their nature to that eternal life. Men desire the beatitude which is eternal life, not in another nature, but in their own. Man wants to be nothing but man, not an angel or another nature. He wants, however, to be a happy man, who attains the highest felicity.

This felicity is nothing other than enjoyment and the union of human life with its primary source, from which that

life emanates. It is divine and immortal life. However, how were this possible to man, if it were not granted to one, who shares the same nature with all, to be elevated to such union, and through whom, as if through their mediator, all men could achieve the ultimate goal of their desires? And this one is the way, since he is the man, through whom every man has access to God, who is the goal of all their desires. It is therefore Christ, who is presupposed by all who hope to achieve ultimate felicity.

Syrian: This pleases me very well. For, if the human intellect believes it can achieve union with wisdom where it obtains the eternal sustenance of its life, then it presupposes that the intellect of some highest man achieves that union in the highest measure and has attained that highest mastery, through which every other mastery hopes to come to this wisdom in a similar manner. If he did not believe that this were possible in the highest of all men, then he would hope in vain. And since the hope of all is in being able to attain that felicity, on account of which every religion exists—and there is no deception in this, since this hope stems from an innate desire which is common to all, and religion ensues from it, which is innate to all in a similar manner—I see that this master and mediator who possesses the summit of the perfection of human nature and dominion, is presupposed by all.

But the Jews say, to be sure, that this prince of nature, in whom all deficiency of mankind is removed, be not yet born, but will one day be born.

Peter: It suffices, that both Arabs as well as the Christians and all those who have borne witness to it in their blood, because of that which the prophets have proclaimed of Him, and which He Himself, whilst He abided in this world, has effected beyond the strength of all men, acknowledge that He would have come.

XIV

Spaniard: There is indeed yet another difficulty regarding the Messiah, of whom the greater part of the world acknowledges, that He would have come, namely in respect to His birth. Whereas Christians and Arabs are of the opinion, He would be born of the Virgin Mary, others hold this to be impossible.

Peter: All who believe that Christ would have come, acknowledge that He is born of the Virgin Mary. For since He is the ultimate perfection of nature and the sole-highest, which father's son should He then be? Every generating father is in the perfection of nature so far distant from the ultimate perfection, that he can not impart to the son this ultimate perfection, beyond which there can be none higher and which is not possible to a single man. Only that father can do this, who is the Creator of nature. Therefore, the highest has no other father than Him, from whom all paternity has its source. Therefore, in divine strength the highest is conceived in the womb of the Virgin. The highest fecundity

is united with virginity in this Virgin. Therefore, Christ is born to us, such that He stands nearest to all men. Namely, He has Him for His Father, from whom every human father obtains his paternity. He has her for His mother, who has been united with no man in the flesh, so that in this way everyone finds His nature in ultimate perfection through the nearest union in Christ.

Turk: A not-insignificant difference of opinion still remains. Whereas the Christians say, that Christ was crucified by the Jews, there are others who deny this.

Peter: That many deny the crucifixion of Christ and say, that He still lives and will return at the time of the Antichrist, is due to the fact that they are ignorant of the mystery of death. Since He will come, as they say, they believe, that when He comes back, He will come back in mortal flesh, as if He could not otherwise fight the Antichrist. That they deny His Crucifixion by the Jews, they appear to do so out of reverence for Christ, as if to suggest that such men would have no power over Christ.

However, one takes note, that one must rightly give credence to those multifarious reports and the proclamation of the Apostles, who have died for the truth, i.e., that Christ has died thus. Likewise, the prophets also predicted, that Christ would have to be condemned to the most ignominious death, which was death on the cross.

The reason for this is the following: Sent by God, the Father, Christ came, in order to announce the Kingdom of Heaven. What He said of this kingdom could be confirmed in no better way than through the testimony of His blood. Therefore, in order to be completely obedient to the Father and to provide all certitude for the truth, which He proclaimed, He has died. He took upon Himself the most ignominious death, so that no man might refuse to accept the truth, since one knows that Christ has voluntarily taken death upon Himself as testament to the truth.

He preached the Kingdom of Heaven and gave notice, how the man who is fit for this kingdom could attain it. In comparison to this kingdom, the life of this world, which is so tenaciously loved by all, is to be deemed as nothing. And so that one would know that the truth be that life of the Kingdom of Heaven, He gave up the life of this world for the truth, so that He would thus in the most perfect manner proclaim the Kingdom of Heaven and liberate the world of the ignorance, in which it prefers this life to the future one. He wished to sacrifice Himself for the many, so that exalted thus before the eyes of all upon the cross, He would bring all to belief and clarify the joyful tidings, comfort the pusillanimous, and freely give Himself for the redemption of the many, and do everything in the best way, in which it could be done, so that man thus achieved belief in salvation, hope in its fulfillment, and charity through fulfillment of the commands of God.

Therefore, would the Arabs attend to the fruit of the death of Christ and see in it that it was incumbent upon Him as sent



Berlin, Gemäldegalerie

Moses Destroying the Tablets of the Law, by Rembrandt, 1659. "It is proper to fulfill the commandments of God."

by God, to sacrifice Himself, in order to fulfill the desire of His Father and that there was nothing more glorious for Christ, than to die even the most ignominious death for truth and obedience, then they would not take away the glory of the cross from Christ, through which He earned the merit of being the highest and becoming exalted above all in the glory of the Father.

If Christ further proclaimed that men will achieve immortality after their death in the Resurrection, how would the

world have been able to achieve better certainty concerning it, than by means of the fact that He Himself has died of His own will, is resurrected, and appeared among the living? Namely, the world was then given ultimate certainty, when it heard that the man Christ, who had died on the cross in the presence of all, was resurrected from the dead and lives—according to the testimony of many, who saw Him alive and died in this testimony, in order to be trustworthy witnesses to His Resurrection. This was the most perfect evangelization,

which in itself revealed Christ. It could not be more perfect. However, without death and Resurrection, it would always have been able to be more perfect.

Therefore, whoever believes, that Christ has fulfilled the will of God in the most perfect manner, must thereby also acknowledge all this, without which, the evangelization of the joyful tidings would not have been the most perfect.

One notices furthermore, that the Kingdom of Heaven was concealed from all until Christ. It is indeed the news of Christ, to proclaim the kingdom unknown to all. There was neither faith, nor hope of attaining the Kingdom of Heaven, nor could it be loved by anyone, since it was completely unknown. It was also not possible that any man would come to that kingdom, as long as human nature had not yet been elevated to that exaltation, so that it would participate in the divine nature. Christ has therefore made the Kingdom of Heaven accessible to us in every way. Yet no one is able to enter it, unless he lays aside the kingdom of this world through death. Therefore, the mortal must lay aside mortality, that is, the possibility of dying. This can occur only through death. Then can he clothe himself with immortality.

As mortal man, Christ would not yet have laid aside His mortality, as long as He had not yet died. Likewise He would also not yet have entered the Kingdom of Heaven, in which no mortal can be. Therefore, as long as He, the first-fruit and the first born of all men, has not yet opened up the Kingdom of Heaven, our nature is not united with God and led into the Kingdom of Heaven. Thus, no man could be in the Kingdom of Heaven, as long as the human nature, which is united with God, would not have been led into the Kingdom of Heaven. All men who believe in the Kingdom of Heaven assert the contrary. That is, all believe that certain saints of their religion had achieved felicity. The belief of all, therefore, who acknowledge that there are saints in eternal glory, therefore presupposes that Christ has died and ascended into Heaven.

XV

German: That is all very well. I see a not insignificant difference of opinion in respect to felicity. To the Jews, only temporal things, which consist of sensuous goods, are promised under their law. To the Arabs, only carnal, albeit eternal goods have been promised under their law, which is written in the Koran. The Gospel, on the other hand, promises angelicality, i.e., that men will be similar to the angels, who have nothing carnal in themselves.

Peter: What can one conceive in this world, for which the desire does not decrease, but rather constantly increases?

German: All temporal things die away, only the intellectual do not. Eating, drinking, luxuriating, and more of the same, please at one time and displease at another, and are unstable. However, knowledge and understanding and to see the truth with the eyes of the mind are always pleasant. And the older the man becomes, the more this pleases him and the more he obtains of it, the stronger becomes his appetite

to possess it.

Peter: If, therefore, the desire and nourishment shall be eternal, the nourishment can be neither temporal nor sensible, but rather only intellectual life. Hence, although the promise of a paradise, where there are streams of wine and honey and a multitude of virgins, is found in the book of the Koran, there are nonetheless many men in this world who abominate this. How will the latter then be happy, if they attain that there, which they do not wish here? It is said in the Koran, that one will find wonderfully beautiful, dark-skinned maidens, with eyes which have large, bright white eyeballs. No German would strive for such a maiden in this world, even if he had surrendered to the lusts of the flesh. One must therefore understand those promises as similitudes.

At another point, the Koran prohibits coitus and all other pleasures of the flesh in churches, or synagogues, or mosques. However, one can not believe, that the mosques are holier than paradise. How shall that be prohibited in the mosque, which is promised yonder in paradise?

In other locations, the Koran says that everything is found there, that we yearn for here, since the fulfillment of all must take place there. Thereby, it reveals sufficiently what it wants to say, that the like is found there. For since these things are so much desired in this world, provided that an equal desire exists in the other world, they must be exquisite and abundant there; however different, for in this similitude it is not able to express that that life be the completion of all desires. Nor did it wish to express to uneducated people other, more hidden things, but rather only that which appears felicitous according to the senses, so that the people who do not value the things of the spirit, would not despise the promises.

The whole concern of him who wrote that book, therefore appears to have been primarily to avert the people from idolatry. To this end, it made these kinds of promises and it put everything together. However, it did not condemn the Gospel, but rather praised it, and thereby intimated that the felicity which is promised in the Gospel would be in no way less than that corporeal felicity. The initiated and the wise men among them know that this is true. Avicenna prefers the intellectual felicity of the vision or enjoyment of God and the truth incomparably to the felicity described in the book of the Arabs. Nevertheless, he adhered to that law. Likewise did the other wise men.

Therefore, there will be no difficulty in uniting all religions. One must only say that that felicity transcends everything that can be described or said, since it is the fulfillment of all desires, the attainment of the good in its source, and of life in immortality.

German: How is it then with the Jews, who do not accept the promise of the Kingdom of Heaven, but rather only the promise of temporal things?

Peter: The Jews very often take death upon themselves

out of observations of the law and its consecrations. If they did not believe that they would attain felicity after death, in that they prefer zeal for the law to life, then they would not die. The belief of the Jews therefore does not mean that there would be no eternal life and that they could not attain that life. Otherwise, no one would die for the law. However, the felicity which they expect, they do not expect on the basis of the performance of the law, since that law does not promise this to them, but rather on the basis of the belief which presupposes Christ, as one can find it stated above.

XVI

Tatar: I have heard much here, that has been previously unknown to me. The Tatars, who are a numerous and simple people, who worship the one God above others, are astounded over the variety of rites which others have, who worship one and the same God with them. They laugh at the fact that many Christians, all Arabs, and Jews are circumcised, that others are marked on their brows with a brand, and others are baptized. Furthermore, there is great diversity in respect to matrimony; the one has one wife, another is legally married to one wife, nevertheless has several concubines, yet another has several lawful wives. As regards sacrifice, the rites are so diverse, that one can not even enumerate them. Among these various forms of sacrifice, there is the Christian sacrifice, in which they offer bread and wine, and say it be the body and blood of Christ. That they eat and drink this sacrifice after the oblation, seems most abominable. That is, they devour what they worship. How in these cases, which, moreover, are varied by location and time, a union can be realized, I do not grasp. However, as long as there is not a union, the persecution will not cease. That is, diversity produces division and enmity, hatred, and war.

Then **Paul**, teacher of the people, commissioned by the Word began to speak.

Paul: It must be shown, that the salvation of the soul is granted, not on the basis of works, but rather on account of faith. Abraham, the father of the faith of all the believing—be they Christians, Arabs, or Jews—believed in God and he was reckoned to be justified; the soul of the just will inherit eternal life. If that is admitted, then the various kinds of rites are not disturbing, for they are instituted and understood as sensible signs of the verity of faith. The signs, not the designated, assume variability.

Tatar: Please explain, how faith saves.

Paul: If God promises something by virtue of His pure liberality and grace, must one then not believe Him, who has the power, to give everything, and who is truthful?

Tatar: Certainly so. No one, who believes in Him, can be deceived. And whoever does not believe in Him, would be unworthy to receive any gift of grace.

Paul: What therefore justifies him, who attains justice?

Tatar: Not merits, or else it were not grace, but rather something owed.

Paul: Very well. However, since no living being is justified in the sight of God on the basis of his works, but rather through grace, the Almighty gives him, to whom He wishes to give, that, which He wishes to give. If therefore someone shall be worthy of obtaining the promise, which is issued out of pure grace, then it is necessary, that he believe in God. In this therefore is he justified, since he obtains the promise only on the grounds, that he believes in God and expects, that the Word of God takes place.

Tatar: After God has promised, it is just, that His promise be kept. Whoever believes in God, is therefore justified more through the promise, than through the faith.

Paul: God, who promised Abraham a seed in which all would be blessed, justified Abraham, so that he attained this promise. However, had Abraham not believed in God, then he would have attained neither the justification nor the promise.

Tatar: Indeed.

Paul: The faith, therefore, in Abraham only effected that the fulfillment of the promise was a just one. Otherwise, it would neither have been a just one, nor would it have been fulfilled.

Tatar: What therefore has God promised?

Paul: God promised Abraham, to give him a seed in Isaac, in whom all people would be blessed. This promise was issued, when in accordance with the common course of nature it was impossible for Sara, his wife, to become pregnant by him and to give birth. However, because he believed, he obtained his son, Isaac. Consequently, God tempted Abraham to tender and sacrifice to Him his son Isaac, in whom the promise of the seed had been fulfilled. Abraham obeyed God; he nonetheless believed that the future promise would be fulfilled even in the dead son, and the latter would be raised. From this, God saw Abraham's great faith. He was justified and the promise of the one seed, who descended from him through Isaac, was fulfilled.

Tatar: Who is this seed?

Paul: It is Christ. In Him all people attained the divine blessing.

Tatar: Which blessing is that?

Paul: The divine blessing is the ultimate desire or felicity, which is called eternal life and concerning which thou hast heard enough above.

Tatar: Thou wouldst say therefore, that God in Christ has promised us the blessing of eternal felicity?

Paul: I wish to do just that. For this reason, it is necessary to believe in God, just as Abraham has believed, so that he who so believes would be justified with the faithful Abraham in obtaining the promise in the one seed of Abraham, i.e., in Jesus Christ. This promise is the divine blessing, which enfolds every good in itself.

Tatar: Wouldst thou therefore say, that this faith alone justifies assumption into eternal life?

Paul: I wish to do that.



National Gallery of Canada, Ottawa

The Apostle Philip Baptizing the Ethiopian Eunuch, drawing by Rembrandt. This Biblical episode was often interpreted as demonstrating the universality of Christian redemption to all human beings, regardless of their origin or physical condition.

Tatar: How wouldst thou impart to the simple Tatars the understanding of this, so as to comprehend, that it is Christ, in whom they can attain felicity?

Paul: Thou hast heard, that not only Christians, but also Arabs, acknowledge Christ be the highest of all, who were in this or a future age will be, and that He be the countenance of the peoples. Therefore, if the blessing has been given for all people in a single seed, then it can only be Christ.

Tatar: What indication canst thou adduce for it?

Paul: The testimony of the Arabs as well as of the Christians, that the spirit which vivifies the dead is the spirit of Christ. Therefore, if the spirit of life is in Christ, which has the power to vivify whomever it wishes, then it is the spirit without which no one who has died resuscitates or any spirit can love eternally. That is, the spirit of Christ is inhabited by the plentitude of divinity and of grace, and from this plentitude all who shall be saved receive the grace of salvation.

Tatar: It pleases me to have heard this from thee, the teacher of the people, since it suffices for our purpose in conjunction with that which I have heard above. I also see, that this faith is necessary for salvation. Without it no one can be saved. But I ask thee, whether faith suffices?

Paul: It is impossible, that someone please God without faith. However, it must be a formed faith, for without works

it is dead.

Tatar: What are these works?

Paul: If one believes in God, one keeps His commandments. For how would one believe, God be God, if one were not to take care to fulfill that which he prescribes?

Tatar: It is proper to fulfill the commandments of God. But the Jews say that they would have received these commandments from Moses, the Arabs say they would have obtained them from Mohammed, and the Christians from Jesus. And there are perhaps other nations, who honor their prophets, through whose hands they have obtained according to their words the divine precepts. Therefore, how shall we achieve concord here?

Paul: The divine commandments are very brief and are all well known and common in every nation, for the light that reveals them to us, is innate to the rational soul. In us God says, to love Him, from Whom we received being and to do nothing to another, except that which we wish done to us. Love is therefore the fulfillment of the law of God and all laws are reduced to it.

Tatar: I do not doubt, that both faith as well as the law of love, of which thou hast spoken, will be accepted by the Tatars. But I entertain great doubt in respect to the rites and practices. I do not know how they shall accept circumcision, which they deride.

Paul: The truth of our salvation does not depend upon accepting circumcision. Indeed circumcision does not save and salvation exists without it. However, he who does not believe that circumcision is necessary for salvation, but permits it to occur in order that he might be in conformity with Abraham and his successors, is not condemned on account of circumcision, if he has the faith, of which we have spoken above. Thus, Christ was circumcised and many Christians after Him, while hitherto the Ethiopians mentioned by St. James and others, were not circumcised, as if it be a sacrament necessary to salvation. Yet, how peace can be preserved among the faithful, if some are circumcised, and others not, remains a great question. If therefore the greater part of the world does without circumcision, one should attend to the fact, that it is not necessary, so that consequently—as I indeed judge opportune—the smaller part adapts to the larger, with which it is united in faith, in order to preserve the peace. Indeed, even if the larger part would have to conform to the smaller for the sake of peace and would accept circumcision, I would decide that it thus occurs, so that peace would be established on the basis of mutual communication. Thus, the peace would be better and firmer if the other nations would accept the faith of the Christians and the Christians would accept circumcision from the latter. However, I am of the opinion that the realization of these ideas is difficult. It should therefore suffice to establish peace in faith and in the law of love, whilst the rites are tolerated from this time forth.

XVII

Armenian: How thinkest thou, should one regard baptism, since it is considered among Christians to be a sacrament necessary for salvation?

Paul: Baptism is the sacrament of faith. Whoever believes justification can be attained in Jesus Christ, also believes ablation of sins is attained thereby. Every believer will express this cleansing, which is manifested in the baptismal bathing. That is, baptism is nothing other than the confession of faith in the sacramental sign. It were the non-believer who did not wish to confess his faith in the word and in the sign, which have been instituted thereby by Christ. Among both Hebrews as well as Arabs there are baptismal bathings, in order to express devotion on account of religion. It will not be difficult for these to accept a cleansing ritual instituted by Christ for the profession of faith.

Armenian: It appears to be absolutely necessary, to accept this sacrament, since it is necessary for salvation.

Paul: Faith is necessary for adults, who can be saved without the sacrament, if they can not obtain it. However, where they can in fact obtain it, one can not call them believers, who do not wish themselves to appear as such by means of the sacrament of regeneration.

Armenian: What about children?

Paul: They will acquiesce without difficulty, to letting

children be baptized. If they have taken it upon themselves on account of religion, to circumcise male children on the eighth day, then the commutation of the circumcision into baptism will be agreeable to them. One will give them the option, whether or not to be content with baptism alone.

XVIII

Bohemian: It will be quite possible, to achieve concord in everything, that was previously stated. But it will be very difficult as regards sacrifice. For we know, that the Christians can not give up the offering of bread and wine as the sacrament of the Eucharist, in order to please the others, since this sacrament was instituted by Christ. However, that the other nations, which do not have such a sacrifice, will accept this kind of sacrifice, is not easy to believe, above all, since they say, it is insane to believe in the conversion of the bread into the flesh of Christ and of the wine into his blood and afterward to devour the sacrament.

Paul: This sacrament of the Eucharist represents nothing other than that we achieve by grace the refreshment of eternal life in Christ, just as in this world we are refreshed through bread and wine. If we therefore believe that Christ is food for the mind, then we obtain him under the forms, which feed the body. And since it is necessary, to be in agreement in the faith, that we obtain nourishment of spiritual life in Christ, why then should we not visibly show, that we believe in the sacrament of the Eucharist? It is to be hoped, that in this world all men of faith may through faith taste that food, which will be in truth the food of our lives in the other world.

Bohemian: How will one persuade all people, that in the sacrament of the Eucharist the substance of the bread is converted into the body of Christ?

Paul: Whoever is a believer knows, that the Word of God will transfer us in Jesus Christ—since nothing is impossible for God—out of the misery of this world to the sonship of God and to possession of eternal life. If we therefore believe and hope for this, then we doubt not, that the Word of God can change bread into the body according to the ordination of Christ. If nature accomplishes this in the living being, how then shall the Word, through which God has created time, not be able to accomplish this? The necessity of faith therefore demands believing this. For if it is possible, that we, the sons of Adam, who are made out of earth, are changed in Jesus Christ through the Word of God into sons of the immortal God—and we believe this and we hope for the future—and if it is possible, that we then like Jesus will be the Word of God the Father, then we must also believe similarly, that the Transubstantiation of the bread into the body and of the wine into blood is possible through the same Word, through which bread is bread and wine is wine, flesh is flesh and blood is blood, and through which nature converts food into the fed.

Bohemian: This conversion of the substance of bread is difficult to comprehend.

Paul: For faith it is very easy. For this is only comprehensible to the mind, which alone looks at substance as the that-it-is and not as what-it-is. For substance precedes every accident. And since consequently the substance is neither qualitative nor quantitative, and it alone is converted, so that it henceforth is no longer the substance of bread, but rather the substance of the body, this conversion can exist only spiritually, since it is totally remote from everything, which is attainable for sensuousness. Consequently, the quantity of the flesh will also not be augmented by virtue of this conversion, nor is it multiplied numerically. Therefore, there is only one substance of the flesh, in which the substance of the bread is converted, even though this bread is sacrificed in diverse locations and there are many loaves, which are placed on the sacrificial altar.

Bohemian: I grasp your teaching, which is very agreeable to me; namely, that that sacrament is the sacrament of the sustenance of eternal life, through which we obtain the inheritance of the Son of God in Jesus Christ, the Son of God; that a similitude thereof is given us in the sacrament of the Eucharist; that it is only obtained in the mind and only tasted and grasped in faith. However, what if they do not comprehend this mystery? The uneducated will perhaps not only abhor believing this, but also abhor accepting so great a sacrament.

Paul: In its sensible signs this sacrament, as long as faith exists, is not of such necessity, that without it there would be no salvation. Namely, it suffices to believe in salvation and thus to eat the food of life. Therefore there is no necessary law concerning its administration; if, to whom and how often it should be given to people. If therefore someone, who has faith, regards himself unworthy to approach the table of the highest King, then this humility is preferably to be praised. Therefore in respect to the usage and rite of this sacrament, one will be able to establish that, which appears to be suitable to the leaders of the Church according to the time and place, as long as the faith is preserved, so that despite the diversity of rites, the peace of faith thus perseveres inviolate by means of a universal law.

XIX

Englander: What should be done concerning the other sacraments, namely Matrimony, Ordination of Priests, Confirmation, and Extreme Unction?

Paul: One ought to take into account the infirmity of man as much as possible, unless it contravenes eternal salvation. To demand exact conformity in everything, means rather to disturb the peace. Yet it is to be hoped, that concord is found in matrimony and in ordination. In all nations matrimony appears to have been introduced in some way by the law of nature, so that one man possesses only one true wife. Thus also the priesthood is similarly found in all religions. Concord therefore will be relatively easy to find in these common points. The Christian religion is proven in the judgment of

all others, to observe the most laudable purity in both sacraments.

Englander: What about fasts, ecclesiastical offices, abstinence from food and drink, the forms of prayer, and others of such kind?

Paul: Where no conformity in the manner of religious practice can be found, as long as faith and peace are preserved, one may indulge the nations in their devotions and ceremonies. Perhaps the devotion is even augmented by virtue of the diversity, since every nation will attempt, to produce its rite more splendidly with zeal and diligence, in order to outdo the others therein and thus to obtain greater merit with God and praise in the world.

After these things had been discussed with the wisemen of the nations, several books were produced by others, who

The King of Kings commanded, that the wisemen should return and lead the nations to the unity of the true worship of God. . . . they should gather together . . . and in the name of all accept the one faith and upon it establish eternal peace, so that the Creator of all, who be praised forever, be blessed in peace.

have written about the observances of the ancients; in every language there were excellent authors, like, for example, Marcus Varro among the Romans, Eusebius, who has catalogued diverse types of religion, among the Greeks and many others. In their examination it became apparent, that all diversity of religion is located more in the rites than in the worship of the one God, whom all have always from the inception presupposed and cherished in all worship, as could be found by means of a concerted comparison of all the writings; even if in their simplicity the people, seduced by the power of the Prince of Darkness, frequently are not mindful of what they do.

The harmonious agreement of religions was therefore concluded in the described way in the heaven of rationality. The King of Kings commanded, that the wisemen should return and lead the nations to the unity of the true worship of God and that the spirit of assistance should guide them and stand by them. Consequently, endowed with full authority for all, they should gather together in Jerusalem as the common center and in the name of all accept the one faith and upon it establish eternal peace, so that the Creator of all, who be praised forever, be blessed in peace.

Mozart C minor manuscript gives us a richer world

by David M. Shavin

On Oct. 3, 1990, the day of birth of the reunified German republic, the front page of the *Philadelphia Inquirer* announced to the world the discovery of the original manuscript of one of the masterpieces of German culture—Mozart's keyboard compositions, Sonata in C minor K. 457, and the Fantasy in C minor, K. 475. Tucked away in an old safe belonging to the Eastern Baptist Theological Seminary in the Philadelphia suburb of Lower Merion Township, the manuscript was photographed and studied by Prof. Eugene K. Wolf of the University of Pennsylvania. Later, on Nov. 21, 1990, Sotheby's of London auctioned the manuscript to a London dealer representing a group of Austrian cultural institutions, who plan to keep the manuscript at the International Mozarteum Foundation in Mozart's hometown of Salzburg.

Only the first of the 14 manuscript pages has been made available to the public in any form. However, from what has been made public, and from what this writer was able to view during a brief showing of the manuscript at the seminary on Oct. 16, it can be asserted that the world is indeed a richer place for the discovery.

The manuscript's value

On the anecdotal side of the matter, the details of the original manuscript indicate that these pages are the very pages that Mozart wrote on when he was in the process of hammering out the final details of the composition. For example, as first explained by Stephen Roe of Sotheby's, Mozart had originally written the three flats of C minor next to the staff, and had started writing the first few measures accordingly. However, in this particular C minor work, Mo-

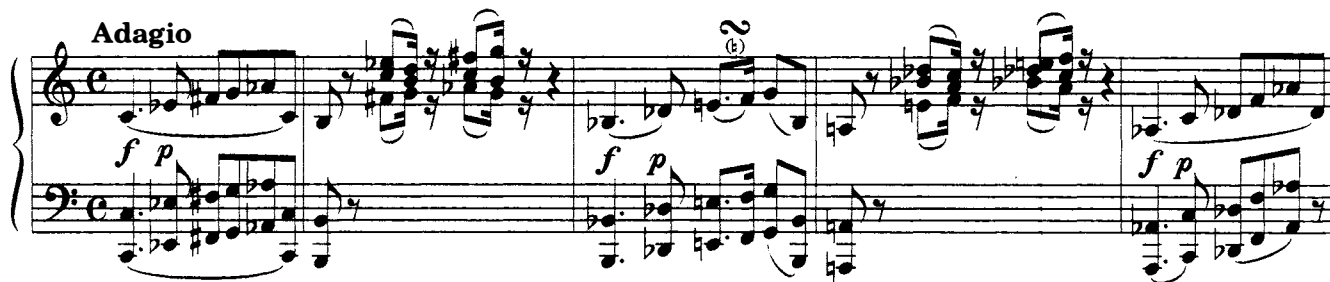
zart soon found that it was easier to omit the three flats, and to write each sharp and flat as it came, than to have to change each of the three flats with accidentals. Consequently, the first few measures give indications of irregular spacing, both where Mozart's original accidentals had been placed and had then been covered over, and also where he had to insert one of the three flats. So now, "Music 101" students can stop fretting over identifying a piece as being in C major (according to the rules of naming these keys from the key signature), when they can't deny on first hearing that the piece is in C minor. More importantly, we are somewhat assured that this is not simply a later copy in Mozart's hand, subsequent to his finishing the composition. We have this document, as it were, created when the iron was hot.

However, on a deeper level of riches, even the first five measures of the manuscript may finally provoke the proper reexamination of both Mozart's composition and of Lyndon LaRouche's 1986 evaluation of this work. In particular, it seems that the highly differentiated phrase markings for the six-note progression opening the work (C–E-flat–F-sharp–G–A-flat–C) and for the two analogous progressions that follow in measures three and five, have defied editors and publishers since the day they left Mozart's pen.

In 1986, LaRouche made certain observations on the scientific problem addressed by Mozart in this work, whereby the fundamental apposition within the central C octave of C to F-sharp, and F-sharp to the C above, was developed as key to exploring and mapping musical tonal space—that is, key to exploring how the mind thinks when it is thinking beautifully. Therefore, the apposition of the two halves of

FIGURE 1

Opening of Mozart's K. 475, transcribed from the manuscript



the measure, and of the two halves of the C-scale, requires that the mind hears C–E-flat against F-sharp–G–A-flat–C.

Before Mozart, the C–F-sharp relationship had been explored in its astronomical domain by scientists from Johannes Kepler through Carl Gauss, and had been imbedded in musical thinking and practice from the biological determinations that result in the primacy of the F–F-sharp register break in the human voice. Mozart now was harnessing the contrapuntal possibilities of the keyboard instrument in addressing these issues. However, modern editions of the Fantasy leave not a trace of an indication of such issues.

The history of the editions

Today, the so-called *Urtext* (original version) of Mozart's Fantasy and Sonata is an edition published in 1977 by G. Henle Verlag of Munich. It is the musical scholarship and editorial work of one Ernst Hertrich, who relied upon three main sources, two being printed editions and one being an early manuscript copy. Hertrich compared and contrasted these three sources in creating the abstracted version that has been deemed in modern times to be the *Urtext*.

The first source was the original edition was published by Artaria of Vienna in 1785, the year of its composition. The second source was a manuscript copy of the Sonata alone, which exists today in Jerusalem. This copy's usefulness stems from the handwritten corrections of the copyist's manuscript, corrections thought to be Mozart's own. It is thought that this copy was made to be given to Therese von Trattner, to whom the work was dedicated. Finally, the third source was an edition was prepared and published in 1801 in Offenbach, by the Huguenot Johann André with the remark "*Edition d'après le manuscrit original.*" There are indications that André took some care to provide the public with a version more faithful to Mozart's working manuscript than the original 1785 Artaria edition. The newly discovered "Philadelphia" manuscript gives credence to the idea that André was working from this same edition, and correcting the series of Artaria editions. Further, the lack of precision in the Artaria editions, indicated in part by their habit of

re-engraving plates with omissions of phrase and dynamic markings, would also speak against their accuracy.

The original manuscript confirms the André edition over the Artaria in an important section at the conclusion of the Sonata. At that dramatic conclusion, Mozart writes an eight-measure line that proceeds in whole notes, C–E-flat–F-sharp–G–A-flat–F–G–C. After the C–E-flat two octaves above middle C, the right hand lands on the F-sharp two and one-half octaves below middle C, at the lower extreme of Mozart's keyboard. Artaria, however, chooses to "improve" this dramatic statement of Mozart by rewriting that section an octave closer to middle C. The manuscript is clear that the "extremist composer" Mozart enjoyed this leap to F-sharp, four and one-half octaves across the keyboard.

The phrasing

However, in all the textual commentary provided from Hertrich's comparisons and contrasts from the Artaria and André editions over matters great and small, there is no reference to any questions with regard to the phrasing of the first six-note passage: C–E-flat–F-sharp–G–A-flat–C. The modern-day *Urtext* would have the world believe that all six notes are phrased together under one slur, for each of the three analogous statements. The newly discovered manuscript speaks to the contrary.

The phrase in question is presented each time in three simultaneous octaves (see **Figure 1**). The manuscript would indicate that Mozart diverges from the whole-measure phrase-marking in both of the succeeding reoccurrences. In various octaves, he separates the second from the third note, apposing one half of the phrase to the other. Once, he separates all notes from each other, phrasing together only the last two. And once, he connects all six notes together again. Somewhere along the line of publishing history, these highly differentiated phrase-markings were put into a blenderizer, and they came out as undifferentiated whole-measure phrases.

Now either Mozart was incredibly sloppy in his phrase-markings, in a manner not evidenced in any other manuscript, or he took some care to communicate some rather

subtle but important conceptions. The phrase-markings clearly do not stamp an indelibly fixed geometry upon each of the phrases. They obviously must serve to bring out different aspects of the phrase as it is re-presented.

The initial measure will be heard as C–E-flat, F-sharp–G–A-flat–C, two apposed parts of a larger whole, simply because the F-sharp entrance commands such a hearing. It would be redundant for Mozart to use phrase markings to indicate such an apposition. However, it is important for the next two restatements to use such a phrase marking, precisely to emphasize the similar apposition of the first measure. Because the two variations start on B-flat and A-flat, and are situated differently relative to the C–F-sharp apposition, the apposition-idea inherent in the first measure must be phrased by the performer, and so suggested to the listener.

In conclusion

This is neither the time nor the place to attempt to account for all the different suggestions implied by Mozart's phrase-marking. In fact, this six-note phrase of a dotted quarter, followed by five eighth-notes, occurs 19 times in the first 15 measures, with 6 different phrase-markings! Even if one or two of them were actual oversights on Mozart's part—not an inconceivable possibility—what is clear is that Mozart deemed his thematic C–F-sharp contrast to be a strong enough and rich enough thematic idea, to be worthy of a host of interconnected relations. Further, it is clear that our modern-day *Urtex*s are deaf to such possibilities.

Finally, it should also be clear that, just as Johannes Kepler did not have to wait 200 years for Gauss and his circles to prove his "F-sharp" hypothesis about the asteroid belt for him to know the validity of his thinking, Lyndon LaRouche did not have to await the rediscovery of a lost manuscript to recognize the actual shape of a great idea from the mind of Mozart. Nor were the printed editions that a largely deaf culture might circulate to be given much credence in the matter. However, the discovery of the asteroid belt provoked the right sort of problems for those who would have ignored Kepler. Let us hope that the discovery of Mozart's manuscript can begin to provoke an equally therapeutic effect.

The world is beyond question a richer place for the discovery of Mozart's manuscript. However, five measures of the first page is a small fraction of the treasures yet to be known from this 14-page manuscript. One of these pages has yet to be examined and studied by the world in any form! A draft version of the development of the variations in the Sonata's second movement exists, presumably a page uniquely able to cast new light on the workings of Mozart's mind. Let us hope that with an early release of the contents of the manuscript, Dr. Wolf in Pennsylvania and the International Mozarteum Foundation in Salzburg see fit to make 1991, the 200th anniversary of Mozart's untimely death, a real celebration of Mozart's continuing life.

LaRouche comments on the K. 475 manuscript

In response to the newly discovered Mozart autograph manuscript, Lyndon LaRouche contributed the following comments on Oct. 14, 1990:

Some years ago, it was my privilege to claim a certain interpretation of the Mozart Köchel 475 C minor Fantasy keyboard work based on the reading of the Fantasy's opening statements as a keyboard representation of a topic in vocal polyphony.

Now, my intent was not to say at the time that Mozart had written that, as a keyboard representation of what he had intended to be a work in vocal polyphony—though that might have been the case—but rather, that this emphasized the axiomatic, one might say, character of all classic polyphony, that it is rooted in the principles of vocal polyphony.

Otherwise, it should be noted, as is fairly well known among all musicologists, or those who are exposed to competent classical musicology, that this particular work is one of a series of Mozart's works during that period beginning in 1782, based on Mozart's deeper familiarity with the work of Johann Sebastian Bach, and that this work, of course, references the most explicitly the *Musical Offering* composition of Bach, which has very special significance in the theory of composition.

So, my purpose at that point was to identify the pedagogical importance of the relationship between the K. 457 C minor Sonata, and this K. 475 in that light, as a kind of Rosetta Stone for understanding almost the entirety of Mozart's later composition, especially works such as later came out, such as K. 458. And then, of course, we have the Beethoven series [of works in C minor], also referencing both the Mozart and the Bach on this account.

As to the method by which I adduced the statement, that it had been Mozart's *intention* that the rendering of the composition be phrased in a certain way: I had, of course, no knowledge of this particular score as such, or anything in the score *different* than the printed scores, but based my judgment entirely upon the following considerations—those I've just referenced—that this could be best appreciated for purposes of performance by thinking of it as a work in vocal polyphony, and identifying the species of voices which would correspond to the voices in the opening statements. That accounts for the entire first section of the Fantasy.

The secondary feature was the significance, therefore, from the standpoint of vocal polyphony, of the register shifts.

Now, starting from the C, which is a nice place from

which to start from the standpoint of the history of music, we then reach the F-sharp–G. This is the crucial, pivotal feature in the composition, first of all because of the major-minor ambiguity, which is so treated, and also because this identifies the voice as the appropriate tenor or soprano register shifts. And therefore, the difference in shading and phrasing which follows the line of registration must be introduced, and we must look at the other statements of the same thematic material from this standpoint. And thus, you have a much more interesting view of the composition as a whole, when looking at the composition from this standpoint and this interpretation than you do from any other. By any other standpoint, you drop down about several qualitative orders of magnitude in terms of profundity of the composition, and profundity, presumably, if one is capable of rendering it properly, of the interpretation of the composition.

Now, as to method.

In addition to these musicological considerations which should be obvious to relevant professionals and others, my insisting that the view I proposed must necessarily have been the intention of Mozart, was based on the following additional considerations.

It should be well known to anyone who has followed any of my scientific and related work, that I am an impassioned advocate of a very specific species of scientific method. While I have mastered all the essential features of the deductive method, I am an opponent of the deductive method, in the sense of being an opponent of Aristotle, an opponent of a naive interpretation of Euclidean geometry. My method is that identified with Socrates and Plato, with Kepler, with Leibniz, with Leonardo da Vinci. This I came by in my pre-adolescence and early adolescence when I was converted to become a life-long follower, in a sense, of Gottfried Leibniz, in opposition to other considered choices, such as Descartes, Locke, Hume, and Kant.

Now, in deductive approaches, *method* is associated with the definition and manipulation of sets of axioms and postulates, as I define this, for example, in such writings as *In Defense of Common Sense*.

For me, as for all followers of Plato, Socrates, and Leibniz, the deductive method is not our own. We are aware of it, we use it in a negative way, to *disprove* certain things, or to show the absurdity of certain assertions, but we do not adopt it as a basis for proof of anything, except negative proofs, to prove the paradoxical or false character of certain beliefs and assertions.

A different conception of method

For us, axioms and postulates are replaced by a different conception of method. Our method is very closely related to that of Jacob Steiner's synthetic geometry, and the most advanced expression of Steiner's synthetic geometry, to the geometrical method of Pascal, Desargues before him, Fermat, Leibniz, Gauss, Riemann, Beltrami, and so forth. How-

ever, our method is not simply a geometrical method, it's not a pure geometry, but is rather a geometry which is a physical geometry, in which the significance of physical geometry, or the significance of the term "physical" in physical geometry, is located in Leibniz's definition of a monadology, or in a correct, more advanced reading of Max Planck's original definition of a quantum conception, as opposed to the later post-1917 Einstein misconception of quantum mechanics.

Therefore, from the standpoint of this method, to which I adhere, it was certain to me that Mozart's *intent* had been as I indicated. Finally, I shall say that various musicians may read the original manuscript of the score as to phrasing in various ways. Various interpretations can be put upon the way in which Mozart writes out this. While I find it very interesting that one interpretation of this phrasing seems to coincide with my views, I would not base my views today on the support of such an interpretation of that manuscript, but would rather base my interpretation on exactly the same considerations I advanced before I knew of the existence of this manuscript, and that is the following:

The Fantasy, particularly its opening section, is written as in the form of a piece of vocal polyphony. The key feature of the performance of the Fantasy, particularly with very close attention to the counterpoint generated by such vocal polyphony, is the register shifts. And thus, the F-sharp–G in the opening statement, is crucial in the interpretation, and the rest of the opening section, and the rest of the composition as a whole, should be properly read by the performer and audience from that standpoint and reference. That was known to me before the manuscript existed, that is my view after looking at a photocopy of the newspaper version of the manuscript, and if the manuscript read seems to support my views, so much the better; but nonetheless, I base my views, still today, on the same consideration I advanced some years ago.

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Space Telescope discovery raises question of star origins

by David Cherry

The occasional release of new images from the Hubble Space Telescope has appeased public curiosity, but the first big event for the scientific world is now approaching. At the end of January, *Astrophysical Journal* will publish a special issue of its *Letters* devoted to a score of papers based on Space Telescope results. "When they appear, they are going to make quite some scientific impact," said Lyman Spitzer, Jr., father of the Space Telescope, in a recent interview.

One of these papers reports the discovery of a massive jet—at least it is being called a jet—apparently emerging from a star in the Orion Nebula (see **Figure 1**). Jeff Hester at Cal Tech's Infrared Processing and Analysis Center and several colleagues discovered the jet when they trained the Space Telescope on a small square within the Orion Nebula no wider than one-fourteenth of its overall width and made ten-minute exposures at several different wavelengths with the aid of filters.

The jet is not the only discovery in these images. There are also wormlike structures in the gas of the nebula not comparable to objects previously seen (see **Figure 2**) and some dark rings that seem almost axially aligned. There is also a pattern of filamentary structure visible in one of the wavelengths that may indicate curtains of gas at photo-ionization fronts driven by starlight.

The Orion Nebula—a gigantic cloud of gas and dust illuminated by hot young stars within it—is well known to amateur skywatchers as a diffuse patch of light just visible to the naked eye at about the middle of Orion's sword. For astronomers, the Orion Nebula is important as the star hatchery nearest our Solar System. Stars are born in the arms of spiral galaxies. The Solar System and the Orion Nebula are a mere 1,500 light years apart in the same spiral arm of our galaxy.

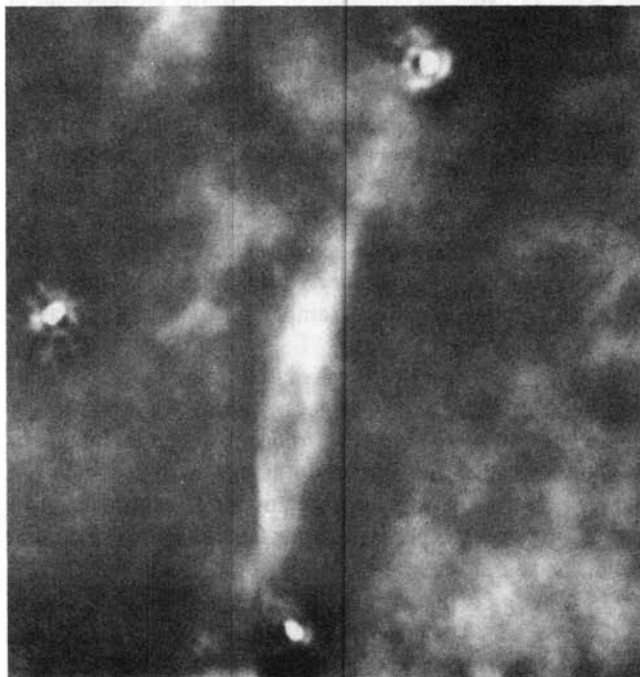
The newly discovered jet is not at all on the order of a large solar flare: Its length is 228 times the mean distance from our Sun to Pluto, or one-seventh of a light-year. Layering in the jet (emission at different wavelengths) is interpreted as a difference between the gas on the inside, and the shock front where the gas on the jet's surface encounters the surrounding, relatively stationary gas. The star from which it appears to emerge, although catalogued, is unknown as to type, spectroscopy, possible variability, and so on. Ground-based telescopes, however, will soon fill in some of the blanks.

While this jet has not been seen before, it is not the first

discovery of a jet or jets emerging from a star: The first case was seen in 1981, and now there are numerous instances. Such jets emerging from stars are not simply objects of curiosity. They seem to be associated with the very youngest stars, and hence are of interest in the attempt to understand the process by which stars come into existence.

For the sake of scientific understanding, however, it is necessary to drop the term *jet*, which astronomers often adopt too readily (**Figure 3**). It presupposes one kind of mechanism and excludes others, when we are far from having direct

FIGURE 1
A huge finger of gas associated with a star



A gigantic jet or finger of gas appears to be associated with a star nestled in a cloud of gas and dust in the Orion Nebula. The star's characteristics are not yet known. The morphology of the structure may be consistent with more than one theory of how stars are born.

evidence of the mechanism involved in even a single case of fingerlike extensions of gas from a star. We *can* safely speak of “mass outflow” in some cases—certainly where red-shift measurements have shown that the finger of matter has a velocity away from the star.

How are stars formed?

The overwhelmingly dominant theory of star formation among astronomers is an elaboration of the simple Newtonian theory of gravity. A massive cloud of gas and dust collapses by self-gravitation to form a body so dense that thermonuclear fusion begins at its center, causing the body to emit heat and light. Even after the star turns on, matter typically continues to be drawn into it by gravitation. As this matter spirals toward the star, it forms an accretion disk around it. There is at least partial confirmation of the existence of circumstellar disks—accreting or otherwise—in actual observations. When astronomers see a finger of matter—or two oppositely directed fingers—projecting from a star, they conclude that the accretion disk is confining the outflow

of matter to the disk’s axial directions.

Such a theory is consistent with the prevailing stochastic or probabilistic view of cause and effect in the universe. But the mere existence of life and of human thought processes is not compatible with mere probabilism nor with the subsumed theory of stellar origins.

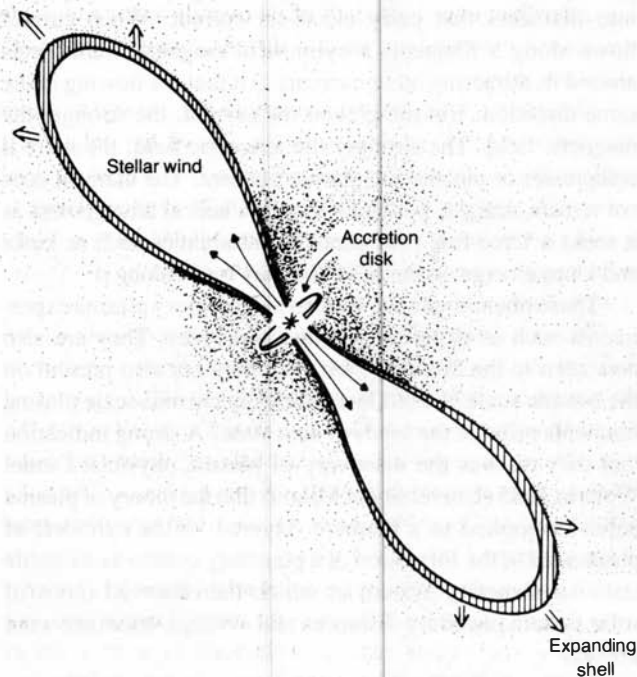
One courageous and prominent astronomer who sees the problem of stellar origins from this more rigorous standpoint is Victor Ambartsumian of Soviet Armenia. Ambartsumian studied the youngest low-mass stars, called T Tauri stars, for clues to the processes of star birth. T Tauri stars vary in brightness with time. Ambartsumian concluded that this variability is not a result of a thermal (randomized) energy source, but is “a result of the appearance in the outer layers of the star of an additional radiation source of a non-thermal nature . . . the release of additional energy in the outer layers of the star frequently occurs over a relatively brief period of time. All the data indicate that the radiation energy thus

FIGURE 2
A wormlike feature of unfamiliar structure



What is the wormlike feature to the right of the black dot? Has anything like it been seen before? Within its head are two well-defined dark points. In the original image, the structure does not, apparently, terminate at this head, but continues in very faint outline to the left and downward, ending like the large end of a crook-necked squash. To the lower left is the star and finger of gas shown in Figure 1.

FIGURE 3
Standard theory says gas fingers are jets



In the standard gravitational theory of star formation, fingers of gas extending from stars are seen as jets, whose direction of flow is controlled by the accretion disk rotating around the star. It is also assumed that such jets are bipolar—that they come in oppositely directed pairs. Sometimes this is in fact clearly seen. Sometimes an unseen second jet is assumed to be obscured by intervening gas and dust. Does the standard theory overlook the possible roles of electric and magnetic fields in star formation?

emitted is drawn not from those energy resources which are found in the outer layers, but comes from the inner layers" by means of a mechanism that is not understood.

"Thus it becomes possible to observe directly the process which, in other stars, takes place only in their central regions." This liberation of energy is not thermonuclear, but ordered just as laser energy is ordered, and "is connected with the emergence of new atomic nuclei which are sometimes unstable and later decay." The question now is whether Ambartsumian's broad hints will be pursued by Space Telescope investigators.

Another important contribution—or group of contributions—to the problem of stellar origins is that of Hannes Alfvén and of physicists who have studied laboratory plasmas. On the basis of laboratory experiments, these scientists conclude that electrical and magnetic fields must play a large role on the astrophysical scale, a view that astronomers usually prefer to evade. Nevertheless, space probes sent into Earth's magnetosphere and into interplanetary plasmas have shown that electric and magnetic fields are responsible for highly elaborate structures there. At least solar system astronomers, therefore, have become much more attuned to the role of electric and magnetic fields.

Alfvén's theory of star formation is premised on the propensity of plasma (hot, ionized gas) to spontaneously form into filaments that carry electrical current. When current flows along a filament, a cylindrical magnetic field forms around it, attracting other currents to it that are flowing in the same direction. But the greater the current, the stronger the magnetic field. The stronger the magnetic field, the more it compresses or pinches the plasma filament. The filament does not remain straight, but tends toward a helical arrangement as it seeks a force-free configuration. Instabilities such as kinks and loops emerge on the helix and may travel along it.

These phenomena are all seen in laboratory plasma experiments such as experimental fusion devices. They are also now seen in the Solar System. Are they not also present on the cosmic scale? Could instabilities in cosmic-scale plasma filaments provide the seeds of new stars? A strong indication that they do was the discovery of plasma physicist Daniel Wells in 1985 (University of Miami) that the theory of plasma behavior applied to a filament (layered vortex cylinder) of plasma led to the formation of a planetary system as its stable state—a planetary system in which the observed ratios of solar system planetary distances and average velocities were obeyed.

These possibilities oblige astronomers to obtain information on magnetic fields wherever possible—through measuring polarization of the light—when studying the origins and earliest histories of stars. And when corrective optics are installed on the Space Telescope, a further improvement in resolving power may reveal crucial details of structure relevant to one of the most important questions we address to nature.

Interview: Lyman Spitzer, Jr.

'Mars would be a great place to visit'

Lyman Spitzer first proposed a large telescope in Earth orbit in a 1946 paper for Project RAND, and has been its leading advocate since then. He is now Professor Emeritus and Senior Research Associate at Princeton University. From 1947 to 1979, Spitzer was Director of the Princeton University Observatory.

*While the following interview does not touch on star formation, Spitzer, more than most astronomers, approaches the problem from the standpoint of plasma behavior. He led the development of fusion research at Princeton, and was involved in its Plasma Physics Lab as late as 1966. While Spitzer has developed a version of Sir James Jeans' gravitational collapse theory of star formation, he believes our understanding "is rough, uncertain, and tentative." "[W]hat about the effects of magnetic fields produced by electric currents in the ionized interstellar gas?" he asks, at the conclusion of his 1982 book, *Searching Between the Stars*. These magnetic effects "may be of predominant importance in certain aspects of star formation," he adds.*

Spitzer was interviewed by David Cherry on March 7, 1990, before the Space Telescope was launched.

EIR: Beyond the Hubble Space Telescope and the x-ray, infrared, and gamma-ray instruments in NASA's Great Observatory series, I understand there are plans for lunar-based observatories in various wavelengths.

Spitzer: There are studies—whether you'd call them plans or not I don't know. People have suggested all sorts of things, and one characteristic of NASA, quite properly, is that it makes detailed studies of all sorts of possibilities before it decides just what to recommend.

EIR: If you were to put a telescope on the Moon, you could have a very large collecting surface, couldn't you, because gravity would be less constraining?

Spitzer: There are advantages and disadvantages of being on the Moon. Quite apart from the large additional effort required, and the large cost of maintaining an observing station on the Moon, the gravitational flexure gets to be a technical problem. It can be solved with enough engineering and apparatus, but Earth orbit is really ideal for a very large diffraction-limited telescope.

EIR: Why is Earth orbit best for large mirrors?

Spitzer: On the Earth, when you point a telescope in different directions, the mirror bends in different ways because of the Earth's gravitational field. The same would be true on the Moon. It wouldn't bend as much, because the surface gravity is less, but it would not be zero. In orbit, there is no gravity, and there is nothing to distort the mirror except for thermal problems, which can be controlled.

EIR: Have you ever, even in your dreams, thought about Mars orbit?

Spitzer: Yes, yes. I don't think it's such a great location for a telescope, that is, a telescope designed to look at stars, and systems outside of our own Solar System . . . but maybe there are some advantages I don't visualize.

I think Mars would be a great place to visit! But that's to find out what's there, not as a base for looking at other systems. If you had a lot of people living on Mars, why that's a different story. But that's so remote that it is hard to discuss.

EIR: Among the projects now accepted for the Space Telescope, are there any that you have had a hand in?

Spitzer: I have a project, proposed in collaboration with my friend Bob O'Dell at Rice University, that is concerned with matter between the stars. I have been interested in this for many years. We got some very interesting information with the Copernicus satellite that had a Princeton telescope-spectrometer, and we'd like to extend that with the Space Telescope. The observations which I have included in our joint program are designed to tell us the composition, density, temperature, and motions in the gas between the stars, and to clarify how this gas affects the evolution and future fate of our Galaxy.

EIR: May I ask what you are doing these days, now that you are in your 70s? You are retired from teaching?

Spitzer: Yes, that's right. But I am continuing my research. I take some time out to go rock climbing, but otherwise I continue my work, though on a more leisurely basis.

EIR: For a long time astronomers generally did not support the proposal for a space telescope first elaborated by you in 1946. You wrote that this observatory was not to extend the boundaries of existing knowledge, but rather to overturn the framework, to give us an entirely new view of the universe based upon much better information. Why were astronomers reluctant to see that?

Spitzer: Well, I don't think they necessarily disagreed with the possibility of doing that *if* one could send up and get the scientific results from rockets and satellites. But in the early days, even rather modest equipment often failed, and people thought it was impractical. I had a good friend who—when I told him I was getting involved in one of these projects—looked at me and said, “Well Lyman, you are young, you'll



Courtesy of Lyman Spitzer, Jr.

In his seventies, Lyman Spitzer is still scaling new heights. In this 1985 photo, taken when he was 71, Spitzer is climbing the Cima della Madonna in the Italian Dolomites.

live to see it fail.”

EIR: Amazing! I guess many more astronomers came to favor a large space telescope after the Moonwalk.

Spitzer: It was not so much the walk on the Moon as it was the success of smaller astronomical instruments. The early observations of stars by the Orbiting Astronomical Observatories were of great importance. These smaller instruments had their problems—two of the four were unsuccessful, but the other two were *highly* successful. Solar space telescopes obtained very significant data on the Sun, and the Stratoscope program also gave some fascinating results. Gradually people began to think, well, maybe there is some promise in this after all. And then when they looked at it, and when we talked to them as to what one could *do* with the Space Telescope, it became obvious to astronomers that it would be very powerful.

EIR: Professor Henry Norris Russell, your teacher, used to joke about where astronomers go after they died, and hoped they were allowed to take their instruments and set up on the Moon. Did Russell think seriously about putting a telescope in orbit or on the Moon?

Spitzer: I don't think very seriously. I don't remember. He was aware that the atmosphere is a terrible impediment to astronomical observations, which we discussed from time to time, but he never made up a systematic list of what one could do if one could only send a telescope up. This just didn't seem sufficiently imminent to make that calculation. If it hadn't been for the V-2 rockets and the RAND study of the possibility of satellites, I probably wouldn't have gotten involved either.

The science of music: 'the one' and 'the many'

by Lyndon H. LaRouche, Jr.

One of the more striking examples of the lunacy to which a modern positivist's academic mentality may lead sometimes, is the occasional episode, during which a university instructor informs his class that science has been unable to show that life (such as that of university instructors) is possible. Lately, since the wider, post-World War II popularization of the Boltzmann dogma, as "information theory," the positivist professor might concede that although the existence of life is contrary to the Second Law of Thermodynamics, it is a remote chance, statistical possibility.

In that way, we forewarn our readers against such a positivist's misinterpretation of some following observations on the subject of electromagnetic determinism, respecting the characteristic metrical features of musical science. Man, and life in general, existed long before positivists first appeared on this planet. Such fundamentally characteristic features of *natural music* as *bel canto* vocalization, and a well-tempered scale with middle C set at approximately 256 cycles, are biologically determined, and thus inherent truths of existence predating the first physicist or musicologist. The fact that something exists, is, statistically, necessary and sufficient proof of better than 100% certainty that the laws of the universe have brought about that existence in a necessary and sufficient way. The necessity of *well-tempering*, of *bel canto*, and of middle C set approximately at 256 cycles, was, in each respective instance, discovered centuries, or even, perhaps, millennia ago. These characteristic features of the "musical universe" are, like the existence of mankind, natural phenomena, not something whose existence requires academic midwifery.

The included task of science, is the search for truth, to

bring the method by which human opinion is formed into conformity with the Creator's laws. In that connection, we, as discoverers, depend upon what physical scientists often term "crucial experimental" evidence. The existence of mankind is such a crucial-experimental fact. It is not something to be proven possible; it has occurred. Rather, we must bring prevailing opinion-making into conformity with the proof, that the existence of mankind as a self-developing, and the dominant species of our Solar System, has been a necessary and sufficient result of the most fundamental lawfulness of universal nature.

Similarly, the crucial-experimental facts from which *musical science* is obliged to begin, are each and all facts of biologically determined *vocal polyphony*. Musical science begins with the subject of singing. Since the adult singing-voice species (soprano, mezzosoprano, tenor, etc.) are naturally, biologically determined, musical science starts here, focused upon what is demonstrated, by crucial experiment, to be *well-tempered polyphony*:

We can not begin with the phenomena of man-made musical instruments, since these are not natural phenomena.

The proofs of the natural principles of *bel canto vocalization* and *voice-registration*, are directly crucial-experimental reflections of the *biology* of the human species. *Bel canto* is demonstrated to be nothing but the human being's most natural, relatively least-effort, most efficient method of speaking and singing, by virtue of the biologically determined characteristics of the healthy expression of the human genotype. This was proven experimentally by musicians no later than a half-millennium ago, and almost certainly much earlier than that.

The vocalization of classical (e.g., strophic) poetry, according to elementary *bel canto* principles of vocalization, is *song*. The participation of singers representing two or more of the biologically determined species of singing voices (soprano, tenor, etc.), is the essence of *classical well-tempered polyphony*.

It is determined, in a similar way, that each species of singing voice has, naturally, four *potential* registers, each with a distinct quality (“color”) of voice relative to each and all of the remaining three. It is also determined, that for each such species of singing voice, the places (on the scale) at which the transition from one register to an adjacent one must occur, is biologically determined, and that this place of “register shift” is fixed such that the place itself may not be shifted frequently without possibly irreversible damage to the singer’s voice.

Similarly, the extreme ranges of the voice, for each species, have certain approximate upper and lower limits, for most of the trained voices in the singing population; by exception, some trained adult singers may command extended ranges. Once we apply these natural, crucial-experimental facts to the canonical-polyphonic vocalization (*bel canto*) of any singable piece of classical poetry, we force upon the whole body of musical science the crucial-experimental proof, that the musical scale must be based upon the *natural bel canto* characteristics of healthy singing, upon Johann Sebastian Bach’s *well-tempered polyphony*, upon the *naturally* fixed characteristics of voice registration respecting each biologically determined species of singing voice, and upon a value of middle C of approximately 256 cycles.

After that, and no earlier, we consider the man-made musical instruments. As a practical matter, we delimit the span of *our* study to the development of instruments during the recent 500 years, approximately. Although stringed instruments (e.g., the lyre, woodwinds, and horns of one form or another), extend into very ancient history, we lose nothing on principle, if we limit our attention to the main lines of development of keyboard and classical orchestral chests of instrumental voices over a period beginning with the adulthood of Leonardo da Vinci, and concluding, approximately, at the beginning of the 1814-15 Congress of Vienna. That “chest” of keyboard and orchestral instruments, which emerged as a standard over the period from J.S. Bach’s work at Leipzig up until the Congress of Vienna, is taken as our standard of reference for defining matters posed in respect to the strictly classical anti-romantic tradition associated factionally with such names as J.S. Bach, Haydn, Mozart, Beethoven, Schubert, Chopin, and Brahms.

These instruments, designed for a well-tempered scale pivoted upon $C=256$, were developed in imitation of those characteristics of the chest of *bel canto* voice-species which we have identified above. Thus, to the degree both composer and performer grasp, more or less successfully, the practical implications of these connections, everything (bearing on

principles) which is to be said of the intent and characteristics of instrumental performance, is subsumed by *natural* voice principles.

Kepler and music

Through the eyes of the mathematical physicist, what we have noted, as the *natural* characteristics of “musical space-time,” presents us an extremely significant challenge. In brief, the laws of a universe in which these *natural characteristics* might exist could not be the universe of Descartes, Newton, Kelvin, Helmholtz, Maxwell, or Boltzmann-Wiener. However, it could be a different kind of physical universe, that of Cardinal Nicolaus of Cusa, Cusa’s follower Leonardo da Vinci, Cusa’s and da Vinci’s professed follower Johannes Kepler, Kepler’s professed follower Gottfried Leibniz, France’s Gaspard Monge, or such followers of Leibniz and Carl Gauss as Bernhard Riemann, Georg Cantor, and Eugenio Beltrami. The case of Kepler’s founding of the first comprehensive mathematical physics, is a very relevant illustration of the point.¹

Take Kepler’s *World Harmony* as a point of reference. First, for the information of the person who has Alexander Pope’s “a little learning” concerning physical-science matters, we emphasize that Isaac Newton did not “discover universal gravitation.” Newton’s famous Gm_1m_2/r^2 is merely an algebraic manipulation of the algebraic formulas representing Kepler’s famous, universal three laws of motion.² Newton discovered nothing; rather, by the algebraic oversimplification in Newton’s parody of Kepler’s laws of motion, Newton introduces an apparently insoluble mathematical paradox into physics, the so-called “three-body problem.”

In Newton’s schema, for example, the orbits of the planets and their moons can be situated at any distance from the Sun one might choose for situating a planet. One merely has to choose a mass and orbital velocity whose associated centrifugal force neatly balances the centripetal force, the gravitational “pull.”

In Kepler’s universe, this is not permitted. The number of possible orbits and orbital velocities is precisely determined. No orbits between any two of these determined orbits is permitted. Kepler’s method permits the existence of no planetary orbit between those of Mercury and Venus, Venus and Earth, Earth and Mars, Jupiter and Saturn, and so forth. Kepler requires one orbit between Mars and Jupiter, which Kepler assigns to “an exploded planet,” i.e., the asteroid belt. Similarly, Kepler’s universal laws of motion predetermine the relative orbital velocities of the planets in those determined orbits.

Although Kepler’s calculations require refinement, his conception of the ordering of the Solar System is the one which agrees with the evidence; whereas the physics of Descartes, Newton, Kelvin, et al., does not fit the evidence—most emphatically, the evidence of the uniqueness of the orbital positions, and of *the relative harmonic values of the*



The orchestral and keyboard instruments, designed for a well-tempered scale pivoted upon $C=256$, were developed in imitation of the characteristics of the *bel canto* voice-species. Pictured counterclockwise from above are moments in this history: angels singing polyphonic music (detail from a 15th-century Flemish painting); boy violinist (by the Dutch artist Frans Hals, early 17th century); man playing the newly invented type of flute (by Antoine Watteau, French, 18th century).

orbital velocities.

It is crucial, that the organization of the musical scale follows conceptually the arrangement shown by Kepler, in Kepler's treatment of the musical harmonies of the solar orbits and their associated harmonic ratio-values of their orbital velocities. This means that the *necessary and sufficient* (i.e., scientific) determination of the musical scale is consistent with the physical universe of Cusa, Kepler, Leibniz, et al., but not with the schema of mathematical imagination adopted by Descartes, Newton, Kelvin, et al.

The same argument applies to *vocal polyphony* in general, as also to vocally determined, *natural registration*, and exactly determined, *natural* singing-voice-species register-shift.

In the universe of Cusa, da Vinci, Kepler, Leibniz, et al., the laws of the universe are coherent with a *musical*

quality of harmonic ordering. We can show this more readily than otherwise, by studies of the existence of "register shifts" within the extended span of the complete electromagnetic-frequency scale, for a scale starting below the frequency of human-brain "alpha waves," up through very energetic "gamma waves."

We must go further, as physics, including biophysics, demands this. We must surpass a simply linear notion of continuous increase of frequency (from "2," onwards), to the realm of "non-linear spectroscopy." This latter, "non-linear spectroscopy," assumes overwhelming importance as we focus upon the biophysical domain.

Obviously the production and hearing of music by the human species involves living biophysical processes in what proves to be the "non-linear spectroscopic" domain of generating and absorbing, discriminating efficiently musical tone-

sequences. Thus, we locate the *biophysics* to be considered respecting a *science of music*.

Since the three cited, principal, natural feature of vocal polyphony—*well-tempered scale*, *registration of singing-voice species*, and determined *register shift*—require a Keplerian universe, excluding the Newtonian, the kind of physics to which a science of music must refer, must be along the Keplerian-track leading through Leibniz and Riemann.

Kepler and life

Another way of presenting what is ultimately the same point just made, is to say that Kepler's mathematical physics was based explicitly, "axiomatically," upon the evidence, that our universe is characterized as one in which life is the highest form of existence, and man is *lawfully* the highest form of life known.

To attempt to quell riotous protests of indignation from among some holders of doctoral degrees in physical science, we must interpolate here an identification of the following unpleasant truth respecting modern university (and secondary school) education. Only after we have cleared the air so, can Kepler be discussed rationally.

The 20th-century trend in U.S. education has been away from the rigorous standards of classical and scientific education preferred by 19th-century Harvard University, for example, toward a rote education of the poor quality which German speakers associate with the conventional word of contempt, *Brotgelehrten*. More and more, scientific education has aimed pragmatically, away from rigorous attention to scientific fundamentals, toward, and below the editorial standard of, say, *Popular Science* magazine.

In brief, even most contemporary university products with four-plus averages and terminal degrees, are primitively uneducated in a field which happens to be this writer's specialty: a *Socratic method of approach to axiomatics*. This latter method is the most characteristic feature of the leading work contributed by the greatest scientific minds of the past 600 years, such as Cusa, da Vinci, Kepler, Leibniz, et al.

What the *Brotgelehrten* among science students and graduates know, is virtually no geometry, but merely a variety of arithmetic-algebra based upon, and limited to a formalist deductive method. Such is the passively accepted classroom mathematics, at all levels of the pecking-order, today. What only a handful of such professionals do know, is that the scientific competence of a deductive mathematics is very much in doubt experimentally. The popular defense of the *Brotgelehrten* is to put out of sight and mind, any physical evidence, no matter how devastatingly true, which calls the "generally accepted," deductive form of mathematics into question.

The evidence which proves Kepler's mathematical physics competent and Newton's opposing mathematics as crucially incompetent by comparison, is the kind of crucial evidence showing the outer limits of physical application of a

merely deductive mathematical schema.

That brings us to our concluding points on the science of music, in this piece. There are three points to be made.

Despite the progress in interpretative performance of classical musical works by some postwar-period musicians, the principles of classical musical composition themselves have been virtually lost. The chief obvious reason for this general decay of musical education's quality is the attempt of established musicologists to superimpose the Hegelian metaphysical schema, in which the romantic school is portrayed as the logical successor of the classical, and the twelve-tone modernist rubbish the logical successor of the romantic. The effort to adduce for the teaching of music a "principle" which coheres with such Hegelian mystical irrationalism, is the core of the musical-theoretical problem of today.

Continuing with the first of our three points here, there is a second aspect of the same problem to be noted here. The popularization of anti-scientific rubbish of Helmholtz's (*Sensations of Tone*) and the popularized hoaxes of Helmholtz's devotee Ellis, if believed, destroy utterly the ability of the music student to understand rationally the three *natural characteristics of music* we have identified above.

Summing up the first of our three concluding points, the 19th-century rise of the quasi-dionysiac dogma of romanticism, decreed through the mouth of proto-fascist positivist Professor Friedrich Karl Savigny, that an absolute separatism must be enforced, between natural sciences (*Naturwissenschaft*) and the arts (*Geisteswissenschaft*). Thus, did establishment support for Savigny's doctrine of separatism lead both to the rise of Adolf Hitler and to the triumph of the irrationalist sundry dogmas of "art for art's sake," in music, poetry, and so forth.

Hence, the proper unification of science and art, as embodying, as an integral wholeness, these pervasively coherent qualities of individual mind setting man apart from, and superior to the beasts, is indispensable for the vigorous revival of music in our time. To this purpose, the current of scientific view of music exemplified by Kepler and his successors, is indispensable.

The second of our three concluding points coheres with the first. Although musical history has proven conclusively, empirically, the three cited *natural characteristics of vocal polyphony*, questions of practical significance arise which music demands be examined from the standpoint of biophysics. We shall turn to that after identifying the third of our three concluding points.

Our third, cohering point is this. It is not sufficient, that musicological questions be settled from the vantage point of biophysics' nonlinear spectroscopy, or from what might be termed a "simply musical" standpoint. The irrationalist myths of "absolute music" must not be left unchallenged. The human function of music, must be ultimately the basis on which musical activity is to be judged.

We subsume the three topics, as ultimately one, under the rubric *Kepler and life*.

The sovereignty of the creative processes of the individual human mind

Every genuinely new conception, as knowledge, which you, or any other person acquires, comes into existence in the individual human mind, in a way which can in no way be described by deductive methods, but rather in an entirely different way, in a way which solves the central paradox of Plato's *Parmenides* dialogue. This is the true key to understanding, first, the human purpose of classical forms of music: This understanding shows us how the *biophysics of vocal polyphony* play their part in defining how much should be performed and composed.

The generation of a new idea, as a unified, *indivisible* conception, in the mind of an individual person, presents this following echo of the *Parmenides* paradox.

Many pieces, each individual, indivisible ideas, enter the mind, and are transformed from a *many* into a new, valid, combined but single and non-indivisible new conception. There is nothing of the new idea in any part of those many ideas which appear to have stimulated its generation. They are the *Many*; the new conception is *the indivisible One*. There is no deductive pathway leading from any or all of the *Many*, to this *One*. The transformation of the *Many* into this new *One*, is the work of *the creative processes of the individual human mind*.

By *creative processes*, we mean the same kind of mental processes which generate, transmit, and assimilate new, valid discoveries of fundamental principle in physical science. This occurs as a *Many* into *One* transformation, typifying so the required solution to the *Parmenides* paradox. Since this process is unique and indivisible, every individual mind engaged in generating concepts which are valid, and new to it, to this effect, is an *axiomatically sovereign* quality of *individuality*.

The case of physical science, the uplifting of man's existence through scientific and technological progress, shows that the self-development of individual mental creative processes, to produce valid changes for the better in man's comprehension of universal physical laws, puts such individual mental-creative processes in a special kind of direct, correspondence with the Will of the Creator.

Thus, in valid scientific progress, the primary relationship to knowledge of the individual's creative-mental processes, is to the *Mind (Will) of the Creator*, and only by derivation to objects in the universe.

Classical music, is the use of the natural characteristics of vocal polyphony, to replicate in music what the developed creative-mental powers of the individual human mind to accomplish otherwise in the "synthesis" of a valid discovery of improved, fundamental scientific principle.

This signifies, that in the process of generating a *Many*

(math-physics *manifold*) from a starting-point, and then developing the manifold to generate a *One*, establishes a single conception—the *One*—as the identity of the composition, rather than as a divisible aggregation of parts. This requires what may be described fairly as a "problem-solving" dynamic to the process of composition; this implies, in turn, that the *problem* and its *solution* are deferred as *problem* and *solution*, respectively, by some notion of lawfulness.

Hence, the *arbitrariness, irrationality* intrinsic to the principle of artistic romanticism, shows romanticism to be on principle a *dionysiac* defiance against reason, and the twelve-tone system more radically so.

Notably, *the principle of musical composition cannot be deductive (e.g., Aristotelian, neo-Aristotelian) in form.*³ It cannot fit within a "universe" (a mathematical physics) according to Descartes, Newton, Kelvin, et al. This brings us to relevant work by Leonardo da Vinci and Kepler, successively.

The central feature of the work of Kepler was his elaboration of a principle central to the scientific accomplishments of Leonardo da Vinci. Da Vinci et al. had shown that all living processes were characterized as to form, and form of functional motion, by harmonic orderings congruent with the Golden Section. This work of da Vinci et al., had the following significances for the later work of Kepler, and for our topic here today.

First, as to constructive geometry (e.g., mathematics). The Golden Section is the characteristic feature of generation (*determination*) of those five "Platonic" regular solids (polyhedra) which are the limit of such constructability within visible physical space-time.

Second, as the convergence of Fibonacci's series upon Golden Section harmonics illustrates, these latter harmonic orderings are not only characteristic of all living processes, but express a characteristic of negentropic processes.

Third, Kepler's choice of this geometrical mathematics for his construction of an astrophysics (and of universal laws of motion) defines his universe (as an integral whole) as negentropic (e.g., directly opposite to the universe of Newton, Kelvin, et al.). Subsequent evidence (e.g., Gauss's work on asteroid orbits) proved Kepler to have been right in his choice of a universal *negentropic* principle, and Newton's physics, based mathematically and ontologically upon axiomatically entropic assumptions, to have been flatly in error.

Modern crucial-experimental evidence shows: 1) that all living processes are harmoniously ordered negentropically as indicated above; 2) that Kepler's negentropically ordered physical space-time was proven as to astrophysics by Gauss's work on asteroid orbits; 3) that in the very small, the quantum-domain of Schrödinger and de Broglie functions, physical space-time is negentropically "Keplerian."

For reasons supplied in such published locations as *In Defense of Common Sense*, creative-mental processes are implicitly *nonlinear negentropic* processes. Consider the ar-

gument for each summarized very briefly.

Any consistent system of deductive argument, such as present-day conventional classroom mathematics, can be represented as an extensible form of deductive theorem-lattices. Such a lattice as generated from the starting-point of a set of unproven, arbitrary theorems, called *axioms* and postulates. All theorems are derived from that starting basis; no consistent theorem so derived contains any claim not originally implied by the original set of axioms and postulates.

A creative discovery in physical science is of the following type; at least, this is so, as long as we examine the matter from the standpoint of deductive method in general.

First, represent an existing physics (for example) by a choice of deductive mathematics, thus depicting that physics, in more or less close approximation, as a deductive theorem-lattice. Now, consider a single crucial experiment whose evidence refutes a consistent and necessary theorem of that theorem-lattice. All other practical considerations assumed taken into account, this single experiment demands a revolutionary overturn of that entire physics.

A fallacy in a single, consistent, and necessary theorem of a deductive system refutes fatally one or more features of the set of axioms and postulates underlying the entire lattice. The required correction of that proven margin of error in the deductive-axiomatic basis, requires a new axiomatic basis, to such effect that no theorem of the old theorem-lattice, e.g., *A*, is consistent with any theorem of the revised theorem-lattice *B*, and vice versa.

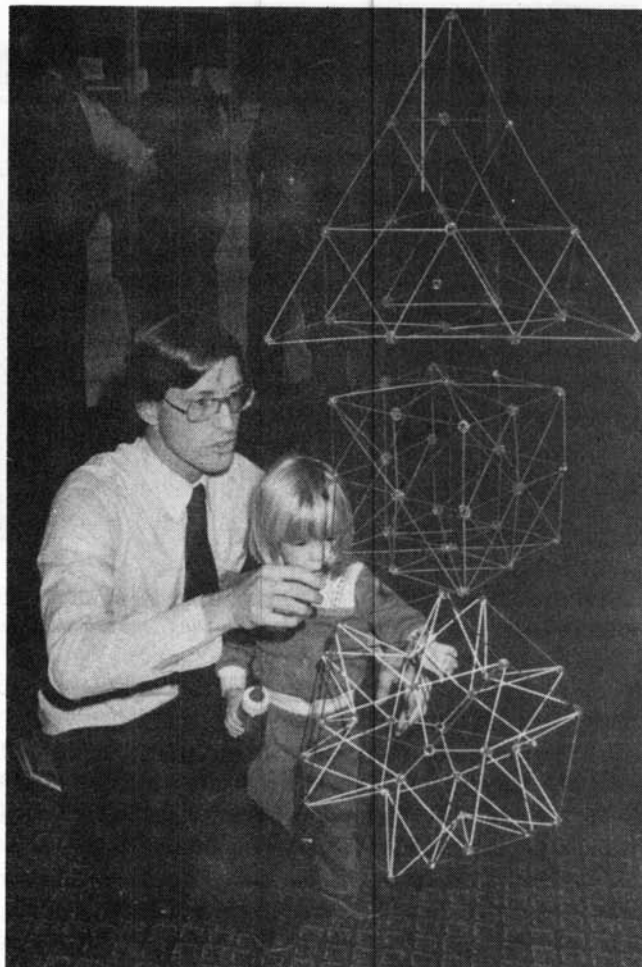
Thus, from the standpoint of deductive, or linear method (all deductive systems are linear, and vice versa), the two successive theorem-lattices are absolutely separated by a deductively unbridgeable logical gulf of *formal (logical) inconsistency*. Another name for this is *mathematical discontinuity*.

Nonetheless, the creative processes of the individual mind, in effecting the loop from *A* to *B*, bridge the discontinuity. Thus, we have as a representation of a creative-mental action (informing practice), a function linking successive theorem-lattices *A, B, C, D . . .*, which is a function of successive, *nonlinear* discontinuities in one and all possible deductive domains. That is a true *nonlinear* function, of a higher Cantorian order. Thus, we have emphasized *nonlinear*.

The fact that the error-correcting aspect inherent in scientific progress directs revolutionary scientific practice (*progress*) of a society toward ever-higher per capita and per hectare reproductive processes, defines this creative function as a *negentropic* function, in the same sense, respecting our illustration, a Fibonacci series converges upon an harmonic ordering congruent with the Golden Section.

This is not merely the case for such creative thinking in physical science; it is the characteristic feature of creative activity in the medium of classical art.

We can illustrate this principle in classical musical com-



A man and child explore nested models of the five "Platonic" solids. In constructive geometry, the Golden Section is the characteristic feature of generation of those polyhedra, and also determines harmonic orderings that express a characteristic of all living processes, and of negentropic processes.

position in many ways. We can consider, for example, the famous Goethe's misguided preferences for Reichardt, over settings of the same poems by Ludwig van Beethoven and Franz Schubert. Goethe failed to grasp the essential principle of musical creativity, even in so elementary a medium as the simple strophic song.

One of the most obvious illustrations of the point, is the treatment of J.S. Bach's *A Musical Offering* by Wolfgang Mozart, Beethoven, Schubert, and others. Here is an excellent showing of what ought to be understood as the seamless union of scientific methods of musical composition and beauty. A proposition is presented, yet once again, for a yet-more-ingenious solution. The solution is bounded by strict classical rigor; the rigor pertains to the way in which a creative modification of the rules is permitted, on behalf of a solution.

There are three most essential things which a classical



Left to right: Franz Schubert (1797-1828), Wolfgang Mozart (1756-1791), and Ludwig van Beethoven (1770-1827) each developed the proposition in Bach's *Musical Offering*, showing "the seamless union of scientific methods of musical composition and beauty."

musical composition must satisfy.

1) The medium must never depart from the domain of *natural beauty*. Beauty is life; ugliness is death. Life is rooted in those negentropic harmonic orderings which is congruent with the Golden Section. This has not changed since Plato.

2) Nothing can be art which is merely arbitrary whim, or which departs from the strict confines of natural beauty. Yet, the mere imitation of natural beauty is not art. Art is that which employs, and never departs from the medium of natural beauty, but which uses that uncorrupted medium as the domain of the same kind of strictly rigorous and valid creative-mental activity, applied to the medium of (in this case) vocal polyphony, which we associate otherwise with valid fundamental discoveries of principle in physical science.

3) The work of art, after meeting in a general way these first two requirements, must also master the challenge outlined in Plato's *Parmenides* dialogue: The *Many* in the composition must be transformed into the continuous substance of the indivisible *One*.

Hark back to Nicolaus of Cusa's work: the *microcosm* (Minimum) and the *macrocosm* (Maximum). We, through efficient development of that *divine spark* which is our individual potential for creative-mental acts, show ourselves, in working for the *isochronically* universal good, to be truly in the living image of our Creator. We participate so, in that which is greater than we are.

It is this quality of doing which marks us out, more than in any other way, as truly, perfectly sovereign individual reflections of our perfectly sovereign Creator. A true work of art brings *Many* into the perfect indivisibility of a *sovereign Oneness*, which latter is the indivisible Oneness of that work of art taken as a whole. Such a work of art thus reflects

upon the direct form of relationship between the sovereign individuality of the creative intellect and that in whose likeness that sovereignty is cast. Unless a work of art achieves that specific sort of *sovereignty* itself, the other conditions also fulfilled, it is no true work of classical art.

The last quartets of Beethoven, beginning with the Opus 127, epitomize the opening into a new dimension of classical musical composition. Since then, the Opus 135, the best classical composers through Brahms, enriched the use of Beethoven's heritage; but they budged music as a whole not an inch further ahead, to this day.

Once, by the aid of insights contributed to young musical masters by a science of music, there will be a more adequate assimilation of what the late quartets represent. Once the first truly *sovereign* musical composition reflecting the principle of those quartets has been heard, we shall know by that sign that the lesson has been mastered, and then music shall, at last, move ahead once more.

Notes

1. See Carol White, "Johannes Kepler: Voyager in Space," *21st Century Science & Technology*, March-April 1988; Lyndon LaRouche, "Designing cities in the age of Mars colonization," *21st Century Science & Technology*, November-December 1988; and *Will This Man Become President?* by the Editors of *Executive Intelligence Review*, 1983, pp. 161ff.

2. Kepler's laws can be summarily stated as follows: 1. The planets move around the Sun in ellipses, at one focus of which the Sun is situated. 2. As each planet moves around the Sun, the vector extending from the planet to the Sun sweeps out equal areas in equal times. 3. The ratio of the square of the planet's year to the cube of the planet's mean distance from the Sun is the same for all planets.

3. Lyndon H. LaRouche, Jr., *In Defense of Common Sense, passim.*, Schiller Institute, Washington, D.C., 1989.

Laughter, music, and creativity

A previously unpublished article by Lyndon H. LaRouche Jr., originally written in June 1976 and privately circulated to his philosophical associates.

As anyone ought to know for his own soul's sake, the so-called twelve-tone or atonal system of musical analysis and composition is a literally reactionary retreat led by dried-out 20th-century composers, in flight from the challenge of attempting to imagine something both new and significant within the framework of the so-called tonal configuration. This is not an opinion, but a readily demonstrated fact.

We shall review some of the possibilities inherent in the most obvious of the contrapuntal potentialities of the octave-scale. We shall consider the implicitly political state of mind which causes an otherwise committed, and perhaps potentially gifted musician to lack the minimal qualities defined by the leading strata among the professional musicians of the 18th and 19th centuries. That provides the thematic setting for focusing upon the broader interconnection between laughter and creativity.

This approach will appear, at first, to be only a choice of musical facts as a means for getting into the principal topics. That initial impression would be mistaken. In the end, we should share the estimation that this approach has been adopted in honor of Ludwig van Beethoven, who is both one of the paradigms for creative achievements in general and a musician whose achievements have never been matched by any of his successors. The object of this particular approach to the subject is, if only in part, to stimulate a broader appreciation of his contributions to the human soul for the forthcoming 150th anniversary [in 1977—ed.] of his untimely death.

In the beginning, it might appear to be the case that we have introduced a theme—in this instance, music—ostensibly to obtain a point of access for the serious activity represented by the development of our argument. That first impression should be cast aside as we reach our concluding passages. As we consider the introductory thematic material from the standpoint of the intervening development, that theme must acquire both a richer meaning and a specific appropriateness to the development itself which would have been non-existent from the standpoint of the opening statements considered entirely by themselves.

That, we propose to show, is the essence of creative music—for which Beethoven's work is the paradigm still, and the specific quality of coherent creative achievement in general.

Some very ABC ABCs of counterpoint

Consider only some of the obvious possibilities for creative freedom in counterpoint based on the most prominent features of the well-tempered tonal octave. We limit ourselves here to those demonstrations which can be made in no more than several hours of classroom work in an introduction to counterpoint. On this basis, the fact of limitless musical possibilities of that tonal system is adequately illustrated.

First, the simple well-tempered tonal scale by itself has several significant features. Second, all the key elements of counterpoint are demonstrable in terms of a single voice. Third, the addition of even a single second voice expands the possibilities not only to include a simple vertical element within the same beat-interval, but—in the hands of a gifted musician—a relatively limitless number of contrapuntal possibilities arising from all the immediately and potentially distinguishable interplays between the two voices.

One begins, for point of elementary reference, with the “natural” scales—the scales as one might imagine them to be understood prior to the influence of Bach's work in strictly defining a well-tempered system. (Any orchestral or piano and string work including fingered wind-instruments demonstrates that this is not merely an historical curiosity.)

The “natural” tonal scale is based upon an algebraically determinable regularity of intervals, such that each octave tone is precisely double the frequency (vibrations per second) of the immediately lower octave-tone, and the half-tone intervals within the octave have rudimentary algebraic determination of “equal distance.” The energetics of this arrangement are obvious to any beginner in undergraduate physics: Notes of a higher pitch, otherwise having vibrations of the amplitude per cycle of vibration, transmit more energy to the ear within each equal fraction of a second.

Shifts in frequency (pitch) are habitually distinguished by the hearer in scale-singing, song-singing somewhere within a range of approximately a quarter-tone, and habitually distinguished as a distinct note at intervals of a half-tone. “Drift” from true or equal pitch in the order of less than a quarter-tone is habitually distinguished as an ambiguity (or a very good control of a range of vibrato), while larger drift is considered ordinarily a disagreeable off-key sharpness or flatness. It is sufficient for our purposes here, to consider these facts as phe-

nomena of musical hearing and to probe the physiology of such intervallic distinctions no further than that.

In a movable-do system based on such “natural” octave scale-singing, the difference between the key of C major and C-sharp major—insofar as intervallic effects are considered—is merely an increase in the intensity of the octave: More energy is transmitted in the singing of a C-sharp major scale at the same amplitude as a previously sung C major octave.

This difference in intensity is not without significance, of course. Music is heard not only as an activity of the mind with respect to the ear, but also with respect to the kinesthetics of singing. The hearer’s own potential singing-range and the different physical experiences of singing in different parts of that range are part of the spectrum involved in the hearer’s judgment of the heard musical tone.

With that, we may leave consideration of the “natural” tonal scale of European music, and now consider all the further points to be covered from the standpoint of reference of the well-tempered scale—including briefly a crucial, interesting little problem arising from the differences between such a well-tempered and the natural octave scales.

The development of the well-tempered scale was not immediately demanded by the use of keyboard instruments. To demonstrate the point, imagine the following: Tune all the C strings of a keyboard instrument (clavichord, harpsichord, piano) to their natural pitch. Now, next, tune all the notes between the Cs according to the natural intervallic intervals for C major. Now, try to play a natural D major scale on that keyboard instrument. The result is slightly off-key. Then, so forth and so on, for the other movable-do major scales, with the same sort of result. The well-tempered scale is a compromise-system, by which the values of the notes of all the scales are adjusted slightly such that the same note struck on the keyboard has the same assigned pitch, no matter which scale is being performed.

Ah, but what an intriguing set of results derives from that compromise. Now, because of the compromise, a new difference has been added for the comparison of one major scale with another. The very slight changes in intervallics (from the natural intervals) within each scale give to each of these key-signatures (scales of reference) a distinct “color” over and above the simple distinctions of intensity in natural movable-do system. This is in fact a major consideration of all the greatest music written in Europe during the late 18th and first half of the 19th centuries (to choose this segment of time for emphasis).

There is one further principal feature of the tonal system after Bach. In the earlier music, principally influenced by traditions originating in Asia Minor and Greece, European music was dominated by what are termed “modes.” In the mainstream of most modern tonal composition only two principal modes survive: the major and minor keys. The simple difference between well-tempered major and well-tempered minor scales is that, relative to the major, the minor key scale

is diminished by a half-tone in the third and sixth interval, such that by augmenting the B-flat of the key of E-flat major to B-natural, we have the scale of C minor.

A few highlights of the possibilities of counterpoint in a well-tempered scale suffice to illustrate the basis for the working point of this paper.

Firstly, although *counterpoint* is associated with the simultaneous singing of two or more voices, all of the root-principles of counterpoint are locatable in terms of a single voice. We shall identify only a few rudimentary illustrative points.

Counterpoint, reduced to its essential principles, is the practice of changing the key or mode through deriving dissonances within an otherwise canonical (e.g., “according to the rules”) elaboration of thematic material. The function of this is, more immediately, the explication of the range of “color” associated with distinctions among major and minor modes of the various well-tempered scales. This intersects what may be loosely described as the internal rhythmic pattern of thematic material, including the interaction between the rhythmic “internal” features of the thematic material and the habituated rhythmic values of the so-called unit measure of the section of the composition within which that thematic material is being developed.

Speaking broadly, counterpoint is essential to making musical composition and performance a vehicle for communicating and evoking the *development* of emotional experience—as distinct from undeveloped music, in which it would be possible only to communicate more or less monotonously a single mood. The more profound significance of counterpoint is that it permits the direct association of the “intellectual” side of music, the ingenious working-out of musical composition problems posed to himself by the composer, the intellectual point of reference—*cathexis*, with the ordering “emotional” (“color”) correlatives of the tonal and rhythmic peculiarities of each immediate section of the composition as a whole. The following analogy is perhaps more appropriate than might first appear to be the case.

Imagine a physicist in the act of solving an important, challenging problem. The struggle represented by this intellectual, etc., effort, ranges over all the moods of which the mind is capable, including the most ennobling sense of excitement in the course of a genuine “breakthrough.” Once the initial breakthrough to a sound hypothetical solution is effected, his mind ranges happily over the process by which this was accomplished, critically reevaluating each feature of that process, retrospectively looking over the shoulder of his intellectual self of that preceding moment whose work is now being reassessed.

If the emotional experiences associated with each part of the first and later retrospective critical phases of that work were somehow made as explicit as the intellectual activity itself, one would then have a first approximation of the special function of great musical composition. If the form of creative problem-solving and the emotional correlatives of

problem-solving were then placed on the same level, so to speak, to serve as the primary subject-matter, we would have defined the special distinction of great music as art.

Using that illustration as a point of reference, we can properly state that great musical composition—with Beethoven's work the paradigm for this—is the science of celebration of the principle of creative life. The formal aspect of musical composition, the obviously articulable features of counterpoint, are an abstract representation of creative scientific activity in general. This is essential, since without a deliberative problem-solving element in musical composition, the successive emotional colors associated with tonal and rhythmic development would lack the essential development of reference to give them meaning.

To the extent that this aspect of musical composition is sometimes broadly acknowledged, the error is usually included, of assuming that the formal, problem-solving activity of music is focused on hypothetical ineffable problems—that “art” in general thus has no practical correlatives in real life apart from that specific domain of art itself. Such suppositions are purely nonsensical, virtually pathetic Bohemian driveling insofar as practical life is concerned, and reveal that the proponent of such pitiable conceits has no real insight into art itself.

If, to strain an illustration, mathematical physics activity were “set to music,” it would be the physics-discovery that would be specific, and the music would be mere “program-music,” the musician's equivalent of degenerate cant. The function of the articulable formal features of counterpoint (at least, susceptible of formal analysis *after the fact*) is that the problem being considered is directly associated with the emotional “tone-color,” rhythmic side of musical activity. Thus, great musical composition is essentially a direct means for approximating and addressing the creative powers of man, for evoking in the performer and listener a sensibility of those creative processes, focusing on the sensuous correlatives of the creative process.

For example, the musically cultured creative physicist, coming from a period of intensive effort in his profession, finds in great music a special kind of satisfaction, the satisfaction of a profound human need. Physics activity per se does not explicitly express the emotional correlatives of creative mental activity, even though those correlatives are indispensable to that activity. Consequently, an appropriate selection in great music legitimizes, gives voice to, those emotional experiences which had no outlet in their own right in the physics activity per se. This may be essential in some respect, at least fruitful for the sustaining of the physicist's creative efforts the following day.

Illustration

Now, let us focus attention on some very simple features of the well-tempered scale, selecting a few points of the sort which are susceptible of immediate effective demonstration

to outright musical novices. Let us consider in that way only two kinds of problems which typify the immense potentialities of counterpoint.

For this purpose we shall consider only the following features of a well-tempered system: the major and minor scales and their interconnections, the notion of principal leading tones, and the fact of the tonic, dominant, and subdominant. We shall consider first the highlights of counterpoint in terms of such elements for a single voice, and then identify a few of the notable features added by including even a single second voice.

Let us begin with the simplest sort of theme, a scale in the key of E-flat major. Let us then introduce just one dissonance into that theme; let us replace B-flat by B-natural, and continue that substitution. We are then in the key of C minor, which can lead us to the corresponding major key, C major, by a number of means. Similarly, the half-tone note one step below the dominant and the subdominant tones leads directly to similar transitions of an obvious sort. In a transition between E-flat major and C minor, a trill on B-flat and B-natural represents a delightful ambiguity, and so forth and so on.

In general, the production and resolving of such dissonances and ambiguities, all of which exist in principle in a single voice, are the essence of counterpoint. One could go much further with the single voice case, even in respect of a few points of the scale we have identified, but this suffices for the moment.

In the simplest view of the effect of adding a second voice, we have the following. Begin the statement of the second voice, using the same theme as the first voice, on a beat such that the sounding of the first note of the theme by the second voice is in tonal agreement with the note and the key being then enunciated by the first voice. One is obviously faced, implicitly, with certain limitations in the selection of thematic material for such simple undertakings, otherwise the continuation of the two voices in parallel will generate an unwanted frequency of dissonances between the two voices, with respect to the immediate beat and the tonalities of the passages immediately surrounding that beat.

Looking at this more broadly, the question of the relationship between the two voices is not properly limited to the “vertical harmonies” represented by the notes sounded in the same beat or fraction of a beat. There is an obvious connection between the cluster of notes immediately surrounding that vertical arrangement. Preceding and following notes sounded by the second voice form an implicit series with the note being sounded by the first voice, and so forth and so on.

Without yet considering the rhythmic relationships between theme and measure, we have a rich range of options in the simplest case of this sort. Somewhere, certainly if the quality of the theme in itself has any bearing upon its selection, dissonances must arise either in respect of simply implied vertical harmonies, or from the configuration of tones

surrounding any beat or fraction of a beat. To describe the matter broadly, the composer has the opportunity, in the first instance, to underline any of these immediate or implicit dissonances he may choose, and to generate development of the music by resolving any of the dissonances he chooses to underline and resolve.

The need for rules

What we have outlined so far is adequate for the statement of an essential principle at this juncture. It is possible, starting from the restricted framework of the well-tempered scale, to elaborate formal rules which provide the framework of all legitimate musical composition. Ah, but only the framework!

This framework allows for the disturbing element, dissonance, inherent in the elaboration of the rules themselves. The effect of dissonance, given the implied rules, is to cause what we may broadly identify as "stress." This "stress" demands a resolution; that is, the dissonant element must lead into, and become retrospectively or reflexively a necessary part of something which conforms to a rule of the well-tempered system. *With one further qualification:* It is permitted to develop a new lawful principle within the well-tempered system, provided that this new "mode" or other element of principle is defined in such a way that it becomes a conceptualized new discovery of a rule to the mind of an idealized audience within the composer's mind.

This existence of an expandable set of rules of composition is not a shortcoming of music developed within the well-tempered system. It is the very essence of music, however—and there is a point of significant difficulty—not for the reason given either by the reactionary formalists, or cited as license for anarchy by the counterculturalists of the atonal existentialist factions.

The reactionary asserts that the rules are necessary, but from the standpoint of stultified conservatism. (The backward formalist who had not yet been successfully bowel-trained would wear diapers; the anarchist who is not bowel-trained would instead ridicule the diapers, in order to more freely express his instinctive proclivities before the public. Frankly, between the two, perhaps the reader will agree that the formalist is more rational as well as being decidedly more sociable.)

The crux of the genuine issue is the principle of *Freedom in respect to Necessity*.

The analogy of the creative musician to the creative physicist bears out here most emphatically. The essential feature of human creativity is absolutely not the free expression of random impulses; thus, all *consistent* existentialists are clinically definable as bestialized paranoids, a potential menace to themselves and others. *The essence of creativity is problem-solving.* In the final analysis, all creative problem-solving subsumes man's mastery of nature, mastery of the implicitly adducible laws of the material universe.

Immediately, man's knowledge of such laws is approxi-

mated *in an historically specific way* by the existing body of scientific knowledge and means of practice. Although ultimately it is the lawful order of the universe as a whole which determines what is and what is not a solution to a problem, the form in which the problem is posed is the set of rules representing the best approximation of universal knowledge. The immediate characteristic of most problem-solving is a solution to a problem which satisfies existing *laws of scientific knowledge.*

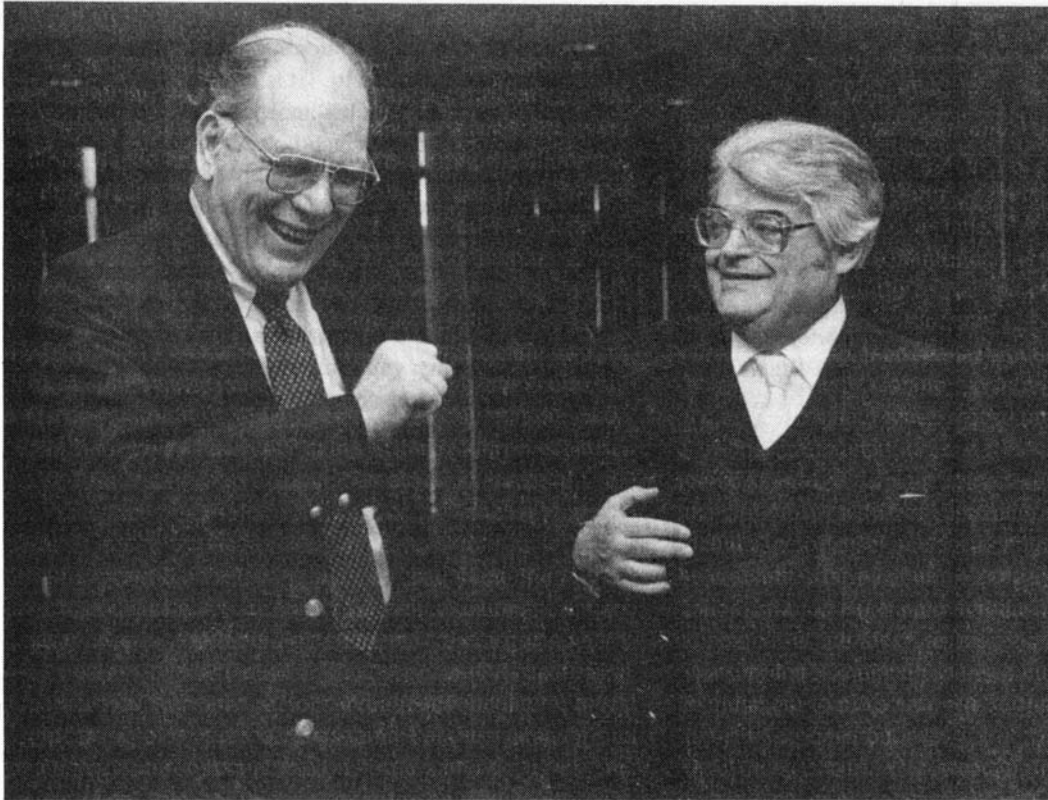
More rarely, more profoundly, there are crucial discoveries which redefine and add to the previously existing bodies of lawful scientific knowledge. It is the location of freedom (creative innovation) within a determining set of lawful knowledge of reality which is the first-approximation definition of creative work. However, that is not adequate by itself. *Random*, impulsive alterations in behavior (*freedom* as the anarchists and other lunatics misdefine the term) is not creative problem-solving. Man's successful mastery of the universe, is the criterion—and active content—of creative work, *of creative mental activity as such.*

The function of music is to emulate and celebrate that creative mental activity, specifically to focus on that activity as if in and for itself, such that the formal and emotional features of the creative process are directly, reciprocally intertwined in defining the problem and the solution. Hence *music must proceed from historically specific sets of adducible rules.* The crazy anarchist who simply proposes to overthrow the well-tempered tonal system for arbitrary freedom of atonality is only a *berserker*, a man driven wild by his own inability to master creative work in the well-tempered tonal system. He is a man who, so to speak, burns down the house (because he lacks the competence to repair its electrical circuits and plumbing) that he might enjoy the freedom of a technology-free hut. Whether the process of musical development is stagnant or alive is to be judged in the same principled fashion as we distinguish between a stagnant or vital body of scientific work: Is there development within the existing framework which leads, through lawful development, to a successful transformation of the previously existing rules?

The role of creativity

Even in terms of the arbitrarily simplified illustration of counterpoint we have given, the problem of the well-tempered tonal system is readily sorted out. *What the rules do not pre-define* is the composer's choice of use of dissonance and the new architectonics of form which he builds with the aid of such choices. The picture is merely amplified in a necessary way as we emphasize that the rhythmic ironies of composition, most notably rhythmic contrasts among figures, ironies concerning thematic material and measure, and so forth, are an essential aspect of the counterpoint as a whole.

Beethoven is the paradigm for what we have outlined. Everything exciting in Beethoven's compositions conspicuously involves an interdependency between the excitement



Lyndon LaRouche shares a moment of laughter with his good friend Norbert Brainin, formerly the first violinist of the Amadeus Quartet, following a concert given by Mr. Brainin and pianist Guenter Ludwig in Boston in Mr. LaRouche's honor, in December 1987.

Philip Ulanovsky

of lawfully situated creative innovations and the uses of the rhythmic and tonal palette. Moreover, on these counts, Beethoven's achievements in counterpoint, and in the further development of the principles of a lawful counterpoint, have never been approximated by any composer to date.

This latter fact is of special relevance to the inane posturing pretensions of the so-called moderns. They are like student physicists who have invented an entire new anarchist's sort of pseudo-physics in revenge for the fact that they have found themselves hopeless failures in the existing profession. These "moderns," who on point of documented biographical and correlated material, were motivated to the atonal system by their inability to write new music of significance in the existing system—to say nothing of matching themselves even to the mid-19th-century romantics so-called—rejected modern technology for the simpler life of the noble savage.

In point of fact, from the standpoint of "sophisticated" conceptual advancement, Beethoven's notable later musical compositions represent a body of musical theory far beyond the competence of his successors, and apparently beyond the mere student-musicologist comprehension of those pathetic creatures who pretend to have superseded his musical conceptions.

To generalize more broadly, if we abstract a concept of musical development from Bach through the later notable Beethoven compositions, with special emphasis on Beethoven's own development, we have in a single, empirically

premised conception both a conception of creative ordering of the development of the adducible formal laws of composition, and a higher-order notion of musical lawfulness which subsumes such an open-ended process of further lawful development of lawful music. As the notable later works of Beethoven already illustrate, there is no definable limit to what can be achieved in that way.

The scherzo

The Beethoven scherzo form is an exceptionally useful point of student's focus. At its best, it might be described as the principle of a lawful musical joke—not merely a sheer delight, but a very lawful kind of humor. Like a creative irony in literature, or an insightful use of punning as a form of metaphorical elegance, it is the anti-anarchist quality of the scherzo—as distinct, for example, from a late-18th-century musical-joke composition—which is its essential feature. An exercise in sheer contrapuntal delight, set to rollicking triplet figures and so forth.

The specific excitement of creative work, otherwise found most notably in great music and insightful forms of wrenching humor, is a specific sort of surprise. Laughter: the quality of the creative experience, of music, of wrenching insightful humor, and the exciting moments of loving.

The Beethoven scherzo is a celebration of that aspect of the creative process as if for itself—the echo of sheer delight apposed, and often necessarily so—to the profundity of

A musician looks at Lyndon LaRouche

The following is a translation of the speech given in French by Eliane Magnan to the conference of the International Commission to Investigate Human Rights Violations, in Paris, on Nov. 23, 1990.

Heaven is full of stars,
Sunbeams light up the Earth a thousandfold,
And earth, spontaneous in her greenery, has her lunar
destiny between day and night.

In this daytime and this night, man has struggled for
thousands of years over the choice for Good or for Evil.

I have known Mr. and Mrs. LaRouche for ten years
now. It was not through politics that I first met them but
rather as a 'cellist receiving their congratulations. Then
came the privilege of becoming friends. Later on, Helga
LaRouche chose me to become secretary general of the
International Human Rights Commission. And it is in
that capacity that I would like to welcome you all to this
conference where we shall better get to know the case
of Lyndon LaRouche and his collaborators, and that I
personally bring you a testimony of friendship.

I would like to stress the word "friendship" which has
a very special meaning in my relationship to Mr. and Mrs.
LaRouche.

Of course, the choice of friendship first of all involves
congeniality, attraction, respect, which then grow into
mutual confidence.

Does that mean always sharing the same opinions?
Certainly not. But freedom of thinking and of expression
is not, in itself, an obstacle to liking and getting along
with one another. Among friends, there will always be a
collusion of minds and, especially, a deep, affectionate
loyalty.

Do you think that I, as a mere musician, could under-
stand such a complex movement as that of Lyndon

LaRouche's within a few months' time? After ten years,
I still have not managed to. (It is known that I don't like
to read newspaper articles and those in the magazines
quickly seem difficult or fastidious.)

So on what grounds should I speak about the
LaRouches, testify on their behalf, believe in them, take
up their defense? Very simply through them and their
behavior, and their friends who, I admit, have often
helped me have confidence in them. For as you know,
Lyndon LaRouche's organization raises so many prob-
lems and issues that you sometimes react with skepticism.

But when you see some 30 nations represented, with
their flags, at the July 1984 founding of the Schiller Insti-
tute in Arlington, Virginia, it is quite impressive. And it
was even more so for me when Marie-Madeleine Four-
cade spoke as a representative of France (and told us
that Friedrich Schiller had been made a French citizen,
although few people know it). That unique and admirable
lady who had alone upheld the first Resistance network
in France during the Second World War, which became
known as Noah's Ark, was now coming, in the name of
friendship, to join the fight of the LaRouches; this woman,
as you know, had had to assess so many men and women
to judge whether they were trustworthy. She was the first
woman to have been honored with a [military hero's]
funeral at Les Invalides: How could she possibly be mis-
taken in her soul and her conscience when she called
Helga and Lyndon LaRouche her dear friends? They are
fighting on the same side—the side of freedom for man-
kind and for the nation.

Wasn't Marie Madeleine Fourcade also one of the first
people who was invited and who agreed to go after the
war to the meeting of the German resistance fighters who,
as we sometimes forget, were the first to be persecuted
before other countries were trampled upon and their lines
of deported persons turned all too often into martyrs?
This signifies that Lyndon LaRouche's organization is
certainly not fascist but one of pure republicans, democ-
rats, and above all, humanists.

And that is perhaps the truth of the matter, which
seems to so upset and disturb those other political parties
that are involved in politics for the sake of . . . politics
and who forget the humanist element without which great

some immediately preceding more momentous creative un-
dertaking.

There is a sick world to be rebuilt. In this world—typified
by the disgusting linguisticians—we are plagued by herds
of humorless, uncreative, officious louts, best summarily
described as of an oppressively grey color turning toward
an ominous yellow. Otherwise, the general population is

psychologically stoop-shouldered with a burden of growing
fears—fears whose exact nature and shapes those persons
would prefer not to know—each plodding miserably from
one familiar, greying place to another, "trying, somehow, to
take care of my own personal business." Meanwhile, the
storms grow; earthquakes, many of suspicious origins, major
storms of unprecedented patterns originating in conformity

missions cannot be accomplished.

But let us now spend an evening in Virginia with Lyndon LaRouche. The master of the house will welcome you in great simplicity just like a true American farmer. Robust, well built, a smile on his lips and his eyes full of goodness. For me, he has the same look as our revered master of the 'cello, Pablo Casals (who was also a devil of a Catalan republican).

There are also a few musicians in the room. So let's begin with a little music . . . let's relax. Keep your shoes on if you like, but if you'd rather take them off, go right ahead. You sit cross-legged on the floor or in a folding chair. You are in no danger of damaging or knocking over anything of particular value in this salon. On the walls you see some reproductions—Beethoven, Brahms, Bach, Lincoln, Rembrandt and, especially, an autographed portrait of their dear friend Indira Gandhi.

And then (I have never seen such a thing in any other political movement), the hours go by with lieder, chamber music, analyses of works, and Lyn is asked all kinds of questions about composition—he could go on about the subject forever. From time to time, we stop to have something to eat at the buffet or to drink a good wine.

Up till now, there is still no politics. The news of the world distributed in the morning and updated one or two times a day in the office are enough. Recreation is afforded by culture, since, for Lyndon, culture is what forms the mind and what saves the society of a nation. Culture above all else.

So a conversation will start up on painting, especially Renaissance art. There is a lot of talk about space, the laws of nature, geometry. So all his collaborators benefit from his search for knowledge. From different countries, his associates always say: Whatever we know, we owe it to Lyn.

You know that Lyn is a very hard worker. He will say, just as Bach did: If you work as much as I do, you will know as much. But is that true? Are not the Leonardo da Vincis, the Bachs, the great political leaders, like de Gaulle, Nehru, Gandhi, Washington, exceptionally gifted beings? Or is it rather their *courage* that surpasses them?

Why do we so badly need an American today whose name is Lyndon LaRouche? Because he can surpass

events, because his knowledge is universal. He knows so many things about the past, in all fields, that he has a clear vision of the future. Read the newspapers now (which I do not read), and you will see he is always at least five years ahead of events and his movement has gone into the 21st century in some fields.

We have come to turning points in the history of the world and we need men of action to lead nations forward to success and not to domination.

The economist Lyndon LaRouche is the inventor of the Riemann-LaRouche method. Lyndon LaRouche never says there are too many people on this Earth. With his economic programs, which you can find out about, each and every country can grow, progress, and feed itself, with existing technologies. Policies are all too often usurious, which is why governments debase rather than lift.

Lyndon LaRouche brings together science, philosophy, and the spirit of reason. He defends Judeo-Christian culture, one of the most accomplished civilizations in his eyes.

In 1988 in Washington, I attended the conference where he announced he was running for President of the United States. And of candidates running with him, he demanded one thing: that they be honest patriots. If every one were like that, the world would be in much better shape.

If so many international lawyers are working for the release of Lyndon LaRouche, it is because they know that these trials have nothing to do with "fraud" but are all-out political trials.

Nehru wrote the following to his daughter Indira from prison on Oct. 26, 1930: "For your birthday, you are used to receiving presents and gifts, which I cannot send you from prison. Nothing material or solid, but my spirit and my thoughts for you cannot be stopped even by the walls of the prison."

The same is true of Lyndon LaRouche whose messages and advice are continually circulating among us. But what we really need is his freedom.

That is why we are gathered here today, in order to better fight for his freedom, so that the star of Lyndon LaRouche may light our way and protect us for a long time here amidst men of good will on Earth.

to known weather-modification capabilities. There are storms of erupting and threatened regional wars, and overall the threat of general combined atomic, biological, and chemical warfare on a global scale. Meanwhile, sickened rats proliferate, and the deadly new waves of killer and debilitating epidemics spread against man, beast, and foliage.

We must shake this off, and build this world as it lies so

immediately and wonderfully within our capabilities to do so. We must, meanwhile, wake up science, sweep away the rubbish, and otherwise become a generation to which the future will look back in warm pride of its ancestors.

While we do this, we must laugh hearty laughter, laughter chiefly because of the excitement we rightly take from our achievements. For this, let there be music.

The bouquet of flowers of musical passion

by Eliane Magnan

The following autobiographical essay was written as part of a birthday tribute published in the form of a "Festschrift" dedicated to Lyndon LaRouche on the occasion of his 65th birthday in September 1987. Written in French, it appears here slightly abridged in translation. It is directly addressed to Mr. LaRouche and his wife, Helga Zepp-LaRouche.

Once upon a time there was a little girl with a 'cello, who promised to be true to it alone, like a motto engraved upon her heart.

Today, there is a constellation of violoncellists who play this instrument magnificently; but around 1927, there were few 'cellists, especially women, and in fact when the little girl, who had meanwhile become a young lady, presented herself before Pablo Casals, his first "consoling" words were: "This is not an instrument for women," but after hearing her: "You can play this instrument."

Another time, around 1948, when she was scolded for not playing in an orchestra (to earn a living), she posed the question in confidence to the dear Maestro, who answered in the following words: "Do not take away what God has given you."

Dear Lyn, it is a surprise for me to write in this book for your birthday. I am not a woman of letters, but I know myself through certain reviews that have been written, and I give you these remarks and personal memories. I hope that the years of my life which have led me toward you and Helga will be gathered like a bouquet of flowers which I leave in your house, which welcomes me with so much trust and affectionate friendship.

Whereas, through the Schiller Institute, I have been able to follow the growth of your movement, which goes hand in hand with the growth of attacks and misunderstandings about your person, you know but very little of the course of my life which led me, through curiosity, to you.

The driving force of this curiosity is the search for the perfectability of man. With open eyes toward love, hope. Sharing all that which is given to man to share.

Action is necessary. It must be lived. Thus you listen even to death, to make room for the unlimited spirit.



Through another's eyes

Here is the testimony of Antoine Goléa, as it appeared on the dustjacket of the record which I made with the Lebanese Musical Cooperative:

"It will soon be thirty years that I have known Eliane Magnan. She was then—it was in Marseille during the war—a very young girl, but she already had a superb mastery of the violoncello. Not only was she a first prize winner at the Paris Conservatory; she had also been crowned at the International Vienna Competition, where she carried off the laurels in 1935, while still a child.

"One would already have wondered, hearing her play during that period, what in her playing was still to be perfected. Technically, she was flawless; and musically, there was an absolute certainty of taste and style, and yet. . . .

"And yet, throughout her life, Eliane Magnan has remained a seeker, a seeker and a restless person. Throughout her life she has wanted to go further, to transform herself, to evolve, to do something else; and this always by looking higher.

"In this regard, her interpretation of the Bach violoncello solo suites may be considered as a test, as an example.

"These are frightening works, not only on the technical plane, but also, above all, on the musical and spiritual plane. One need only compare the interpretations of the greatest 'cellists of our day, to realize the diversity of conceptions that can be applied to them. And then, in the face of these differences, what could a young competitor, such as Eliane Magnan was at the time, around 1950, do, when for the first time she dared to approach these exemplary works—exemplary precisely because of their difficulties of every order?

"She could either try to imitate this or that great master; or to overlook everything they proposed and seek her own path; or to make a synthesis between all of their teachings and her own conceptions.

"In reality, Eliane went through all those phases. She searched—one must always come back to that notion—over the years. Modestly, as befitted a young musician, respectful of the masters' teaching, she set herself to learn in their

school; and in so doing she occasionally erred, by taking as a model this one or that, who could give her absolutely nothing, so great was the difference between what they proposed and what Eliane Magnan herself felt and thought.

“These searches, these hesitations lasted more than ten years. In the course of the difficult period of feeling-out, of discoveries, and also of marking time, she never tried to impose herself. But one day, enlightenment came. After having listened to everything, and assimilated everything, except for what was manifestly inappropriate to her, she set herself down, as if despoiled of all impurities, before these masterpieces. She no longer questioned anything but the texts . . . and listened to her heartbeats. And then, instinctively, she felt what she could retain of all that which she had heard; by the depth of her most intimate, most personal, experience, and to offer the synthesis which embodies for the moment her interpretation of the First Suite, in G major, recorded on this disc. Everything there is dictated by the breadth of respiration; both the tempo of the different parts, the rhythmic accentuation, and that song of the depths which, at certain moments, confounds Bach’s music with that of the invisible choir of angels; with that also, of a humanity which, with all the strength of its unavoidable flesh and its imperfect spirit, seeks to attain the shores of the ineffable.

“But Eliane Magnan does not stop at this most pathos-laden, face-to-face encounter with the work of the greatest among the great. Far from the attitude of her illustrious colleagues, she has always pored with sympathy over the works of her contemporaries, of those musicians of the twentieth century who find themselves also placed at the dangerous crossroads of permanent searching. . . .

“And then she went further. For about a decade, Eliane Magnan attached herself to the musical life of that Lebanon where, without forgetting France, she has meanwhile put down roots, and to that Lebanon Quartet which owes its existence to her, she has opened doors and hearts on the immense perspective of Western music. For that action, Lebanon was at that time the predestined country: crossroads of civilizations, the blessed land where two great religions have made Peace, thus bearing witness, despite all the political and social vicissitudes, to the profound unity of the human race in its eternal dialogue with God.

“And this action has borne its fruits. Today, Lebanon is opening up to musical creation which, as always in a country of ancient and illustrious tradition, can only be a work of synthesis. . . .”

My early years

From the age of seven, regularly every Saturday, I used to get up at 5 a.m.; my mother and I used to catch the 6:20 train from Saint Quentin which arrived in Paris at 9:10 a.m. It was one of those trains with wooden seats, crowded with workers, who used to make room for us in the chaotic car. That did not stop my mother from embroidering lingerie on

China silk, to pass the time.

Arrival in Paris: breakfast at the Rapide du Nord. Solfège class at 10 a.m. Lunch at the Berkeley on the Champs-Élysées where a cousin was the director, before creating the Colisée. When the weather was fine, I had the great joy of taking a carousel ride, mounted on a horse, baton in hand, and trying to catch the brass ring as I passed it! My youth was not to make me lose all the rights of my childhood.

At 2 p.m., ’cello lesson with Paul Bazelaire, professor at the National Conservatory of Music of Paris, and then we headed back home. The studies became more important every year, and it was decided, when I got to be nine, that I should go to boarding school in Paris.

My solfège teacher was Mme. Samuel-Rousseau (to whom we had to bow!), who lived on Rue de Clichy, Number 50, Institution Saint-Louis, directed by the Congregation of the Dominican Sisters of the Presentation, of Tours. The proximity of the Paris Conservatory, in Rue de Madrid, gave this convent the vocation of boarding the female music pupils and teaching them to adhere to strict schedules at an unusually young age.

My childhood friends were Lola Bobesco, of Romanian origin, and Marie-Thérèse Chailley. . . . Lola was so gifted! She made so little of it that I wondered why I should not do the same. The Attitude and Principle of Least Action. It was necessary to convert, so to speak, “the numerous hours of so-called missed work.” The teachers never stopped telling you, “It is difficult, so very difficult! Difficult to succeed.” Fortunately, I had the protection of my young age and went through it all without being scared by the bogeyman.

The days of competitions, for me were marvelous! Big outing! I dressed up in a pleated navy-blue skirt, buttoned to a white blouse, with a navy jacket, and patent leather pumps. The sight of this blue jacket at the competition became legendary. “Oh, it’s the little Magnan! Oh! She is going to get the first prize!”

Let’s get back to the principle of “least action,” because to be sure, it was not a question of being a bad pupil, and it was absolutely necessary to make up those missed hours. The replacement was to know how to evaluate the minimum time needed to be ready for certain obligations, such as the lessons, the Conservatory class every five days where we had to know everything by heart, or else—what a disgrace!—we were not allowed to play. All that was “crowned” by the examinations and competitions. This evaluation necessitated learning mental concentration, a very precise choice of work, a mental willingness, self-confidence, and self-control. For self-control, I have often recognized that without the discipline of the boarding school, and having to overcome the painful separation from my family, I would not have been so able to dominate my feelings, my attitude, and my action.

Our schedule was as follows: getting up at 6 a.m., Mass at 6:45, bedtime at 8 p.m. Horrible—but a godsend.

Every day we heard, without rigidity, the words of moral-

ity, obedience, love of one's fellow man. The smile on the lips which I have kept, which brings a kind of freshness, willingness, can only have come from that protected childhood in a convent of nuns dressed in white, with their long black aprons with their ample folds, and in that time, on their heads, a very pretty white coif which was rounded at the top, falling in double folds at the sides of the head. These white coifs represented for me a flight of the spirit toward heaven.

All this brought us to the First Prize of the National Superior Conservatory of Paris.

Toward a solo career

I had just turned 15. I was also the pupil of Maurice Maréchal who was a very great violoncellist. He was always on concert tours: Malaysia, Russia, the United States. At that time airlines were rare, which made him say: "In this profession, you really need railroad health."

Having gotten my prize in 1936, I gave my first recital at the Salle Cortot in February 1937, where my teacher Paul Bazelaire was at the piano. This is how he wanted to present me to the Parisian public. I gave this concert under difficult conditions. My health suddenly gave way; a few days later, I was immobilized by a serious attack of rheumatic fever. On April 13, my birthday, some wonderful yellow tulips from Holland brightened my sickroom—thanks to my mother. In May, I started to get impatient. Learning that there was an international competition in Vienna, Austria, it seemed to me impossible not to go there. If I recall rightly, there was a stormy conversation with the doctor on this subject. I could not play much, but mentally yes! I chose the concerto by Lalo, the Fifth Suite of Johann Sebastian Bach, some Schumann pieces, and above all, the formidable Prelude and Fugue for three voices for solo 'cello by Louis Abbiate. I had to leave in June alone for the competition; my father had just lost his job as the manager of a business, and for economy's sake, I had to do without my mother's presence.

At this international competition, I won a Prize of Honor, fifth in the category. First prize went to André Navarra, who was 13 years my senior.

My parents heard me on the radio broadcast of the prize-winners' concert. There was that success, and the invitation to play as a soloist with the Vienna Philharmonic. In Vienna I had only the time to give myself the present of the "imperial box" at the Opera. The misfortune, the great tragedy of the war was at the doors and borders of Europe.

Following the exodus, I played on French Radio, and repeated the concert in Toulouse and then in Marseille, where I spent three years, before returning to Paris.

Meetings with Casals

In Marseille, in the "Domaine de la campagne de Montredon," the Countess Pastré became particularly interested in helping artists. She became for me "Mamie Pastré." The entourage was quite curious: cultivated people, recounting

their memories of the past.

Residing there were Lanza del Vasto, Luc Dietrich, writers; Clara Haskill, Your Güller, pianists. It was wonderful for me to hear them or to play with them. Casals came to give concerts in Cannes and Montredon with Clara Haskill. Yvonne Lefèbre introduced me to Casals: "But, I have already met her."

In fact, I had been traveling from Ariège where undoubtedly I had visited my aunt, a Carmelite nun at the Pamiers monastery. In Toulouse, some Catalonian students were paying their respects to Casals. I went to seek him out in the train, and I found him. Casals got up . . . I bowed, told him my name, my titles, concerts, etc. It was in returning to my place that I realized that during my whole proud introduction, the dear Maestro had remained standing.

Another person who had the same attitude is Lyndon LaRouche. After a conference in Wiesbaden where I played for the first time, with my friend Marie-Pierre Soma, before rejoining the guests at a reception, he waited for us to be ready, to congratulate us. That is something that cannot be forgotten.

It is a privilege to be treated as a person who works for Art, for beauty. Is not Art the salt of the earth, to bear witness to the soul of men above matter, which is necessarily the ordinary substance of our daily lives?

Thanks to Mamie Pastré, I went several times to visit Casals in Prades. The first time at Villa Colette, in a bare room: three chairs, a wooden table; and the next year in his "Gardian house," a very lovely property. We were still under the occupation regime. Casals did not want me to settle in Prades, since he did not know from one moment to the next whether he would be forced to quit the region.

Looking back, there is no need to regret the short term of my meetings with Casals. I had already imitated Maréchal's playing so much that Madame Maréchal, with her slightly drawing American accent, used to say: "I don't know how to tell any more whether Eliane is playing, or my husband." Wouldn't I have done the same with Casals? Which would have risked being a frightful caricature, since the style of Casals was absolutely unique and inimitable.

In 1946, I wanted to present myself at an international competition in Geneva, having been able to reap the benefits of the one in Vienna. The stupidest thing happened to me. The dampness of the lake gave me a bad cold, and kept me from playing at the precise time of the tryouts. Incredible.

My encounter with two 'cellists, Antonio Janigro and Mirko Dorner, was to make me forget that misfortune. We became inseparable. We had talked about Maestro Mainardi a lot and three weeks later, my father, always agreeable when it was a question of self-perfection, agreed to send me to Lucerne, where Mainardi was finishing his summer course.

Mainardi was very exacting about the purity of his sound. I did not want to hear myself being told: "Lots of noise, but not much music."

It was hard to understand, all the same; the next winter I went to take his course at the Academy of St. Cecilia in Rome. But evenings in Lucerne, in some café or restaurant in the company of our teachers, we found ourselves in the company of either Edwin Fisher, Dinu Lipatti, or Furtwängler. That was not so bad.

From 1946 to 1948, I was named as a Fellow of the Casa Velásquez in Madrid. The memories are so full of friendship and enchantment.

The border was closed between Spain and France. So I was particularly happy to present myself to the public, as a representative of France. Without these lengthy stays in Italy and Spain, I believe I would not have been able to find the right style and to play so well the composers of those countries, who did not come naturally to me: the lightness and the rapidity of the Italians—the reserve, and static pride of the Spaniards. What a privilege to be able to assimilate, on the spot, the ideas and customs of countries, to understand them and not crawl back into my snail shell!

We continued our trips. In summer 1962, on a Turkish skiff, we crossed the Mediterranean from Marseille to Beirut. In Rio de Janeiro, I had attended a Lebanese performance by the famous singer Feirouz. My immediate impression of the dancers, in the Dabké, was that their dance steps expressed a great deal of wit.

So there I was, at the Festival of Baalbek, to see what was really going on. I had several concert tours in Scandinavia—Denmark, Sweden, Norway, and Finland. It was time to warm up in the sun. This curiosity lasted for 13 years. The

welcome was warm, as is the tradition in Lebanon. The vivacity of wit was real indeed. Proposals were made to me, and I accepted a professorship at the Beirut Music Conservatory. Around Christmastime, the administration had not yet wrapped up the formalities of my contract. Meanwhile, I had gone to the United States to play the Dvorák Concerto, under the baton of Eugene Ormandy with the Philadelphia Orchestra.



Philip Ulanowky

Eugene Ormandy wrote to Mr. Judson, manager of Columbia Corporation, recommending me as the “Ginette Niveu” of the ’cello. Mr. Judson replied that “the ’cellist market was very difficult. Especially the woman ’cellist market.” In these conditions, I would “not be signed up on the list of artists.”

That confirmed my decision to accept a teaching position for the first time. Settle down a little, and not pack and unpack suitcases in hotel rooms. The charming invitations to lunch at the embassies, which always came at exactly the only possible rehearsal times in the concert halls, the loneliness of those long trips. Filled with this resolution, I was going to keep quiet for awhile, but when I got back to Beirut, lo and be-

hold, the Joffrey Ballet was performing at the Casino, under the patronage of Mrs. Harkness.

The orchestral musicians made neither Joffrey nor the orchestra director happy. Especially not the ’cellos, as it turned out, and so he had me asked to go on tour with them. I hesitated, but I had wanted to go to India for years. So I gave in, since officially my teaching contract was still not ready.

That was a fairytale voyage. One country after the other—Iran, Afghanistan, India. . . . [In India] we passed through Hyderabad, where I found the most beautiful present of my life: Indira, who became my daughter thanks to the intervention of Indira Gandhi.

Years in Lebanon

In Beirut, you have the impression of being always on vacation, when in 30 minutes you can go from 1,000 meters high, blue sky, and mountains, and to the sea on your return.

For the “Lebanon Quartet”—Antoine Saad, Vera Saad, Hossam Mayas, Eliane Magnan—I founded a “Lebanon Musical Cooperative,” registered with the Ministry of Agriculture.

In 1971, Antoine Saad and his wife left Beirut for Berlin, where he was engaged by Radio Berlin. He no longer had confidence in Lebanon’s future.

I continued the activity of the Cooperative with young artists, local choruses, very good amateurs, and the Conservatory professors. The last concert took place one hour after a bombardment. Sixty persons attended, faithful, confident that “music” must pass everywhere and even more, through the trials of life. I would certainly still be in Beirut, if war had not come knocking on the door there, too. Twelve years have gone by. We have not ceased to hear about Lebanon, the Palestinians, the Israelis, the hostages, and the terrorists.

In Beirut, I was admirably seconded by my friend Antoine Medawar, director of the Carlton Hotel (Lebanese). A music lover and a great scholar, Antoine Medawar was president of the Musical Youth of Lebanon and president of the Lebanon Musical Cooperative. Music evenings, both after the Baalbek Festival and at his house, were followed by suppers, unforgettable banquets. . . .

For a long time, I had been playing one Bach suite per day. With the aid of Antoine Medawar, I recorded a few bands on the radio, and then an agreement was signed with the Chahine recording company in conjunction with Pathé Marconi, to record the suites by subscription.

Like a schoolgirl, I have the habit of making precise charts of my minutes and hours of work, scheduling the passages or the pieces chosen, so as to be ready on the projected dates of performance.

On arriving in Paris, I found that none of that was possible. The studio reserved from Beirut was unsuitable for a musical recording project. I did not have the artistic director I needed. The music critic and friend Antoine Goléa came to the rescue, along with pianist Geneviève Darras, who found me a studio.

Only two suites were recorded when I had to go back to Beirut. I do not know why I rejected the Second Suite. To show my good will to our subscribers, a record did come out, which was very thrown together. On side one was the first Bach suite, and on side two, a solo ’cello sonata by Hinde-

mith and the Oriental Suite by Touffic Succar, the director of the Beirut Conservatory. That was the result, the distillation of all my summer hours, plus improvisation, for the first attempt at recording the six suites of Bach.

My interpretation of these six suites by J.S. Bach is very classical, even purist.

London, *The Times*: “Purists may find equal satisfaction in her firm, clean, always attentive execution of the Suite in D minor by Bach.”

Nice, *Nice-Matin*: “Blessed are they who, knowing how to read to the letter as disciples and not as slaves, penetrate all the way through to the spirit. Such was the case of Eliane Magnan, whose agile fingers and fine musicality succeed in melding that impeccable alignment of abstract constructions into a supple and melodious harmony.”

There is currently a “revival” of a Baroque interpretation. Sometimes I appreciate it, sometimes it bothers me. By training, it is very difficult for me to change the written values of a phrase. I am far from wanting to play in strict time, and sometimes when I listen to my recordings, I find myself not free enough, or too rhythmic in keeping time. A balance is hard to find. In playing the Preludes and Fugues on the piano from the *Well-Tempered Clavier*, I also cannot conceive of changing the values written by J.S. Bach.

L’Ame et la Corde, Michel Winthrop, Church of Brillettes, May 13, 1982: “This evening, spent with one of the best ’cellists there is, filled us with serenity, happiness, and emotion. Eliane Magnan plays the way she is. The generosity, the humanity of her playing, are in her own image. In Bach, Eliane Magnan bathes in her internal world, leaves the door wide open for us to look in, and understand, just then. Is it Bach who speaks through her bow—or is it the ’cellist who speaks to Bach, in a sort of extraordinary confession?”

The challenge of musical performance

Before Leonardo da Vinci’s *Adoration*, I have asked myself, “What is it *in particular* that makes a masterpiece?” I seemed to discover that in masterpieces, the straight lines (rhythmic) were the support of the curved lines (melodic).

There were dominants, highlights of colors, gradations, shadows, light, relief—all that within the limits of a frame.

I made the comparison with musical scores and references for the performer. I finally found that the coding of music is very poor. Music is written measure-by-measure on pages which are turned, and turned. How can one enframe the work, and see it as a whole at a single glance?

Since the straight lines and curves are not visible, does not the performer mix the two in his choice of attack on the notes, which follow one another in little black spots. . . . How can one choose shade in relation to light? By gradations. Is it necessary to always do the same **f-ff-p-pp** from when it first appears in the score?

How many performers are despairing on this subject. One must not give in to fantasy; yet does it not require a profound



A life in art

Eliane Magnan (above, left) in the early 1950s, from a concert program; (right) with Eugene Ormandy in 1962 in Philadelphia, on the occasion of her performance of the Dvorák violoncello concerto; (center) directing the Schubert Mass in G at the Salle Cortot in Paris—53 years after her solo debut there in 1937—in March 1990; (below, left) the “Magnan Trio” with the American violinist Seth Taylor and Italian pianist Monica Ripamonti taking a bow after playing for an ICLC conference Taunusstein-Wehen, Germany, in April 1990; (right) with Marie-Pierre Soma during their first U.S. concert tour in July 1983.



imagination to remain faithful to the text, recreating it with the greatest possible exactitude?

With some supplementary points of reference, this is what I now attempt to apply in my teaching and performing. Then, I add, homogeneity of sounds, in the musical scale, adding to the time-values and pitch of the sounds, the "breadth" which is usually not taught.

Since instruments, unlike the human voice, do not have imperative voice register-shifts, this is what has drawn Lyndon LaRouche's attention to my competency in registers.

The difficulty resides in that, in our stringed instruments, including the piano, each note depends on the weight of the fingers and the manner of attack on the note. In the organ, harpsichord, and fortepiano, certainly the personal touch of the artist counts, but it is more the style which intervenes, because he is limited by the very construction of the instrument, which tends to produce an equilibrium of sound, by itself.

For the string quartet, the modern piano, and the wind instruments, the proportion of air or weight is what must correspond to the volume, to the breadth of sounds.

Notice the organ pipes, the different caliber of the strings of the instruments—each note must be different. Each note emitted must correspond to a different caliber of string. One must find equilibrium for the emission of the totality of musical registers.

This application and attentiveness to the "breadth" of sound is definitely the secret of my sonority.

Have I succeeded in the six Bach suites which I just finished recording for the Schiller Institute, thanks to you, in rendering everything that I wished to put into my musical thought? I don't think so. Despite a certain joy in completing this project, it brought with it numerous cares. A long learning process in the same recording conditions, the same studio, would be required to accomplish the tapings as quickly as possible.

Often it was enough to make my hair stand on end. Mr. Kisselhoff, my sound engineer in Paris, would announce: "Not enough rosin. Too much rosin. Put some alcohol on the strings. Would you please do the second repeat again?" etc. One has to pay so much attention, that it becomes difficult in those conditions to find the inspiration, and even to succeed in playing and realizing what you would like to do. Inevitably a certain mechanical side slips in, where it is difficult to bring out your entire feeling.

Moreover, you know that my deficient state of health did not simplify the task.

But I wished to record the Bach suites at the request of my friends who, after my concerts, were always asking for the records that did not exist! Was it not pretentious to have had a stubborn weakness for giving in to their proposals?

"She plays grandly, she plays passionately. She imparts to Bach's music its profound beauty, its evidence of human truth." (Antoine Goléa, *Témoignage Chrétien*, Paris, January 1979.)

In Memoriam: Eliane Magnan

On Dec. 21, 1990, the beloved 'cellist and secretary of the International Commission to Investigate Human Rights Violations, Eliane Magnan, passed away in France, just a few months before her 70th birthday. We print here a selection of remembrances and tributes.

I knew Eliane for a little less than ten years. When I first met her, she was already seriously ill with cancer and the doctors were saying that she would soon die. She was also profoundly depressed by the war being waged to wipe Lebanon off the map. Many people, upon hearing they have this disease, die from fear. They curl up and die within weeks. Eliane however believed in the importance of life, including her own. There is no doubt that she decided after meeting Mr. LaRouche that here finally was a political figure who understood one thing: that the people who destroyed Lebanon had to be stopped before they did the same to the rest of the world. This political idea was a new leaf she turned at that time.

I do not believe that there are any great artists who are really unpolitical. If you do not know what a life-or-death question is for millions of people, how can you get across any idea Beethoven stood for? How can you be anything but effeminate in your art? Eliane was a powerful person, because she got this point. She never had any money because she wouldn't toady up to people in the art world. She gave up her job security at the Paris Conservatory when she was past 60, to campaign for LaRouche. She just let go of things.

As a complete amateur, I am very interested in music and I like to sing. Eliane, though she was a brilliant professional, did not despise to direct our small amateur choir. In March 1990, she directed a Mass which Schubert had composed as a 17 year old, and we sang this in the Salle Cortot in Paris. She walked out onto the podium and told the audience, which included a number of people very hostile to Lyndon LaRouche, that she was dedicating the concert to getting him out of jail. Although I am not a Christian, I think I know one when I see one. There are few people in the world at the moment who believe in the teachings of Christ and have thought about what the words of the Mass in fact mean. During the rehearsals, when we came to the words in the

Mass, *et vitam venturi seculi*, some of the singers cried. You cannot describe, you can only know, what was written on her face at those words. You could see the centuries marching past.

I would like to say that this was nothing piteous or sad. This was a woman who knew with certainty that she would not live to the end of the year, and what she got across to the audience and the singers, was not “Let *me* be saved” but the idea of the immortality of the soul, an idea which most of us would otherwise not get. You die, but before you die, you toss the ball and you know that out there, someone will run with it. That may sound rude, but when she wanted to, Eliane could be pretty rude too.

—Katherine Kanter
Wiesbaden, Germany

The truthseeker

A truly creative person in a sense most highly valued by her friend, Lyndon LaRouche, Eliane Magnan was not afraid to have her ideas challenged, when the issue before her was the prospect of embracing a higher concept of truth.

One of the last times Eliane visited Leesburg, she unexpectedly shared with me her thoughts on a matter she had struggled with since first coming into contact with the ICLC association, in the early 1980s. I was somewhat surprised when she began to speak, though her later actions make clear to me that these thoughts were part of a change in her life toward the end.

The subject she raised was her apparent disagreement with Lyndon LaRouche over his uncompromising rejection of composers from the “Romantic” movement. A little bit of explanation is called for.

As a virtuoso ’cellist, Eliane was required as a child to master the repertoire of technically difficult ’cello concerti (solos accompanied by orchestra). For historic reasons, the majority of the concerti for ’cello were written by secondary Romantic composers. Wolfgang Mozart never wrote for solo ’cello, and Ludwig van Beethoven was restricted to sonatas for piano and ’cello, also having written only one violin concerto.

Also, being French, Eliane was surrounded by the music of Debussy and Ravel—French Romantics—from earliest childhood. While her precision of moral judgment was beautifully proven by her rejection as a teenager of the radical French Romantic poets, she was tolerant of the French Romantic composers.

Thus, when Eliane first became associated with the ICLC, her earliest contact included impassioned intellectual fights with particularly some French members over LaRouche’s denunciations of the Romantics. Since LaRouche’s investigation of the Romantic syndrome and its deadly effect upon classical art is available in many of his writings, it is sufficient to just point out here the following:

The French Romantics were known for compositions that relied heavily on “special effects” to trigger emotional reactions in audiences—“below the belt” so to speak—in place of the kind of rigorous examination of the human creative process which is the subject of classical composition.

Unprompted, Eliane in 1989 told me: Look, I know that Lyn is right when he says that Beethoven and the other classicists are superior to the Romantics! That is absolutely obvious, there is nothing to discuss. It is just that sometimes I worry. I find that people don’t necessarily understand the great classical compositions, the public finds them difficult. It has just seemed that sometimes the Romantics are easier to understand.

As anyone who knew Eliane quickly learned, her life’s involvement in music had always been for the purpose of bettering the world’s population. The context for her raising this matter soon became clear. Soon after this discussion, Eliane assumed a more active role as a political spokesman for LaRouche’s cause. An important moral and intellectual quest was coming to resolution in her mind: It was not possible to educate the public alone through music. Rather, the challenge was to address the public, simultaneously through science, politics, poetry, and music, and always on the highest level, to achieve the greatest good. To be troubled to fight through such ideas when otherwise heavily burdened with personal adversity, is the hallmark of a truly Beautiful Soul.

—Renée Sigerson
Leesburg, Virginia

We remember Eliane Magnan as someone who radiated joy, humor, and a Christ-like quality of love of her fellow man. She came to Leesburg in 1985 to participate in the Schiller Institute performance of Mozart’s Requiem in memory of Indira Gandhi. To our astonishment and delight, Eliane accepted our invitation to stay in the United States and help us create a cultural renaissance.

On one of her last visits here, we took her to Gettysburg and we read Lincoln’s famous address together. She said that she felt more at home in America’s vast open spaces, than in her native France. And she could say that, in the autumn of 1988—when the monstrous injustices being committed by the U.S. government against Lyndon LaRouche could have induced any European to become very cynical about America! She was truly a world citizen, who fought for Lebanon, and near the very end of her life, went to Thailand to guide the efforts of the Ibycus Orchestra and its fledgling classical music program.

Everyone who ever played or sang under her direction, or attended one of her classes, or benefited from her coaching, had to marvel at her ability to convey to musicians—whether they were professionals, or amateurs like ourselves with very modest skills—the *poetic concept* in the music, and to get them to execute it at a level that sometimes seemed

miraculous. Perhaps it was because she had carried her musical mission to so many remote places, that she found a means of rigorously communicating these ideas that surmounted all linguistic obstacles. She insisted on the *metaphysical* content of great music. Therefore, we were not surprised when we heard the view stated, from professional musicians who had also played under very famous conductors, that she succeeded in expressing the composer's musical intentions *better* than those more celebrated "big names."

We who were close to her struggle for life, against her terrible disease, know that she continued that struggle, breaking all the rules and odds against her, in order to better prepare us to meet the standards she was setting. May perpetual light shine upon her.

—Warren Hamerman and Nora Hamerman
Leesburg, Virginia

Eliane Magnan was for us, in America, a present which we will continue to cherish in a precious corner of our memory, as a person who touched people by her simplicity and natural grace. So her music, especially her rendering of Bach, radiated that same simplicity, naturalness, and grace. All who were fortunate to hear her play will testify how her whole being took hold of the music, and the music was made beautiful through her. Her secret, she did not keep for herself, so concerned was she that others might love music as she did. "You have to work very hard, you must overwork yourself, and it is still very hard," she once told us. Very hard work, tenacity, heroism in fighting the physical constraints and pains of her disease were her daily life in order to reach what we would perceive as simplicity and naturalness. She worked hard to achieve beauty in music; she worked equally hard to achieve greatness and beauty as a human being.

—Louise Gandhi, Los Angeles
California

The day I met Eliane Magnan was the birthday of my friend Alejandro Pēna. Quite a few of us Ibero-Americans were attending a conference of the Schiller Institute near Washington. When the first day was over, we heard that Alejandro had invited us to a toast. Shortly afterward his small hotel room was crowded with well-wishers, not just from Ibero-America, but also including Europeans and Americans. We toasted and sang and joked and made a ruckus.

Suddenly somebody said, "Eliane should play!" This small woman had just entered the room, with her black dress, her sweet smile, and her 'cello. Someone gave her a chair. And with her eyes shut, pulling the music out of the depth of her soul, she started playing Bach as I had never heard Bach, with a majesty I could never describe to anyone who had not had the good fortune to hear Eliane play. A reverent silence

fell. Our humble birthday party had turned into an extraordinary celebration: Alejandro was receiving a gift from the hands of an angel.

I shall always remember her like that: surrounded by that crowded group, playing Bach with her eyes closed, deeply concentrated, forgetting herself so as to give generously to the others her treasure, and so to elevate our souls to God. Like an angel. May God keep her in Glory.

—Salvador Lozano
Leesburg, Virginia

During the first conference of the Schiller Institute in the Washington area, I had the pleasure of accompanying international guests from Europe on a tour of the National Air and Space Museum. Eliane Magnan was among the guests, and as we stopped in front of the life-size exhibit of two Apollo astronauts on the Moon, Eliane started to cry. I was completely horrified, as I know not one word of French, and had no idea what was wrong.

I asked her what was the matter, and between tears, she told me that that landing on the Moon had been one of the most important moments in her life. She tried to indicate to me through halting English and some gestures how beautiful she felt this accomplishment of mankind was, and did so very effectively.

—Marsha Freeman
Leesburg, Virginia

There are a precious few people today who have made it their life's commitment to bring joy to other people. Eliane was one of these few. I knew Eliane, personally, since I first traveled to France in 1985. Despite the tiny size of her apartment, she graciously let me stay there until I could find another apartment. This type of unselfishness was the hallmark of her personal relations with people.

The main vehicle through which she expressed her love for humanity was, of course, through her music. To be one of her students it was impossible not to be affected by her excitement. I was present, as a tenor, at many of the choral practices Eliane would lead in Paris. Eliane had the capacity to rehearse the most difficult aspects of a choral piece by immediately going to the heart of the composer's musical conception. She would often sing out some key phrase, going "Ta-Da," "Ta-Da," "Ta-Da," and before any of us realized it, an amazing transformation occurred. The same musical piece which we had previously plodded through, like a herd of elephants through quicksand, became totally effortless. What remained was the pure joy of rediscovering the composer's original ideas.

God entrusts to each of us a divine spark, and our responsibility as human beings is to give this spark to others. Eliane

truly made this responsibility the active force of her life. Fortunately for us, she left behind a part of her beautiful soul through her wonderful recordings. She will always remain for me someone very special.

—Don Phau
Leesburg, Virginia

I remember Eliane as my sister. When in 1985 she decided to maintain a permanent household in Virginia, as well as France, we laid plans to share a house, or live close by. Christmastime, 1985, was a comical scene when she and her daughter, Indira, arrived, and I was amazed to see, tagging along behind, a big, white cat. This was the family pet from Paris, which Eliane said she brought along so that the city cat could have a two-week holiday to try country life in America!

From then on, I had the pleasure of the frequent company of someone, who not only was an inspiring, generous musician and teacher, but who found joy in the diversity of mankind. She had musical projects around the globe, and the mementos she kept around the house—from Mexico, Bangkok, Gorbio, France, Berlin, Gettysburg, and many more places—were never tourist souvenirs, but always reminders of people and projects. Only Lebanon had no prominent mementos in her Virginia home, I think because memories were so painful for her. Instead, she kept a beautiful white and gold Lebanese caftan and scarf in her room, and occasionally she wore these for a concert performance, as a symbol of her love of Lebanon and civilization, and her defiance of tyranny and barbarism. In this way, she was very deliberate about things, especially so about her daily schedule—when to practice, when to do correspondence, to teach, to read, to enjoy flowers and food, when to entertain and visit with friends, and so forth—all calculated to live life in a way to do the most good. This trait always reminded me of Benjamin Franklin, who wrote in his autobiography about the virtue of cultivating “useful” habits, or Lyndon LaRouche, who admonishes his friends to try to “be more productive.” And so, despite the cancer, she made people work harder at their music, and have fun at the same time. I personally miss her so, and I count myself blessed to have her as an example.

—Marcia Merry
Leesburg, Virginia

This poem was written by my husband, Will, during the first few months of his incarceration as a political prisoner. As we re-read it on Christmas, after hearing of Eliane’s death, it spoke to the feelings we had of her and the love she brought to the world.

—Marianna Wertz
Leesburg, Virginia

A Prayer

Our Father, teach us how to pray,
That with our will we tempt not Thee;
To us the fortitude convey,
That to Thy will we faithful be.

The world rejecteth Thy command,
Thy holy image is profaned,
Satanic arts defile the land,
Thy faithful, God, have been detained.

Yet in Thy Wisdom we believe,
Not for ourselves we Thee beseech,
But that Thine end we shall achieve,
To be Thine instrument us teach.

For we like David wish to sing
Thy praises to eternity,
And wielding music as a sling
Thine enemies subject to Thee.

And if an angel there may be
Today as in the days of old,
May Thou unto us gracious be
And in our hands Thy purpose hold.

—Will Wertz

Eliane Magnan spent several weeks during the summer of 1986 in Houston. During that time, she conducted the Houston “orchestra,” joyfully teaching us, in her own unique way, demonstrating how to present a musical line in a beautiful manner. When she returned here for a concert in 1988, Dan Leach wrote the following poem to her.

—Harley Schlanger
Houston, Texas

Adagio—for Eliane

Somewhere between the Earth and Sky we float,
When thou, in twilight’s peace, thy Vespers sing,
And, lifted by each skyward rising note,
Like prayers which flutter from thy soul on wing,
Into the deep’ning beauty of the night,
We breathe a purer, holier atmosphere.
But, like one dreaming of the long-lost sight
Of home, there rises to our eye a tear;
For in the music of thy love-tuned heart,
As in a mirror, our own true hearts we see—
The instruments of Heaven, as thou art,
Would, but for self-love and languor be.
Like sweetly echoing tones, one moment more,
Linger, and teach our fledgling hearts to soar.

—Dan Leach

Feature



Detail of the "Hundred Guilder Print" by Rembrandt van Rijn. The beautiful etching of around 1650 combines various episodes from the 19th chapter of the Gospel of St. Matthew into a single scene, showing Christ preaching, healing the sick, blessing children, and refuting the arguments of the Pharisees.

2 On the subject of Christian civilization

Lyndon LaRouche explains why it is the moral obligation of adherents of all the world's religions to save Christianity from the deadly assaults of the oligarchy which is leading the world into a maelstrom of religious warfare.

10 On the concept of divine love

Gottfried Leibniz on the science of happiness.

12 Leibniz's first writing on 'Society and Economy'

The seminal 1671 work by the founder of modern physical economic science.

Philosophy

14 Nicolaus of Cusa and the Council of Florence

Helga Zepp-LaRouche commemorates the 550th anniversary of the Council of Florence which united the Eastern and Western churches and was instrumental in launching the Italian Golden Renaissance.

19 On the Peace of Faith

Cardinal Nicolaus of Cusa's dialogue, written in 1453, seeks to identify the common aspect of all the great religions which can serve to forge an ecumenical order of peace.

Discoveries

40 Mozart C minor manuscript gives us a richer world

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55 Laughter, music, and creativity

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