IVORY COAST CONFERENCE

Africa Advancing into the Space Age

by Renée Sigerson

July 20-Leaders of the West African nation of Ivory Coast are advancing a several-year process of collaboration with the Schiller Institute, the strategic policy association created by Helga Zepp-LaRouche, which from its inception was committed to launching a far more rapid economic growth policy for Africa than could ever occur so long as the financial and geopolitical power centers that keep a tight, genocidal lid on Africa's economic development remain in control.

Among the Ivory Coast government and educational associations acting together toward this goal of liberating Africa's full economic poten-

tial, is the "Association for the Safeguarding and Promotion of the Thought of El Hadj-Boubacar Gamby Sakho" (ASPP-BGS), named for the wise philosopher who brought together Christian and Islamic peoples throughout West Africa. Boubacar Fofana, President of the ASPP-BGS, has worked closely with the French Schiller Institute Africa coordinator, Sébastian Périmony, to bring the Institute's work on science, education, and economic development to the benefit of this critical African development project.

Thus, on June 11, 2021, two hundred students participated in a conference held at the Université Félix Houphouët-Boigny, Abidjan-Cocody, dedicated to the theme: "Africa Enters the Space Age: The Case of the Ivory Coast." In the invitation circulated by the ASPP-BGS, Boubacar Fofana identified the development of space science as an indispensable requirement for the progress of all nations. He wrote:

In 2017, the Ministers of Science and Education





Courtesy of Sébastien Périmony

A huge banner advertising the June 11, 2021 conference, "Africa Enters the Space Age: The Case of the Ivory Coast." At right, panelist Dr. Marie Korsaga is speaking.

representing the 55 nations of the African Union adopted the first continental space policy, considering it "decisive for the economic development of the continent.... In January 2019, the AU endorsed the creation of an African Space Agency, choosing Egypt as its headquarters.... Other countries are working with Russia, China, and France, such as Ethiopia.... [The ASPP-BGS] proposes to continue to promote the [Ivory Coast] city of Yamoussoukro as the *scientific capital of West Africa*.

In opening remarks to the conference, he stated:

This first event that we have organized dedicated to astronomy, astrophysics and space will be the first step.... The objective is to open astronomy clubs in high schools and institutes in Yamoussoukro and the rest of the country with the purchase of telescopes, and finally to create a plat-

0 'We Are Not All Sheep, Some Are Citizens'

EIR July 30, 2021



Courtesy of Sébastien Périmony

More than 200 students participated in this conference dedicated to astronomy, astrophysics and space science, held at the Université Félix Houphouët-Boigny, Abidjan-Cocody.

form for reflections with institutions, scientists, engineers, and students to build the first 100 percent Ivorian nano-satellite.

Miniature satellites have become an all-important tool of modern technology and land management. They are used to measure plots of land for construction, to link isolated settlements to telemedicine facilities, to test the composition of soil, analyze weather, and not least, to provide security against terrorism, and such criminal activities as illegal gold mining, which have spread to dangerous levels in under-developed countries.

The Background

This recent June event is very much related to the November, 2018 conference in Paris, where Mrs. Zepp-LaRouche released the French language translation of the Schiller Institute's report, "The New Silk Road Becomes the World Land-Bridge: A Shared Future for Humanity," a publication that broke the international press blackout on China's launching of the global "Belt and Road Initiative" through which China has committed itself to investments that can hasten the elimination of abject poverty throughout the developing sector. The audience at that 2018 con-

ference included many Frenchspeaking representatives of African countries that had been French colonies.

Ivory Coast representatives who attended that event then initiated a plan, coordinated with the French Schiller Institute, to recruit university students in West Africa to devote themselves to the scientific studies and careers needed to successfully forge a modern economy. In 2019, at the Ivory Coast "political capital" Yamoussoukro, 400 students from the Félix Houphouët-Boigny National Polytechnique Institute, as well as other universities throughout the country participated in a day-long dialogue focused on China's bold intervention into world economic relations, through the BRI, and

how this approach reflected the influence of the life's work of economist and statesman Lyndon LaRouche. The presentation of LaRouche's work on scientific economics was delivered then by Sébastien Périmony.

According to the ASPP-BGS, that 2019 conference led to the establishment of a partnership with China's University of Tianjin, which involves ongoing dialogue with Ivory Coast's National Polytechnical Institute.

This year's June 11 conference, held at Université Félix Houphouët-Boigny in Ivory Coast's "economic capital" Abidjan drew 200 students despite the COVID crisis. Yamoussoukro Deputy Ahuili Naylor who sponsored the event, recalled in his opening remarks that Ivory Coast's founding President Félix Houphouët-Boigny—a renowned figure who held that post for 30 years—"liked to say that the future belongs to science and technology." Ahuili Naylor added, "This conference aims to make Ivory Coast a country that counts in the concert of nations."

Fofana also made a point of thanking Professor Arsène Koka Kobéa, Director of the Ministry of Higher Education and Scientific Research, without whom the conference could not have been held.

Opening remarks were delivered by Dr. Jean-Baptiste Ackah, Université Félix Houphouët-Boigny physicist, aeronautical engineer at ASECNA (Agency

for the Security of Air Navigation in Africa and Madagascar) and public affairs officer of the Ivorian Association of Astronomy (AIA). Dr. Ackah emphasized that the University has been mobilized "to invest more into awakening the desire of young people to go into science ... [as] part of space physics and space weather. With a goal! To build an astronomical observatory in Ivory Coast." It was announced that the French association *Uranoscope* has already provided the first telescope to launch this astronomy training program.

The 'Invisible' Key to Knowledge of the Universe

Following these remarks, the floor was given to Sébastien Périmony, who focused on giving the students access to the program developed by Lyndon LaRouche's Youth Movement for mastering the discoveries of Johannes Kepler, the founder of astrophysics, whose extensive writings capture the polemical method of thinking required to this day, to guide modern science:

This is often attributed to Newton, but it is Johannes Kepler who is the true discoverer of what we now call universal gravitation and who was the founder of astrophysics. Newton, at the head of the powerful British Royal Society, merely restated Kepler's and

Huygens's discoveries as mathematical formulas, and then claimed that he had discovered gravitation. Newton waged a virtual war to attribute the discovery of infinitesimal calculus to himself, when it was a German scientist who had already discovered it, namely Gottfried Wilhelm Leibniz.

Périmony emphasized the need for youth to immerse themselves in the writings of Kepler and Leibniz, to discover for themselves the different methods of scientific investigation pursued throughout the history of mankind. Taking up the visual animations made by the LaRouche Youth Movement, he demonstrated the equivalence of the geometrical hypotheses studied by Kepler between the models of Ptolemy, Copernicus,

and Tycho Brahe, in their failed attempts to explain the retrograde motion of Mars.

Though appearing different, all three models accurately portray the interaction of the earth and sun as it is "visible" to the human eye, but fail to account both for the real causes of the interactive motions of these celestial bodies, as well as the actual shape of their orbits and the speed at which these bodies are moving. Like so many doctrinaire schools of thought, Périmony showed, the underlying axiom controlling the three investigators' assumptions are those of Plato's enemy Aristotle, for whom "the imperfect world of mankind does not allow one to understand the causes of things, the voice of God being impenetrable," reducing humans to



Courtesy of Sébastien Périmony

Séastien Périmony, a spokesman on African issues for the Schiller Institute in Paris, used visual animations to demonstrate the equivalence of the geometrical models of Ptolemy, Copernicus and Brahe in their failed attempts to explain the apparent retrograde motion of Mars, which Johannes Kepler understood.

merely making observations and deductions, and creating "geometric models" from that. Showing how Kepler used the error of Aristotle's emphasis on sense-certainty as the foil for developing his own approach, Périmony noted: "There is no worse scientific method than the Aristotelian method"

He noted: "It is thanks to Kepler, who was looking for physical, intelligible causes," not merely what was visible to sense perception, "that we now know that the motions of the planets are elliptical and that their velocities continuously change." Périmony underscored that it is from this approach to Plato's higher hypothesis that students must be inspired to be the discoverers of tomorrow.

Students responded to this challenging examination of scientific method, by talking about how much they





Courtesy of Sébastien Périmony

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Conference speakers. Left photo (l. to r.): Maram Kairé, Dr. David Baratoux, Dr. Marie Korsaga, Sébastien Périmony, and moderator Dr. Bamba Abdoulaye. Right photo (l. to r.): Maram Kairé, Boubacar Fofana, and Sébastien Périmony and Maëlle Mercier of the Schiller Institute.

want to specialize in space research, but how difficult it is to get funding and scholarships to follow through on this passionate commitment to science.

African Women in Science

This exchange set the stage for Dr. Marie Korsaga, the celebrated 34-year-old who is the first female astrophysicist in West Africa. She stated: "In Burkina-Faso when there is a lunar eclipse, if children ask what is going on, they are told: 'It's the cat that caught the Moon!' If the children ask, 'How did the cat get up there and catch the Moon?' they are answered: 'You have to make a lot of noise to chase the cat away'."

Being fascinated since early childhood with the universe, and such questions as how did life appear on Earth, she followed every documentary she could find on the Apollo space mission, and was determined she would become an astrophysicist, even though, "It was a field unknown in Burkina, and I had never met an astrophysicist in real life!" Her specialty now is "invisible matter, which makes up 95 percent of our universe," and she is determined to "help unravel this mystery." Her goal is also to recruit other African women to this field, insisting that participation by women is required, if science is really going to advance. She declared:

It is necessary to strongly encourage women to study science and especially to study astronomy: Let me take this occasion to make a vibrant appeal to the young female students present in the room!

Following her appeal, two very active founders of

L'Astronomie Afrique, an online publication, spoke, urging the students to join in the far-reaching range of activities these scientists have generated. Dr. David Baratoux, a planetary scientist at the Université Félix Houphouët-Boigny and the French Institute of Research for Development, reviewed the concrete applications of space technologies on earth:

Here you have the well-known rover Curiosity, which is on Mars, and which shoots a laser beam at Martian rocks to determine their chemical composition. This is called LIPS (Laser-Induced Breakdown Spectroscopy) technology. And to send an object like that to Mars, which is several million kilometers from Earth, we had to miniaturize a technology that is also used in portable field instruments that allow geologists who are here in the field to know in a few minutes if certain elements are present in the rocks [used for mining purposes].

Baratoux and his colleague Maram Kairé are working tirelessly to inspire African students to get out and make scientific and economic development a popular social activity. Kairé, described as "one of those whose passion changes the world," has generated so many activities in his home country of Senegal, that he came to be the first African whose name was given to an asteroid! Founder of the Senegalese "Association for the Promotion of Astronomy," he quoted that nation's revered Cheikh Anta Diop, who said: "You have to arm yourself with science to the teeth!" So, Kairé has taken that to



Courtesy of Sébastien Périmony

"You have to arm yourself with science to the teeth" — Cheikh Anta Diop. Shown: One of the Space Buses set up by Maram Kairé that travel around Senegal with scientific exhibitions and animations to interest the public in science.

heart by setting up "Space Buses" in Senegal, which drive around the country displaying exhibitions and scientific animations for the public.

In 2017 they both worked on "the initiative for planetary and space sciences" among youth, of which two workshops have already been held in Ethiopia and

Kenya. In 2018, Baratoux participated in Senegal in an event of global importance: the observation of the occultation of a star by the asteroid Arrokoth, to learn more about the asteroid in preparation for a NASA space mission. A number of telescopes were placed throughout the country to observe, in the space of a second, the predicted passage of the asteroid in front of the star. In 2019, NASA experts could not make the trip because of the crisis there and sent two tons of equipment to Senegal-months of preparation to capture only one second. The objective: to have the means to cal-

culate the trajectory of this asteroid that NASA wanted to visit with a flyby spacecraft, which it later did!

At the conference, Baratoux's colleague Maram Kairé emphasized how important space technology is for progress in healthcare throughout the underdeveloped world. It is thanks to the method developed to list the infinite number of stars that it was possible, he noted, to classify the irises of the human eye, and thus

improve eye care. Telemedicine, thanks to satellites, allows medical interventions at great distances. This is important in Africa, where it is common that childbirth gives rise to complications and the nearest specialist is four hours away. Maritime surveillance, land registry, security and the internet all require space age science:

The development of Ivory Coast, of our different countries will inevitably intersect science and technology. What we can guarantee is that if we rely heavily on science and

technology, we will manage to do the same thing as these giants that we take as a reference: The United States, France, China, Japan, and others. It's very possible: the same amount of brainpower is available here. We can do it, and we have no choice: we have to do it.



Courtesy of Sébastien Périmony

Participants agreed that the conference had fulfilled the challenge posed by Boubacar Fofana at its opening: to link Copernicus, Leibniz, and Kepler to the peoples of Africa.

Participants agreed the conference fulfilled the challenge posed by Boubacar Fofana at its opening: "This morning, we will make the link between Copernicus, Leibniz, Kepler, the Dogons of Mali, the Baules of Ivory Coast, the Peuls of Macina, and other peoples of Africa"—the many different cultures that together compose this impassioned area of West Africa.