

MAGLEV AND AÉROTRAIN

Why and How Europe Killed Its Own High-Speed Transportation Plans

by Karel Vereycken

Sept. 29—When considering the breathtaking expansion of high-speed rail networks in China—including its ambitious plans for the construction of maglev systems—it may come as a shock to learn that more than forty years ago, it was Europe that was leading the way in the development of these advanced technologies. France, Germany, Italy and Britain were all pushing the envelope for the creation of a Europe-wide, 21st Century transportation system, and were poised for the development and deployment of maglev and related systems. Yet almost all of these efforts were systematically shut down. Why?

A fresh look at the archives—the 1978 Working Papers of the Strasbourg-based Parliamentary Assembly of the Council of Europe¹—provides insights into

1. The Council of Europe (not to be confused with the European Council, on which sit the heads of state and heads of government), is a 47-nation international organization (much larger than the European Union) dedicated to upholding human rights, democracy and the rule of law. The Council of Europe is an older and wider circle of nations than the 28-member EU—it includes, for example, Russia and Turkey among its member states.

The debates on transportation took place in one of its bodies, the Parliamentary Assembly of the Council of Europe (PACE). Made up of 324 members drawn from the national parliaments of the Council of Europe's member states, PACE generally meets four times a year for week-long plenary sessions in Strasbourg. It is one of the two statutory bodies of the Council of Europe, along with the Committee of Ministers, the executive body representing governments, with which it holds an ongoing dialogue.



Transrapid

Transrapid 08 maglev train, at the Emsland Test Facility, in Emsland, Germany.

why European states scrapped the very best of their national research on the new revolutionary technologies that were being spun off from the aerospace programs of the Kennedy era.

As I will demonstrate, the archives indicate that this was done, top-down, in great secret, in the name of European “unity,” demanding that each nation sacrifice its own scientific contribution, however valuable it might be!

Typical was the sabotage of the Transrapid, the German-developed high-speed monorail train using magnetic levitation, for which planning started in 1969. This technology's most advanced version, the Transrapid 09, could reach a cruising speed of 500 km/h (311 mph), and had extremely rapid acceleration and deceleration.

Some time earlier, a brilliant French engineer, Jean Bertin—using an aerodynamic principle called “ground effect”—developed a Tracked Air Cushion Vehicle (TACV) in the late 1960s called “Aérotrain,” a train without wheels, levitated by air-cushions and propelled

by an electric linear induction motor whose magnetic fields interact with a passive metallic rail. Prototypes of the *Aérotrain* broke world records, attaining 345 km/h as early as 1967 and 422 km/h in 1969!

During the same period, in the UK, a British rail engineer, Professor Eric Laithwaite, worked on the same principles and invented the *Hovertrain*, also a tracked hovercraft, while in Italy, the Aeronautical Institute of Palermo developed several prototypes of its own for air-cushion levitated vehicles, notably the IAP3.

A Polycentric European Capital?

The idea of a polycentric European capital, united by high-speed transport, is part of the relevant background. Since the very creation of the European Economic Community (EEC), the choice of the capital for Europe-wide institutions was and remains a subject of dispute. The European Commission and European Council are based in Brussels, Belgium, while the European Parliament is based in Strasbourg, France, but has a secretariat in both Luxembourg and Brussels. The European Atomic Energy Community (Euratom) is based in Brussels, while the European Organization for Nuclear Research (CERN) is in Geneva, Switzerland. It is an utterly mad arrangement.

In the early seventies, some people hoped to end this confusion with a polycentric capital of Europe under the name of *Europolis*. For such a capital to function, they proposed to interconnect, as soon as possible, the main cities housing European institutions with a single 800 km high-speed transportation corridor, also called *Europolis* or in French, *Europole*, stretching from Brussels to Geneva, via Liège, Luxembourg, Metz, Nancy, Strasbourg, Mulhouse, Basel, Lausanne and Bern. Travel speed was planned at 300 km/h, allowing a trip from Brussels to Geneva in three hours (today six hours).

Europole became very popular, not only among high-level EU technocrats, but also among local elected officials of Alsace and Lorraine, in a context in which



Aérotrain 180 prototype, on a test track near Saran, France, 1974.

CC/FlyAkwa



Jean Bertin

the latter region, hit by the Davignon Plan reducing EU steel production (adopted in 1978), was desperately fighting to attract new economic activity.

A huge debate broke out, and in January 1971, the Council of Europe adopted resolution 471 (Document 2903, paragraph 6) calling for the creation of the *Europole* high-speed system.

In 1978, the Working Papers of the Council of Europe (Document 4096) summarized the debates in the section titled, “*Europolis*, a Factor for European Polycentrism” (page 34) as follows:

Few proposals of the Committee on Regional Planning and Local Authorities have aroused such controversy, in some cases very heated controversy, as the proposed high-speed air-cushion link connecting up the headquarters of European and international institutions (Brussels-Luxembourg-Strasbourg-Basle-Geneva), known as the “*Europolis*” project. . . .

The Committee’s proposals regarding this link-up between the headquarters of the European institutions were incorporated by the Assembly in its Resolution 471 (paragraph 6), which stated clearly that it would be a first link in a wide coordinated European network of high-speed land communications using a new technique (air-cushion) with a view of backing up railway networks whose main lines were already over-stretched and did not permit the high speeds now possible due to advanced techniques . . . Mr.

Messmer, the [Gaullist] French Prime Minister at that time [1973], had stated several months before: “This project seems to me to be one of the most intelligent and of great value to our country and to Europe as a whole.”

After quoting a study indicating that “present demand on the Europolis axis shows that total custom is small,” the report goes on, saying the survey “endorses our program”:

The single, central capital is a thing of the past. The concentration of European institutions in a single place would inevitably lead to centralization on a European scale. The disadvantages of dispersion can nowadays be resolved by modern means of transport and communication.

The report then goes through several cost-benefit analyses, demonstrating that the project was both sound and profitable, and concludes,

that at this stage no decision regarding the technology to be applied has as yet been made. For this preliminary study, the technological and economical data of the air-cushion system were adopted but a comparison with other technologies including the German technology of electrodynamic and electromagnetic suspension with linear motors will be made before any definite decision is taken.

Thus, Europe appeared to be poised to move into a maglev future.

Financial Deregulation and Malthusianism

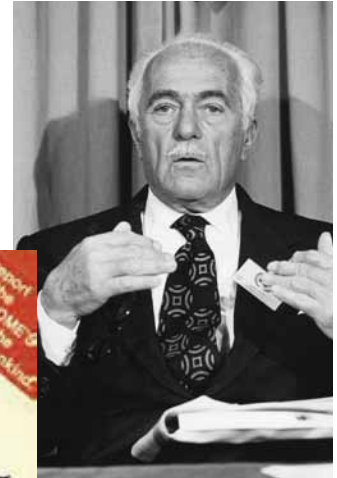
In reality, the European enthusiasm for new modes of transport technologies provoked a terrific reaction among the financial oligarchy, an oligarchy that was then engaged in imposing a vicious, global financial dictatorship, whose power depended on the enforcement of Malthusian, anti-progress policies on a world scale.



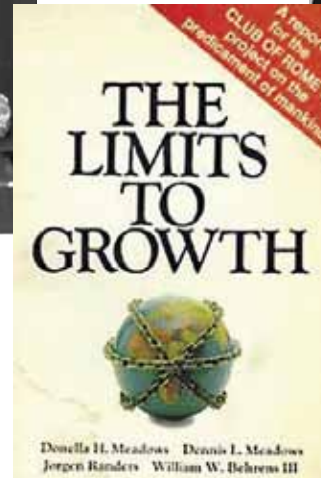
EIRNS/St Stanley Ezrol

Club of Rome
Chairman
Alexander King.

Club of Rome
President Aurelio
Pecci.



UN



After the successive assassinations of John F. Kennedy (November 1963), Martin Luther King (April 1968), and Robert Kennedy (June 1968), and the ousting of German Chancellor Konrad Adenauer (1963) and French President Charles de Gaulle (1969), the way was wide open for the British oligarchy and its friends and allies to impose a paradigm shift in world directionality, including the shutting down of the U.S. Apollo space program, the reversal of America’s and Europe’s commitment to advanced technology and scientific development, and the simultaneous imposition of a global regime of financial deregulation.

On the financial plane, the first large crack in the system appeared in 1967, with a run on gold and an attack on the British pound, provoking a 14.3% devaluation of the pound. Next, U.S. President Richard Nixon—breaking with the international financial system President Franklin Roosevelt had crafted at Bretton Woods, New Hampshire in 1944—took the United States off the gold reserve system in 1971. By late 1973, the regulated financial system had disintegrated, and participating currencies were allowed to float freely.

In the same time period, in 1968, former NATO operatives Aurelio Pecci and Alexander King founded the Malthusian Club of Rome, whose report, *The Limits to Growth*, called for zero growth to be imposed on both populations and economies, allegedly to prevent over-



cc/Ashley Dace

Hovertrain RTV 31.

population and the depletion of existing resources. In order to impose this Malthusian post-industrial paradigm, scientific discoveries and new technologies such as nuclear energy were systematically demonized. The 1973 oil shock was mainly organized to brainwash populations into believing that growth should be halted or scaled down due to the rapid depletion of resources.

This rapid shift in both policies and outlook prepared the ground for the termination of Europe's nascent maglev systems.

Pragmatic Short-Sightedness

In France, the engineer Louis Armand, at that time (1955-58) the Chairman of the French national railway company (SNCF), was called in by French President de Gaulle's office. De Gaulle told him: "Do you realize that engineer Jean Bertin made a remarkable invention with his *Aérotrain*?" Rather than take this up as a challenge to revolutionize France's transit systems, Armand returned to his office and reportedly told his team: "Look guys, there's a guy who launched a crazy thing, a train on air cushions speeding over 300 km/h. If we don't come up with something, once this thing is flying, the SNCF is dead." His engineers responded: "You know, we are preparing something simple, which consists of ramping up the speed of trains on rails, the *Train à Grande Vitesse* (TGV) [High-Speed Train]."

Denying the complementary role that normal rail and air-cushion/maglev transport could perform, the rail technocrats stuck to their old axioms. They rejected the development of maglev in favor of wheel-on-rail technology, as demonstrated in this contribu-

tion of the Paris-based International Union of Railways (IUR), of which Louis Armand was a president, to the debate appearing in the Working Papers:

The prospects opened up by new technologies offering the possibilities of high cruising speeds with wheel-less guided transport systems (*Aérotrain*, *Hovertrain*, etc.) were regarded as a direct challenge by the railway authorities. They reacted in various ways, particularly by proposing substantially faster transport and comfort up to airline standards. But their ambitions did not end there. In the midst of the oil crisis, the European railway boards' IUR proposed in April 1973 a master plan for the future of European railways. This plan entails providing a homogeneous high-speed European rail network, capable of competing with air transport by 1985. The implementation of this plan should halve present traveling times between European cities. The new network would be to railways what motorways are to the rest of the road system. It is striking that this plan embraces the idea of a coherent European network, *though confined to one mode of transport*. [emphasis added]

The Master Plan proposed the upgrading of 13,593 km of existing railway and construction of some 5,875 km of new, high-speed rail—in total some 20,000 km of rail grid,² including a tunnel between France and Eng-

2. Still today, less than half built; see below.



cc/Roger W

TGV in Tours, France, 1994.

land, allowing traveling speeds between 200 and 300 km/h, meaning doubling the then existing speeds.

Parallel to these developments in France, on January 29, 1973, the British government, through the actions of UK Prime Minister Margaret Thatcher's sidekick Michael Heseltine, who was Minister for Aerospace at the time, pulled the plug on the British Hovertrain. Then, in June 1974, a freshly elected French president, Valéry Giscard d'Estaing, scrapped the contract, already signed and agreed to by the French state under President Georges Pompidou, for an Aérotrain air-cushion track connecting Paris's La Défense business district with Cergy Pontoise, a new city then under construction 50 kilometers from Paris, where the European Space Agency was about to locate its headquarters.

In Germany, the Emsland Transrapid Test Facility for Transrapid maglev trains was completed in 1984, and the Transrapid technology was validated in 1991 by the German railway authorities in cooperation with various universities. Despite these breakthroughs, however, the Transrapid is today banned in Germany. Only a short track of 30.5 km operates today—in China, between Shanghai and its airport.

Top-Down Malthusianism

To understand what happened, one has to read both the 1983 speech of French MP Alain Chenard (at that time mayor of Nantes) before the Council of Europe, as well as the subsequent reactions. Ambitiously, Chenard proposed, on the model of Airbus, to create a single European railway company of which the national railway companies (SNCF, Bundesbahn, etc.) would be shareholders. This new company would then be in charge of proposing a European transport technology integrating the advantages of both air cushion and maglev: "It would be unthinkable, said Chenard, that the new technology of tomorrow's Europe would be French, German, Belgian, or from Luxembourg. It will be European, or it will not be."

Subsequently, the Council of Europe buried Chenard's proposal, instead issuing an "Advice" (Opinion 23, paragraph i.), calling for—



Germany's Transrapid—banned in Germany.

Transrapid

a full feasibility study of the Europolis line, covering every aspect and comparing the merits of the various technologies, namely the TGV system [on wheels], magnetic levitation with linear induction motor (Transrapid), and air-cushion suspension (Aérotrain). A separate, detailed study should be made of each of these technologies; it should not be confined to the Strasbourg-Luxembourg-Brussels section, since that is only the first concrete manifestation of a purposeful, political scheme to build a central line of communication (London-Lille-Brussels-Liège-Luxembourg-Metz-Nancy-Strasbourg-Basel-Zurich-Milan) which would give Europe a polycentric structure, and might include extensions and ramifications in the directions of Rotterdam-Amsterdam, Paris, Cologne-Düsseldorf, Saarbrücken-Frankfurt, Karlsruhe-Stuttgart-Munich, Berne-Geneva-Lyons, etc.

And, paragraph "m" of the same Advice states that the feasibility study should "include the Europolis project in its program for the development of transport infrastructures of Community [EEC] interest," before concluding that, "in the short term, the improvement to this line proposed by the railway networks in question should also receive Community support."

All of this is double-speak for burying Chenard's maglev/Aérotrain proposal, and since European governments failed to act in a coherent fashion, the financial and Malthusian predators, mainly operating out of the City of London through EU institutions and bureau-

cracies, ended up imposing the worst. Not only did they destroy their own revolutionary innovations, but the promised upgrading of the railway grid never happened either. Instead of the promised 20,000 km, today only 9,000 km has been built or upgraded!

So, from the contextual evidence, one can conclude that, for the supreme sake of “European unity,” Germany, France and others were arm-twisted by the “European deep state,” actually the Anglo-Dutch financial oligarchy, to abandon their new revolutionary technologies such as maglev and air cushion, all of them based on the use of higher energy flux-densities, and to remain with “normal” rail transit systems, with the promise that speeds would be increased.

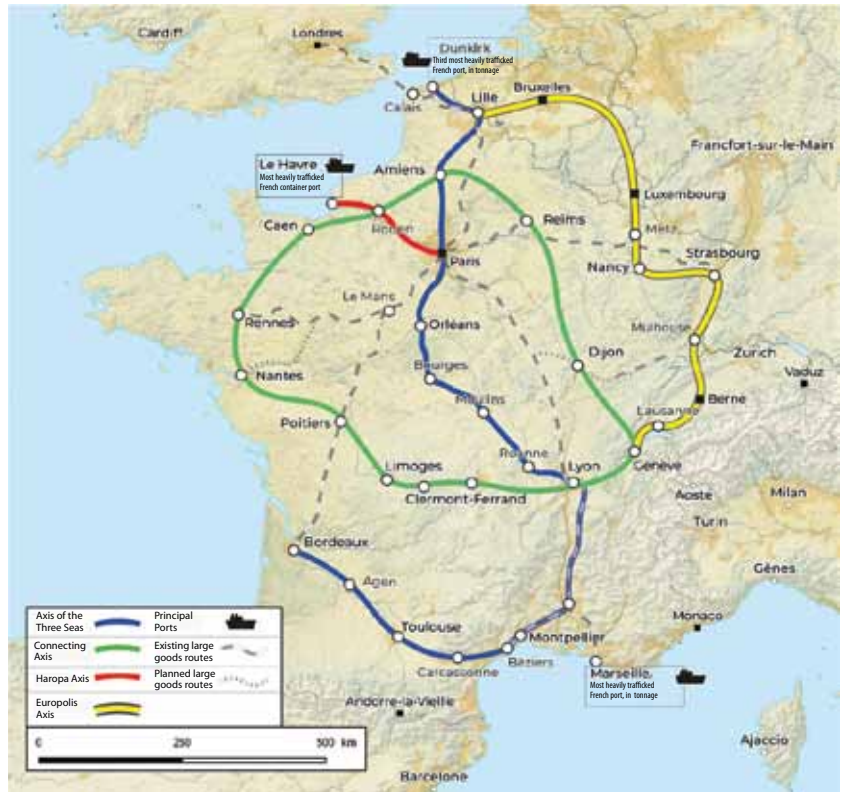
‘No European High-Speed Rail Network Exists’

In June 2018, a [special report](#) of the European Court of Auditors observed, “Since 2000, the EU has provided 23.7 billion euros of co-funding to support high-speed rail infrastructure investments.” However, they say,

We found that the EU’s current long-term plan is not supported by credible analysis, is unlikely to be achieved, and lacks a solid EU-wide strategic approach. Although the length of the national high-speed rail networks is growing, the Commission’s 2011 target of tripling the number of kilometers of high-speed rail lines by 2030 will not be reached: 9,000 km of high-speed lines are currently in use, and around 1,700 km of line was under construction in 2017. On average, it takes around 16 years for new high-speed lines to proceed from the start of work to the beginning of operations.

Therefore, says the report:

There is no European high-speed rail network, and the Commission has no legal tools and no powers in the decision making to ensure that



Karel Vereycken

Map showing the proposed, but never-built, 800 km Euroapolis system connecting London-Lille-Brussels-Liège-Luxembourg-Metz/Nancy-Strasbourg-Basel-Zurich-Milan, would give Europe a polycentric structure.

Member States make rapid progress toward completing the core network corridors set out in the TEN-T Regulation. As a result, there is only a patchwork of national high-speed lines, planned and built by the Member States in isolation. This patchwork system has been constructed without proper coordination across borders: high-speed lines crossing national borders are not amongst the national priorities for construction, even though international agreements have been signed and provisions have been included in the TEN-T Regulation requiring core network corridors to be built by 2030. This means a low EU added value of the EU co-funding of high-speed rail infrastructure investments.

There Is Hope—In a New Paradigm

Today, three new developments tend to make us optimistic and convince us that things might change very soon:

1. China, in merely a decade, has constructed some 20,000 km of high-speed rail, and now intends to shift

from its second generation TGV to its own maglev technology.

2. In France, a small but very serious start-up named Spacetrain is developing a new hydrogen powered, air-cushion high-speed vehicle.

3. Among the EU governments, the fear of the rise of popular outcry could cause them to finally deliver on the promises made 50 years ago. The immediate construction of the Europole fast-train connection could and should become their priority.

All of this can only become a reality in the framework of a New Bretton Woods system, a new Glass-Steagall law, and a return to Hamiltonian and Listian state credit, as elaborated and called for by the international LaRouche movement.

During the entirety of the period under discussion here, as European oligarchs acted to destroy maglev technology and deindustrialize Europe, the LaRouche movement actively and continually exposed the Malthusian nature of British designs, while also putting forward both scientific and economic policies which would return Europe (and the world) to a pathway of rapid physical-economic development. The only serious attempt in recent times to return Europe to infrastructure investment in the tradition of Friedrich List

and Charles de Freycinet, began with the proposal for a “Productive Triangle,” developed by Lyndon and Helga Zepp-LaRouche after the fall of the Berlin Wall in 1989, proposing to mobilize the core industrial capacity of Europe—whose center of gravity is located in the historically industrial area between Paris, Berlin and Vienna—to reconstruct and “irrigate” both Eastern Europe and Africa with mutually beneficial economic development.

The core of this proposal, now 30 years old, remains valid today. Furthermore, the recent advancement of China’s Belt and Road Initiative is the outcome of what the LaRouches proposed now 30 years ago.

Nothing in a positive direction of significant magnitude is to be expected, however, while the trans-Atlantic banking and financial sector is being crushed under the burden of trillions of dollars of unpayable speculative debt, especially about 1 to 2 quadrillion dollars of worthless derivatives. This reality emphasizes the urgency for convening a New Bretton Woods monetary conference, for the purpose of averting worldwide financial disaster and returning to a system where the issuance of credit is tied to productive investment. Under such an arrangement, maglev, Aérotrain, Transrapid, and much more will become possible.

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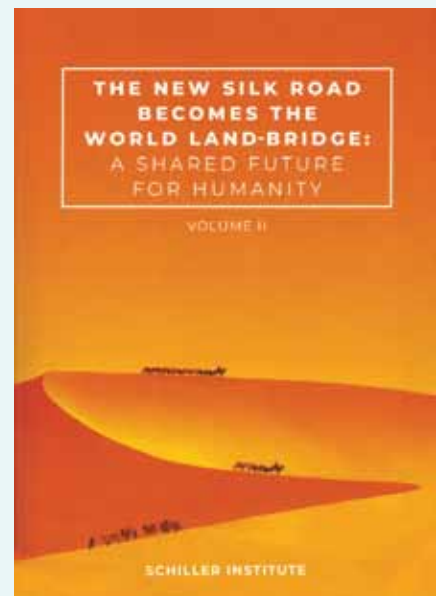
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