

# The tradition of Friedrich List

## *French political economy from Jean Bodin to Charles Dupin*

We are faced today with a world situation in which a humanist Franco-German alliance is a matter of life or death for humanity. To succeed in organizing the world for a viable peace, such an alliance has to create a new, more advanced economic order primarily based on industrial development and the education of the citizenry for that purpose. This crucial task—our critical task—is the lesson of Friedrich List and his French predecessors that I am bringing to you.

The usual story told about economic science is that it started as a thing-in-itself, an appropriate category of science, with Adam Smith's *Wealth of Nations*. Such an assessment is a big lie propagated by the evil sponsors of Adam Smith, the Anglo-Dutch oligarchic, merchant-banking interests.

Opposed to Smith's notion of a world of "free traded" fixed values—a world bound to shrink and die—there is the *true science of political economy* from which sprang the Zollverein conception of Friedrich List. In absolute opposition to Smith's "stable" state of a merchant world, rationalizing the control and looting of the British monarchy's Bank of England over its Empire, List's method of political economy—the humanist method—starts from the process of creation, the power of mentation to produce new resources and enlarge its reproduction at a higher level, through the mediation of labor power developed as cognitive power. This requires high wages and high education for the population as a whole to assimilate and expand the higher conceptions of science embodied in a continuous generation of new industrial processes and machines. This is what List meant by naming "industrial education" the organizing drive behind his system.

Not only France and Germany were made as republican nations by the predecessors and successors of Friedrich List, but List represents the turning point at which the "American System," made for America by the European humanist tradition embodied by Alexander Hamilton, was brought back to Europe by the "German-American" Friedrich List. Given the horrendous situation in which the United States is caught today under the law of Adam Smith's followers, it is also an immediate task for us Europeans to cross the Atlantic again and intervene there, as our humanist predecessors did, armed with the tradition of Friedrich List.

That tradition instructs us Europeans to break with the IMF and World Bank and create as an alternative the European Monetary Fund, a monetary Zollverein. It instructs us to break with suicidal compromises, with the Maginot-line approach of self-defeating "European monetary stability," and to immediately base the EMF—cradle for a new world economic order—on the higher feasible ratio of labor power development. Our rule should be no more tolerance of genocide in the Third World, no more tolerance of economic collapse and predatory British monetarism, but a world ruled by the higher hypothesis of development. We have to generate the proper actions to bring that hypothesis into universal practice—East and West, North and South.

This primary goal requires *willful state intervention* to continuously advance science and industrial technologies, educate the citizenry for that advancement and forcefully lock out adverse monetarist interests.

In that fight, our enemies are the followers of the evil current centered around the Cities of Amsterdam, London and Lower Manhattan, represented in Britain's seventeenth and eighteenth centuries by William Petty, John Locke and Smith's master controller David Hume, and finally exemplified by nineteenth century genocide advocates Malthus and Darwin.

On our side, and hence its relevance, List's Zollverein conception is not a point isolated in world history. It is a key, further contribution to the secular greatness of the *European Grand Design* represented by Gottfried Wilhelm Leibniz and Jean Baptiste Colbert in the seventeenth century, as well as by other humanist currents mostly located around or within the government of France. The names associated with that historical force are those of Jean Bodin, Sully and Duplessis-Mornay in the sixteenth century, Trudaine the Elder and Forbonnais in the eighteenth century, Ferrier, Chaptal and Dupin in the nineteenth century. Lazare Carnot and Gaspard Monge were the two great figures who directly shaped the mental environment into which List was organized.

This view of French history may come as a shock for an even cultured German audience. I am aware that the German image of France—reinforced by some pre-De Gaulle events—is more that of an impotent Parisian intellectual babbling about destiny without moving one

inch to intervene. But I can tell you that the views I am developing provoke an even blunter shock in a French audience, because French history has been so much falsified by the enemies of humanism, the Anglo-American enemies of the Franco-German "American System."

Therefore let's look at how we Europeans plotted in the past to make the world work, so as to better plot, here and now, a crucial moment for the secular humanist conspiracy.

## The higher hypothesis

It is clear from List's letters to Charles Ingersoll that it was during his first stay in France (1822-1823) that he grasped the method of humanist economics, later developed in the United States through his reading of Hamilton's 1791 *Report on Manufactures* and his involvement in the Mathew Carey-led Pennsylvania Society for the Promotion of the Manufacturing and Mechanical Arts.

The three explicit sources mentioned by List himself and his biographers are Ferrier's *Government considered in its Relation to Trade* (1805), Chaptal's *About French Industry* (1819) and his dialogue with Charles Dupin, author of the *Progressive Situation of the French Productive Forces* (1827) and hero of Edgar Allen Poe's *Purloined Letter*. Beyond such specific locations, the key point in List's education is the drive to achieve energy transformation at a higher level (i.e., negentropy) as conceptualized in an economic form by Leibniz, carried out in actual economic policies by Leibniz's associate Colbert and later further developed by the great Leibnizians Lazare Carnot and Gaspar Monge.

François Louis Auguste Ferrier defined himself as a nineteenth century "Colbertiste" and proved to be one in his polemics against Adam Smith and free trade. Both Chaptal and Dupin were leading figures in the *Carnot-Monge networks*, where they formed the economic policy-making and industrial organizing force behind the "American Party" of List's close associate Lafayette. In a broader sense, List was the advanced product of the secular fight of the prodevelopment tradition centered in France against the Malthusian evil of London and Geneva—Amsterdam.

This can only be understood from the standpoint of the higher political hypothesis: from the seventeenth to the nineteenth century, France was conceived by the European humanist leaders as their key potential base in connection with the American Republic. That base was organized around the conception of a centralized research and development institution for the production of a rising social surplus through the use of the most advanced industrial technologies and education of the population at the highest available level of science. This

conception was the basis for the creation of Leibniz's and Colbert's Academy of Sciences (1666), Trudaine's Ecole des Ponts et Chaussées (1747-1749), Monge's and Carnot's Ecole Polytechnique (1793), Chaptal's Society for the Promotion of National Industry (1802) and Dupin's classes to workers at the National School of Mechanical Arts and Manufacturing (Conservatoire National des Arts et Métiers, 1824). It is from the development of such types of *leading institutions* that the humanists derived the specific economic measures to be taken by the government of the nation.

Leibniz's Academy (Society) conception, as developed in his 1671 *Society and Economy*, is the kernel of the tradition assimilated by List. The Academy is the *source of motion*, a "virtuality" which embodies the process perfecting the world (in Leibniz's terms, transforming "potentiality" into "actuality"):

Thanks to the Academies (or Societies), which are research and development institutions equipped with manufactures and commercial companies of their own, monopolies will be eliminated, because the Academy will always put out a low and fair price on goods, and very often, those goods will become even cheaper because new manufactures will be built where there are presently none. In particular, the mercantile monopolies will be eliminated ... because the wealth of the merchant is much too great, and the misery of the worker too deep, a situation that Holland notably experiences, the motto of the merchants there being to maintain workers in poverty and hard labor. The Republic suffers from it, because even in the opinion of Aristotle, workers should form the most favored class. Nam mercatura transfert tantum, manufactura gignit (trade can only move what has been produced by manufactures). And why so many should be reduced to such a poverty for the good of so few? The goal of the Society will therefore be to free the worker from his misery...

The foundation of such a Society will make it possible for many Republics to correct a deep mistake which has consisted of letting everyone look for his food, either growing himself rich by ruining hundreds, or involving hundreds in his fall, people that had put trust in him and whose sustenance depended on him...

(In our Society) things will be very different: everyone will enjoy working, because everyone will know why he works. Nobody will be brought out of labor against his will, because nobody will work only for himself, but for the community as a whole... The companions will compete with each other in the workshops, and the masters will

perform the tasks requiring more cleverness. But no master will prevent the companion from becoming more intelligent and being a master in his turn, because this will inflict no loss on him.

Such an Academy (Society) is not a fixed institution, but a self-perfecting virtuality achieving itself in practice through continued generation of means to foster an accelerated economic growth.

Energy, in that sense, is not a static form, but is the invariant capacity to transform matter to higher orders with lesser action (energy density), as described by Carnot. Key to understanding this point is Carnot's approach to Leibniz in his *Reflexions on the Metaphysics of infinitesimal calculation*. Carnot shows that motion from one point to another cannot be explained in terms of a finite world, in terms of simple instantaneous velocity, as does Newton. Newton's view eliminates the notion of acceleration, and therefore presumes a world of limited resources where the transformations from causes to effects require the magical intervention of an omnipresent God. Man, in that conception, cannot be the source of motion, and his role is to let God's "invisible hand" establish the adequate "equilibrating mechanism." This is the oligarchical fiction of "stability" and "nonintervention" against which Carnot polemicalizes, the conception of Adam Smith's "invisible hand" and "free trade."

From the higher standpoint of Carnot and Leibniz, man should intervene through the proper institutions (Academy, Ecole Polytechnique) to actualize for social practice his self-perfecting process. Man, in that conception, realizes himself as a self-transforming particle, active labor-power. Machines, at differing moments of history, are the finite accomplishments of this transfinite process of "virtual labor."

This is to say that at certain moments in history, certain forms of production (i.e., technologies) embody the transfinite process of "virtual labor." The sector that List fought all his life to develop—coal mining, steel production, and railway construction as a whole process—was in that precise economic sense the most advanced of his time, the higher hypothesis of the same sort that nuclear energy represents today. It is not nuclear energy per se that is the higher achievement, but the fact that nuclear energy embodies the process of economic development as the most efficient form of energy production today. From that standpoint, it is extremely ironical to note that the first place where List stayed in America was in Harrisburg, Pennsylvania—not far from the Three Mile Island nuclear plant.

It is only from the standpoint of higher energy transformation that an economic science can be developed and successive, advancing types of machines be produced.

It is from that standpoint that Leibniz's Academy polemics are directed against the fixed notion of an economy advocated by Sir William Petty (1623-1687) and accomplished by the Amsterdam-London merchants. Petty locates the value of a commodity in the labor-time as a linear entity, represented by the manual labor of the peasant. The rule to generate wealth on such a commodity is to "pay cheap and sell dear," maintaining the wage of the laborer at the lowest possible level. In Petty's world, where man as a fixed object is defined by his individual greed, workers' motivation to work is conceived as hunger. This is the evil conception that Adam Smith picked up and developed through "economist" John Locke (1632-1704). It corresponds in physics to the Newtonian conception of the "finite limit" as opposed to Leibniz's and Carnot's achievements in infinitesimal calculation, based on points of energy transformation of "curving" linearities (acceleration).

The uncreative impotence of this evil is what Poe mocks in the *Purloined Letter*, contrasting Dupin's "poetry in mathematics" to the step-by-step, fixed-object by fixed-object, approach of the French police. The case of Dupin is epistemologically key in understanding the humanist tradition in economic science as derived from Leibniz and Carnot.

Charles Dupin was an 1801 graduate of the Ecole Polytechnique, Gaspard Monge's favorite student, and Lazare Carnot's protégé. His early scientific work was on infinitesimal geometry (with Monge) and notably on the problem first raised by Fermat and Euler of a sphere tangential to four others. He became famous at the age of 18 for his study on what is now known in mathematics as Dupin's cycloids and his approach to caustics, accumulations of waves of light energy. His explicit reference for that work is Leibniz and Bernoulli.

The point to be made here is that Dupin, as a Leibnizian, takes the self-evolving process as primary. He called his science "dynamics, the science whose object is to develop the production and application of driving forces." And it is from this standpoint, the same as Leibniz's, that he regarded the notion of *productive forces* as primary in economic science, a conception directly picked up in Dupin by Friedrich List. Dupin's definition of the French productive forces in 1827 is the following:

I name productive forces the combined forces of man, animals and nature, applied to the labor of agriculture, manufactures and trade.

Those forces don't stand still, they grow with the prosperity of people and decrease with its degeneration. I have tried to measure for our country not their present magnitude, but the velocity of their growth, velocity which must be the rule of all our hopes...

Those forces have not a purely material and physical action; their regulator, brake and motor are the spirit, the patience and the energies of man's will. Thus the reason of the people, as well as its morality, are intimately linked to and have necessary relations with the development of the productive and commercial forces.

The process to develop those productive forces is called by Dupin "industrial education", increase in the productive powers of labor. His definition of "the velocity of their growth" as the primary feature opposes Dupin to the British tradition at the most significant epistemological point.

### The Zollverein conception

The key to List's Zollverein conception is that it is not "protectionism" as a static institution, but achievement of the best possible conditions at a given point to develop a national industry following Leibniz's rule for the Academy. It is "realization of the power to create wealth, which is much more important than wealth itself." It was undoubtedly the proper weapon for the higher hypothesis against the British System of imperial domination and dumping.

List emphasizes that "manufactures foster to a supreme degree the moral forces of the nation," and that their protection is justified by the industrial education of the nation when foreign competition tries to prevent its development. He therefore subsumes the particularity of a protectionist customs tariff at a given point of history to the higher hypothesis of a political Grand Design. Nothing is more opposed to a sectarian position: List does not oppose protectionism to the free trade cult, but outlines a necessary measure for the production of a higher social surplus. The Zollverein is the protection of the Academy conceptions against British malthusianism.

A similar approach to the problem of customs tariff was developed by Jean Bodin (1530-1596) at the General Estates of the French monarchy in 1576. After having stressed the necessity of foreign trade against the advocates of self-sufficiency delusions, Bodin treated "freedom of trade" as only a predicate of technological progress, therefore with no absolute value. Under the circumstances of the sixteenth century, Bodin argues that freedom of trade should be subsumed by the primary need to protect the developing French manufactures against the Genovese banking-houses and Habsburg looting. His proposition was to tax imports of manufactured articles when similar goods were produced in France, as well as exports of unworked commodities, so that "the increased value of the goods after they have been worked up will remain in the country

... The subject should gain more income in working up the raw materials, and the Prince should take the revenue from the export tax on unworked raw materials and commodities and invest it in new industrial ventures".

In this conception, protectionism is only justified by the development of national manufactures, and it should be imposed by the Prince if there is no other way to solve the problem of financial warfare from other nations, in particular dumping of manufactured products to prevent the industrial development of the Commonwealth. The solution in terms of international relations, beyond self-reliance and anarchistic competition, is to encompass international development within the framework of "broad alliances" between "sovereign republics".

This conception of protectionism for development—the basis of List's Zollverein—is absolutely opposed to the British-Dutch conception of protectionism for cash (collection of taxes on foreign trade for any imported or exported goods). In Bodin's and List's approach, the measures most agreeable to a given case are not invariant qualities of the Commonwealth; the fundamental law is the expansion and upgrading of the Commonwealth and its invariant feature (transfinite) is technological advancement.

The law appropriate to the Commonwealth of Nations, or Zollverein, should therefore foster the conditions for technological progress of the whole world. Bodin's approach to the question of creation is key to understand this. I will elaborate this point now because it gives the most accurate insight into the true sources of economic science: it is not the result of some inquiry on the pre-established laws of a market (exchange values), but on the contrary it derives from the very process of human creation. Bodin represents the true source of economic science as a representative of sixteenth century Erasmian networks who adduces the basis for political economy from the standpoint of the humanist ruler of a nation-state committed to perfect its members.

In his *Historical Method* (1566), Bodin locates *perfection in motion* as the primary quality of God, and thus breaks through the theological dilemma of "omnipotence against omniscience": "It is said that God," he writes, "in creating the world, would have produced in himself change, which is supposed to be contrary to living beings, the human individual intervenes as a creative mind whose task is to *lead*, and it is such a leading quality that makes history and changes the laws of the whole, bringing the rest of the world into advancement toward perfection, the very quality of God accomplished by an individual.

—to be continued