**Thoughts while sitting in a TGV train (1st Class) , from Avignon to Paris, July 12, 2013**

**Roy Lisker**

1. **How did I get to travel first class, when activities**

**like Ferment Magazine will always keep me as poor as the attic mouse of an underpaid *shammas* ?**

 **It happened this way. The train ticket had been purchased in Arles a week before. Being new to the system, I believed that the station for boarding the train was Avignon-TGV. It was not; the station on the ticket was Avignon Centre.**

 **However it was my good fortune that the official traveler’s aid assistants at Avignon-TGV did not catch the error, and directed me to wait on the upper platform where TGV trains arrive from Marseilles. In this way I missed my train.**

 **When the error was pointed out, the ticket office had no option but to put me in the first class compartment of the next arriving train. When I saw the young man whp’d misdirected me, all I could do was exclaim “All’s Well That Ends Well!”**

 **He didn’t know the reference. The French tend to think that Hugo is a greater writer than Shakespeare. I don ‘t agree, but they’ve got a strong case.**

1. **The Plasmodian Universe: This construction is**

**based on the notion that what we call the universe is merely the interaction of a certain number of fundamental plasmas. If there are at least two, one can dispense with the need for a Void or Vacuum. *Each indeed is the “vacuum” for the complementary plasma!***

1. **The plasmas are constituted of** א1‎ **distinct “location particles”, and are equivalent to what we think of as Space.**
2. **Each location-particle has a ‘weight-tendency’ which by itself is infinitesimal. However, by piling together of these on a single place, (against the background of the** א1 **complementary plasma) one develops the substance of a point-particle, the fundamental object of physics combining energy with matter.**
3. **“Force fields” between the point particles create what are know as “rigid bodies”.**
4. **The plasmas could be called “ethers”. They may perhaps be applicable to clarification of the paradoxes of gravity, quantum theory and statistical mechanics**

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1. **Think of ways of taking the Principle of Least**

**Action, and applying it to practical issues of living. The problem is, of course, that it is a teleological principle, which is contrary to the goals of Physical Theory. It’s all about reaching goals with minimum effort, implying that there are goals to reach. But here are some interesting examples:**

* 1. **“Action” is involved when transporting a**

**certain weight over a given distance. Money, which weighs almost nothing, is a good example of something which can be transported over great distances with a minimum of action, a transported potential energy. Once arrived at some distant location, it can be “activated” to do work.**

* 1. **By setting a very slow pace, one can easily**

**walk across the continental United States by allowing 10 years to do so. At that pace (300 miles a year), one would eat, spend or consume no more than what is normally done in one’s daily living. (It is less than a mile a day).**

 **This highlights the trade-off of time with energy that is characteristic of “action”. One thinks of Edward BelBruno’s ingenious trajectories for traversing the entire solar system with almost no expenditure of energy.**

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**(3) On Maritime Democracies: There is a marked tendency for democratic forms of government to emerge in great centers of maritime commerce: Classical Athens, Venice, Holland, England starting in the 17th century, even the United States which, at the time of the revolution, was essentially a long coastline from Maine to Georgia.**

 **Such nations cannot remain long subject to land-based feudal empires. One may perhaps cite Japan as an exception, but it closed its borders to the outside world in the 17th century. A full counter-example is found, perhaps, in Portugal.**

 **When there is international commerce in a thriving port, there is a good chance that one finds a reduction in prejudices, bigotry, ethnic divisions and even the protectionist of guilds and occupational castes. Since England needs tea from Assam or furs from Canada, it must deal with the Assamese people and the Indians of Canada. Since the Moslem nations trade with Venice, Othello can become a Venetian general. Amsterdam in the 17th century was easily the most religiously tolerant city in Europe.**

 **The 20th and 21st centuries are, as usual, exceptional. However, one notes that even China, a incompetent bureaucratic despotism, maintains a port city , Hong Kong, in which there remains a semblance of democracy.**

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 **(4): The invention of the first atomic bombs involved 10% Science, and 90% Engineering, although the scientists are quick to take the “credit (??)” . The question therefore arises: why were so many very high level theoretical physicists and mathematicians sent to Los Alamos, when two or three (say Teller, Feynman and Oppenheimer), would have been enough to do the job? Our speculations come from several directions:**

1. **Seen from the point of view of the government, the presence of**

**all these great intellects in one center serves as a kind of whitewash to disguise the criminal malevolence of the bomb. Even the name was disguised, and people spoke about “the gadget” . The overload of “prestige” seemed to imply that the traditions of Western Civilization, (dating back to Plato at least) , were consistent with inventing a bomb that kills 200,000 people in a few days. Indeed, they called themselves the “Athens of America”!**

 **(b) From the standpoint of the scientists, one must remember that the most famous among them were war refugees who rightly
feared that the Germans might win the war, which would be the end of civilization as we know it. Yet they also knew, being intelligent and in the best situation to receive and interpret the knowledge, than neither Germany nor Japan had anything near the resources to construct a workable bomb. Yet only Rotblat resigned when it became common knowledge that the Germans had no way of building the bomb.**

 **At the same time they must all have been quite insecure with**

**regards to the threats to their continuing residence in the US. The country has always been isolationist, racist and xenophobic. J. Edgar Hoover and Joseph McCarthy believed that even Einstein was a secret Communist. It was therefore a matter of “proving one’s loyalty” to a suspicious country of refuge, that they dared not refuse to work on a weapons project for which they might have personal reservations.**

1. **Once installed at Los Alamos, the engineers did most**

**of the work while the scientists, after their daily 9-to-5 strolled about, giving each other seminars, catching up on their own research, editing and proof-reading their textbooks, and attending concerts. These standard academic routines continued without interruption.**

1. **What motivated the mad rush to complete and drop**

**the bomb before the war was over?**

1. **The US military wanted to make sure that it had**

**a workable weapon, one that could be used in future wars. It proved the former but not the latter.**

1. **The American public wanted something for**

**its money. Billions had been spent on producing the bomb without telling anyone. This would not go over well in a “democracy”.**

1. **The fear that the Japanese would resist to the last**

**drop of blood was based on stock racist stereotypes. Of course by the end of the war both the Germans and Japanese were universally hated, but so was Western Europe all over Africa and the Americas because of imperialism and slavery. Of course these parts of the world didn’t have atomic bombs.**

1. **When it came to making decisions about**

**the bomb, the military saw the scientists as vintage examples of arrested development. Of course the scientists in their own way saw the military in much the same way, but the decision-making power was with them, not the scientists. That’s why the scientists should never have gotten into the bomb-making business in the first place.**