

available real estate is Mars, which has a fractional gravity which is probably tolerable. We can build a self-sustaining science city on Mars. There are many technologies we have to master to be able to do that; it would take about 30-40 years, but we could do it. We build a city of about 250,000 of so on Mars, of engineers and logistical people who sustain it. That would be a great profit to Earth.

We will not bring back any minerals from Mars, except for scientific purposes, but when we have learned to build a city on Mars, we can use that to build a city in the Sahara. If we can solve the problems of man's habitation in space, there is no problem on Earth we will not solve by the same means, in terms of man's habitation. So we have to go to Mars to establish a science city simply in order to discover the new knowledge which we need to have to meet the requirement of the human race over the coming period.

So the cup is given to us, and we must drink from it. We must make the trip to Mars.

But we can't just go out and get a bus ticket. Therefore we have to prepare. How shall we pay for it? It won't cost us anything to get to Mars, because the improvement in the productive powers of labor on Earth as a result of the scientific and engineering developments will make everybody on Earth rich. The net cost of the project will be less than zero: a pretty good investment. Only groups of nations can do it. We have the technologies so why don't we do it?

But the problem on this with the pseudo-science is the same thing. Knowledge is often used to describe what passes for engineering knowledge or what enables you to pass a multiple choice questionnaire in the course of getting a useless degree from the university. But knowledge is the communicable ideas which cannot be expressed in words. We practice that knowledge first of all by poetry. The principle in all great poetry is the same: metaphor, or in all great Classical tragedy, or in Classical musical composition. In mathematical science, we know it as the principle of discovery. We don't have science today, because science means knowledge. Leibniz had science, Riemann understood the principle of science, Kepler was a great scientist, so was Leonardo. Cusa was the first real scientist, because he was the first to understand this principle of human knowledge in this way, even though the precedent for it was established by the Greeks.

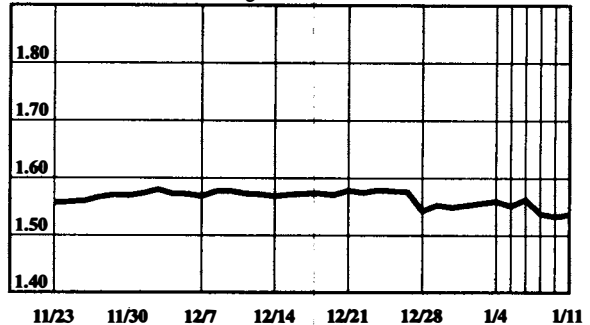
If we enforce the idea of the distinction between living and dead processes and then among living processes, the difference between thinking processes and animal processes, if we learn the lesson of what we can do with the dog of Renate Müller and her husband Dino de Paoli—of how they elevated her to something more than a dog could be—and then understand real human creativity; if we address all these questions from that standpoint, with the science of physical economy to help us, then these things are no problem.

I'm sorry to be long-winded, but I thought the axiomatics had to be addressed in this case.

## Currency Rates

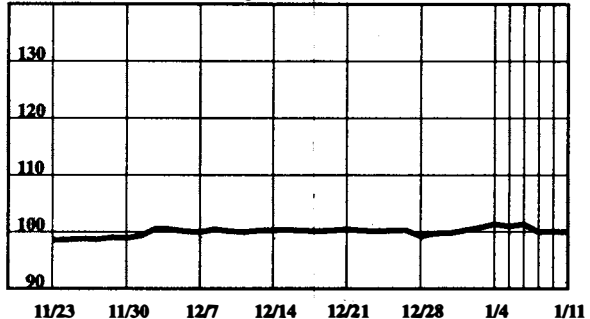
### The dollar in deutschemarks

New York late afternoon fixing



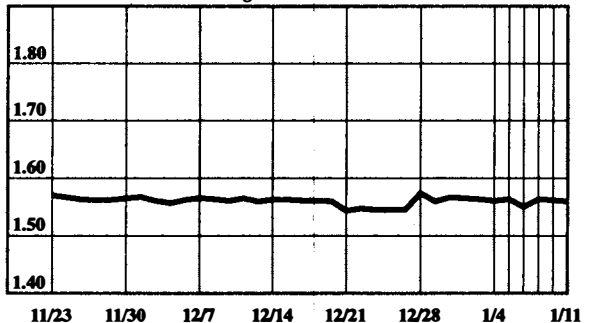
### The dollar in yen

New York late afternoon fixing



### The British pound in dollars

New York late afternoon fixing



### The dollar in Swiss francs

New York late afternoon fixing

