

## Chapter One

### The Sun and Petroleum

Throughout the Edo Period the Japanese were living only with solar energy. This was the case with all of humanity prior to the Industrial Revolution, which was founded in Britain and marked the beginning of the use of fossil fuels as the primary energy source, Japan began industrialization approximately one hundred years after Britain (around the late nineteenth century. Among all of the present so-called advanced nations, Japan was the last to use solar energy as its only energy source. Our ancestors built the unique Edo culture by utilizing stored solar energy (which had a maximum life of two years) and plants (which requires solar energy and is an indirect way solar energy was used). They also used solar energy directly.

A haiku, attributed to Takeshi Ikeuki, reads:

The sun water  
Using it modestly  
Without throwing it away, either

Sun water is a washbowl full of water heated by direct sunlight over a long period of time. One would have found the spot where the sun would shine most intensely throughout the day to place their wash water. At midsummer around Tokyo sun water became tepid at best. This contrasts with the efficiency of water heated through a solar heat device. As recent as fifty years ago, people would save on fuel by making tea and by bathing in the summer using sun water mixed with a little boiled water. This form of bathing, known as gyouzui, has almost disappeared so allow me to explain - one would splash water onto their bodies from a water bowl; the water was then poured onto the corner of the garden. Young children would relish gyouzui in mid-summer but only in mid-summer.

We utilized sun energy in every conceivable way because it was the only energy source available. It is upon careful analytical reflection that we understand that our ancestors could only use solar energy. It is unlikely that they were aware of this fact. In the heart and conscience of many there lived a reverent appreciation for the sun. Though there may not have been the idea of solar energy it is probable that many knew that their survival was due to the sun. For many, early morning began with ritual worship for the sun by facing the east, clapping hands, and bowing.

Due to the indirect and simple ways which people used solar energy technology, accomplished during this period, did not use nature forcefully; modern technology requires an overabundance of power to fuel itself. Unlike these modern times

people did not treat nature violently using big energy. People of the Edo period were mindful of each of their actions; for example making tea demanded much physically - drawing water by hand, collecting firewood, preparing and using a cooking stove.

Since the Meiji period Western culture worship became popular and the thought of living a life dependent upon solar energy was diminished by the thought of using fossil fuels in large quantities - it was a thought that would last a long time. When people were occupied in adopting European advanced science and technology they made harsh and poorly evaluated criticisms of the Edo period. Furthermore, the view of history that man improves with time began to spread after the Pacific War. This impinged upon anyone from evaluating the Edo Period; attack from progressive thinkers resulted for those who attempted. The prejudice portraying the Edo period as a foolish feudal age lasted for more than one hundred years.

It is without question small minded to conclude one society superior to another using only superficial and convenient points of view. To contrast: one civilization cultivates and orders nature using a great amount of energy while the other; using a little amount of energy, kept a greater harmony with nature.

If the ideas that mankind improves with age and that a multi-consumptive society (which is the result of recent progress) is truly excellent then life today must be one-step closer to a heavenly paradise in comparison to Japan of fifty years ago. However, I cannot believe that we are indeed approaching a paradise on earth step by step.

Everyone recognizes that our current day-to-day living is much more convenient and comfortable than would have been thought of fifty years back. But, it is becoming quite clear, that we are now saddled with global scaled issues. The roots of these current problems are the mass consumption of so-called fossil fuels (petroleum, coal, natural gas, etc.).

Japanese people depended only on plants and the sun until aggression from Western countries exposed us to many dangers. Those who worshipped the European civilization as a universal one thought that this aggressive attitude by the Westerners was proof of Japanese inferiority. Some continue to think this way. We are now living in a Japan where there is no place for trash dumps as a result of completely adopting this universal civilization.

If I write, that mankind cannot exist - irrespective of how respectful and progressive a theory there may be out there - if its country is filled with trash and its atmosphere and water polluted, critics may point out that the Japanese did not understand true European culture but most energy and resource specialists will neglect

such a contradiction. Whether or not the criticism holds up or not does not change the fact that humankind must develop from its current ideology of man versus nature.

It is not certain how we will overcome our problematic age but what may be best is that we turn towards living again with solar energy. Though we cannot turn the hands of time back to the Edo Period, and I would not want to, but it is wrong to neglect or one-sidedly oppose the life of Edo saying that it is old and behind.

The life of the Edo Period is the accumulation of knowledge of civilizations that used only solar energy. It is the best concrete example of a solar energy society.

I say this knowing that there are those who oppose me or say that what I am doing is pointless, but it might be far more realistic to know about a nearly perfect circulation type society which thirty million ancestors were actually managing than to dream of a revolution which aims at a fictitious ideal society. The more details that we have regarding a solar energy dependent society, the greater we begin to recognize the uncertainties attached to our present fossil fuel dependencies.

In order to know the length of something it is best to use a standard measure (e.g. a ruler). In order to know our current life situation it is best to hold it up to a historical measuring stick (i.e. the Edo Period).

There are two reasons why I have thought to use the Edo Period as a measure. Firstly, the Edo Period used solar energy in the most refined way than any other period in Japanese history. That is not to say that a hunting and gathering culture is in any way inferior, for example, but it is not helpful to our targeted goals due to being so obscured from our present reality. A detailed examination of the Edo Period (especially Japan after the latter half of the 1700's) shows that almost everything necessary for the present Japanese life had been invented (of course this does not include products based on modern industry). Modern industry depends on fossil fuel energy, so we can clearly see the difference between solar energy-type and fossil fuel energy-type if we examine Japan of the Edo Period when we did not use fossil fuels. Moreover, due to the high literacy rates of that period there are an enormous amount of records detailing the lives of the Edo Period.

Secondly, the Edo Period speaks of the very lives of historical Japan. Though it is popular to visit Denmark and Germany to study about environmental measures it has not translated into a successful Japanese society. Even though we have, for the past fifty to one hundred years, been imitating what seems to be successful in distant countries - which are so different in regards to climate, geographical environment, population and population density - it has left us in a disgusted state. Needless to say,

Japan is in the same position on the Earth now as it was in the Edo Period. Even if a climatic accident is occurring worldwide, the climate of Edo Period Japan will be of greater similarity to present Japan than any other nation. As well, we would be allowed to say that the ancestors of the Edo Period and present share almost the same racial heredity. Even though the people have gotten bigger through the change of life habits and the face shapes have changed, the people of the Edo Period best compare with the present people of Japan than any other country. Also, the daily life of Edo Period Japan has left its stains in the habits of the current people (except for a few which had changed in favor of the foreign way of life completely).

Maintaining the traditional way of life is safer and more comfortable, knowing its advantages and disadvantages from practical experience, than demonizing it and switching to an idealized Western way of life.

Having the points listed above, favoring Edo Period Japan as a mirror for present Japan, makes the analysis easier to accept. Although, this does not deny the existence of the criticism - what was being done in feudal Japan was meaningless and should be ignored completely. I welcome their right to hold their opinion.

Even though it existed on isolated islands the Edo culture was original and rich due to its incredible efforts to use limited energy efficiently. Not to be efficient with all that one had could have been a matter of life and death. This is in obvious contrast to our present existence, which allows us to be frivolous with what we consider to be waste products.

Another contrast to our present day is the body structure. In those days people were slim and muscular and in these industrial days peoples bodies are fat and full of waste. This is due to the fact that in the solar energy based society comfort and convenience were a rarity. If we throw away our arrogant and masochistic attitudes towards inconvenience we begin to see their merits and begin to clearly recognize our present way of being. By looking through a variety of lenses, this book will show, as concretely as possible, how a solar energy based society helps to bring about a normal way of human existence.