

Chapter 7 Starting Out Slowly

Dependent heavily on solar energy, it was no easy task for the people of the Edo Period to make well-prepared rice, as it required certain skills to adjust irregular heat levels by firewood. In reference to the secret of this rice preparation over a wood fire, there is a traditional Japanese saying composed of a series of 7-5-7 syllabic verses which is: "Hajime choro-choro, naka pap-pa, akago nakutomo futa toruna," which literally means: "Start with a low flame and bring to a vigorous boil - even if the baby cries, don't remove the lid."

To prepare rice on a kamado, or traditional Japanese stove, you must first put the hulled rice and proper amount of water into a traditional Japanese iron pot called a kama and start by boiling the rice over a low fire, gradually increasing the flame. The lid is not to be removed while the rice is steaming over a strong fire and the flame must be lowered after it boils when the water level starts to decrease. In this solar-energy based society, the people of the Edo Period had to make due with one another's experience and manpower thus a wide range of practical knowledge was necessary. For ease in the memorization of procedures for complex tasks, verses such as the one above were adopted as simple instruction.

While the statement that people lived only with solar energy sounds romantic, in reality there was a lot of trouble in the simple task of cooking rice. However, if one looks at the reverse, by spending time and effort on these tasks the people of that era managed to live without consuming such an enormous amount of fossil fuels.

The reason that sales of electric rice cookers exploded after their debut in 1955 is that for every household they had turned a troublesome task into one that takes absolutely no manual effort. There is now no need to expend the energy to get firewood and keep it dry, nor to dispose of ash left after cooking, making the whole processes of cooking rice much simpler. All we need to do is wash the rice for a minute or two and put it in the cooker.

In order to use an electric rice cooker, we must rely on an environment that enables us to use as much electricity whenever we want. Most importantly, electrical sources must be extremely sound and available wherever we want to plug in an appliance. For this purpose, electric power companies constantly generate electricity not only from the moment you push the 'on' button, but it is supplied according to the estimated average of gross hourly consumption.

In the solar energy-based society, people were able to cook rice anywhere as long as they had a kama and firewood and the knowledge and experience of cooking rice over a fire. Shortly after the Second World War, I spent the summer of 1947 with my mother, brother and sister in a mountain in Shinshu, or Nagano Prefecture, which is located to the west of the Kanto region. While it was very inconvenient to live in the mountains, at least we didn't have to worry about water and firewood. There were several perennial springs nearby and a stream with drinkable water. Firewood was as available as water. Since trees surrounded our house, many fallen branches could be found on the road and by just stepping into the forest we could easily find fallen trees that we could gather without the needing any permission from landowners. My mother used this firewood we gathered to cook rice and no one ever accused us of stealing twigs from other people's land.

As for fuel and water used for cooking and bathing, we lived almost the same way the mountain villagers of the Edo Period did. Like those villagers, we received benefits of the forest. Since our consumption of firewood and water was much smaller than forest productivity, there was little impact on the growth of trees.

However, people can live on forests only when population is small compared to its size. Energy issues are closely related to population problems. Though the Edo-era Japanese had a stable life based on solar energy with practical knowledge and experiences, such a life works only in a low-density population.

The real reason why population in the Edo Period did not increase was because people had to live with limited energy. Population growth depends on food production, which in turn, now depends on the amount of energy that can be spared. Though weather is an important factor in food productivity, under the same conditions, the most important factor is basically how much oil is available.

Although the number of households engaging in agriculture accounts for less than 10 percent of all households, there are no cases of starvation in Japan today. This is because an enormous amount of energy is spent on agriculture in addition to increased food import from foreign countries. Since inexpensive petroleum is available as fuel for transportation, importing agricultural products of low unit-cost is profitable.

It is historically evident that Japan cannot support more than 30 million people in the Edo-era lifestyle utilizing the solar energy stored in the previous year or two, even if 80 percent of the population engages in farming, forestry and fishing.

One of the current major concerns in Japan is the aging population, with the younger population decreasing despite an increasingly aging population. However, to maintain a balance in the pyramidal demographic structure with a thick base of young people, along with longevity in life, an increase in population as a whole would become necessary. With limited flat areas in Japan, population density has reached the world's highest level. In this situation, how can we so optimistically assume that we can maintain or even increase the already large population and continue to live affluently?

Though we may be able to continue our present way of living for awhile by exploiting abundant resources and energy, we do not know how long our environment can support such a large population. Evidently, increasing the population at this time will only extend our problems and in the end result in even larger problems for our children.

From my experiences, it is clear that we are now at a critical point: it is crucial for us to choose the lifestyle of the Edo Period - live slowly, and make efficient use of limited energy with knowledge and experience. To maintain such a lifestyle, we should deal with our population problems now and do our best to keep the population steady at lower level.

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