

## **The Idea of City Planning: On Cities and Garbage**

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### **1 The Age of Cities and Garbage**

Q (interviewer's question): I have read "The Idea of City Planning" (Iwanami Shinsho), which taught me a lot, and this book is about urban planning, or rather, city planning with citizen participation, with specific examples. Today, I would like to focus on the issue of garbage.

T (Tamura): "Urban planning" is a broad term in the civic sense, but it is very narrow in the government office. The terminology used in government offices is different from that used by citizens. When we talk about "urban planning" in government offices, we are referring to "land readjustment" and "arterial projects" rather than comprehensive urban development. Rezoning" is necessary, but it lacks an image of how to create space and lifestyle after the rezoning is completed. In government offices, this is called "urban planning. The term "Machizukuri (Town making in Japanese)" that I used in this book is not in the narrow, bureaucratic sense, but in a more comprehensive sense.

Q: In this book, you consider the 20th century as "the age of urbanization. You also point out five characteristics of the urban phenomenon: non-self-sufficiency, openness/variability, heterogeneous community, common means of living, and non-visibility. I think it is safe to say that we have moved from the age of urbanization to the age of the city today. What do you think of the characteristics or concept of garbage in the city?

T: In the process of metabolism, everyone produces various kinds of waste, which is the fate of life. In the past, this waste was processed and circulated within the natural eco-system. However, in the age of urbanization, the individual as an unit is no longer able to handle it. When the waste can no longer be processed, the city, as a community, tries to process it socially. However, from the citizen's point of view, once emitted, it is invisible - what I call "non-visibility" - but it is processed out of their own loop of circulation. It becomes someone else's property, and you are not aware of it. Although they are not aware of it, if it is not processed somewhere else, communal life cannot be maintained. We are faced with such a contradiction. This structure appears especially in issues such as garbage. I think it is fair to say that this is one of the worst aspects of "invisibility." I think it is fair to say that this is one of the major issues facing cities today, and one that cities are destined to face.

Q:-I think that the first step in processing garbage is to separate it, but how should this be done?

T: There are things that can be put into the recycling process and things that cannot. From the broader perspective of the global environment, everything is in a cycle, and as much as possible should be processed (i.e., reused) in an ecological way by being part of that cycle. However, there are some things that cannot be so easily reused. Therefore, I believe that there are two basic types of waste: reusable waste and non-reusable waste. In reality, there are many things that can be reused but are disposed of without going through the cycle of reuse. The modern urban consumer society is encouraging this trend more and more. Even things that should be put into the cycle of reuse are all discarded. In the past, both individually and socially, everyone was making efforts, consciously or unconsciously, to put things into the cycle of reuse. Even Tokyo did it right after the last war, because urban life could not be sustained without it. However, when it comes to recycling waste in a modern city, it costs a lot of money if it is done by administrative decree. Even if the waste can be recycled, it is cheaper not to put it through the recycling process. In this case, the cheaper option is inevitably chosen. It is natural that it is better to recycle resources because they are the earth's resources, but according to the logic of current economic efficiency, this is not the case. That is the problem. My

problem with garbage was not limited to ordinary household waste. For example, asphalt from road construction (Mr. Akira Tamura was involved in city planning at the Planning and Coordination Bureau of Yokohama City from 1968 to 1981--editor's note), But asphalt could be recycled. However, it was cheaper to throw it away, so everyone threw it away. Soil dug up during construction was thrown away, and soil from other places was added, and new asphalt was put in. However, we acknowledged the situation that we could not afford new places to discard soil and asphalt. So the city of Yokohama built a plant to reproduce the waste, and even though it was not profitable to operate, they created a waste disposal public corporation so that the waste could be used again. When we started this project, few other cities were doing it. This is a good example of putting the waste into reuse. We also considered the issue of empty cans, for example, and we tried to get a coalition of large cities to work together on a deposit system, but this has not been very successful. We also experimented a lot with sorting garbage after it had been collected. We tried various things, such as using a magnet to absorb the waste after crushing it, or vibrating it to put the heavier items on the bottom. However, when I thought about it, I realized that this was a strange thing to do and required a lot of extra energy. In the end, we tried many things, but I can't say that we succeeded or not. We had to work at the root of the problem. This is a problem related to public awareness. In Numazu City, for example, everyone lays out the bins in the morning, and there are residents assigned to sort out to make sure everything is in order. This may be easier to do in a city the size of Numazu, but I can't say that it has been successful in Yokohama.

Q: For example, when we accumulate old newspapers, we tend to throw them away because it is too much of a hassle. I wonder if it would be possible to devise a way to do this at the administrative level, rather than just leaving it to the waste paper collectors.

T: Not really. A city is supported by its citizens, and within the citizens are various individuals who solve problems in their own work. If the private sector can handle it, that is a good thing, and there is no need for the government to do everything. Therefore, if something can be done economically by the private sector, it is better to put it into the recycling process. I do not agree with the idea that the government should do everything. Therefore, I agree with the fact that the waste paper collectors are doing this. However, from an administrative point of view, the government needs to keep a close eye on the overall situation, such as when a garbage collection are makes a mess and the surrounding residents complain about it, or how the land use plan is related to the mess. However, due to the strong yen, suddenly the garbage collection contractors stop coming. This is caused by a larger economic mechanism, so the local government cannot do anything about it. It would be nice if there was some kind of subsidy system in place to help those who can no longer collect their goods when prices fall, but the fluctuation would be tremendous. But recently they have started coming again, so I think it's good. At the time, I was also involved in discussions with a group of chiefs of the seven major cities, and we had a lot of discussions. We discussed it extensively. We even came up with the idea of a joint project, and Kyoto was a little ahead of other cities, but we have not succeeded yet. If we can make this kind of thing work, the consumers can also make it work, and the physical reuse will be reused in the social and economic mechanism. That's the interesting thing about the deposit system, as a principle. That's why we discussed it a lot in the seven major cities' chiefs' meeting. It is impossible for one city to do it alone. We thought it would be possible if a coalition of cities worked together, but it didn't work out.

Q: In that case, what went wrong with the government, companies, and consumers?

T: The worst thing that happened was that the leaders of the local governments left the local government. Local governments should be able to take charge of the actual situation, change Japanese politics, and build a new way of life in the era of urbanization from a place that is closer to the citizens. Of course, if we had gone further, we would have had to deal with difficult issues such as the relationship with corporations, but since Tokyo, Kawasaki, Yokohama, Nagoya, Kyoto, Osaka, Kobe, these seven cities were on the panel, we should be strong if we say we are going to do it. We had all the major cities in our sights. Even so, there was no guarantee what we could have done, but we were

able to do a great deal, and I believe that we could have done something different. Politics has to be built from the perspective of people's daily lives. That is why local governments can really do the work. We expect them to continue to meet their duties.

## **2 From Management Efficiency to Economic Efficiency**

Q:-In the case of Tokyo, for example, there is a distinction between burnable and non-burnable garbage, and household garbage is disposed of as burnable garbage. Food scraps are disposed of as burnable garbage.

T: Food scraps are not flammable. In fact, it would be better to turn the city into a rural community in the sense of putting it on the recycling process, but since the rural community itself has now become a city, this is no longer possible. So, I think, basically, there is nothing else to do but burn it. In fact, food waste is very watery. For example, it is very difficult to burn watermelon rind, which we often eat in summer. That is not burnable garbage, but very difficult to burn. It's all water. That's why we pour oil on them and burn them. When there is a certain mixing ratio of burnable and non-burnable garbage, however, there is inevitably seasonal fluctuation, especially in the summer, which is not good. Anyway, right now, I think we have no choice but to burn it. However, even if we burn it, it will not disappear, but it will be reduced to one-twentieth of its volume and one-fifth of its weight. Water is removed and the form of the material is reduced, but the amount of actual number does not change that much, according to the law of the immortality of matter. The question is what to do with what remains. In the case of Yokohama, the sludge from the sewage treatment plant was called "hamatsuchi," or "beach soil," and used as fertilizer. I think that if we can bring the ashes of the garbage to something similar to this kind of thing. However, it contains heavy metals and many other things, so it has to be sorted first. That is a difficult problem, but so far, we have been throwing it away. The beach soil also has its problems, but we use it in special places and put it into the reproduction process. The ideal is to burn or not to burn, but possible to burn, and then to put the waste in the reproduction process. Anyway, you never know what is in food scraps. Therefore, we had to build a water treatment plant at the disposal site. Since disposal process costs a lot, we are wondering if it would be better to use the technology to reproduce the waste. Sewage treatment plants, we don't know what's in them, but they have a kind of homogeneity, so to a certain extent they are working well. The distinction between burnable and non-burnable waste is that burnable waste goes to the incineration plant, and non-burnable waste goes directly to the landfill. However, even if it goes to the incineration plant, it ends up at the disposal site. Therefore, I think that there should be reproduction, and that it would be better to return to the natural eco-system as close as possible.

Q:-Going back to the topic of used paper, recently, newspaper companies have finally begun to tie up with vendors to collect used newspapers.

T: It is a matter of money. It is not economically profitable, or rather, it is not profitable from a managerial point of view. From the perspective of the national economy, it may be economically viable. If it is not economically viable, the corporate structure will not move. Therefore, if resources were to run out, everyone would do it. However, since resources are still available elsewhere, they will not move. Nevertheless, there are examples of companies that do not import rice even though it is cheaper to do so, so if the same thing is applicable, it may become profitable.

Q: For example, recycled paper is relatively expensive. What do you think should be done about this problem?

T: I think it would be a good idea to put a tariff on imported chips. If we consider whether recycled paper is too expensive and the other is too cheap, then in the resource-poor environment of Japan, people are buying cheap one. If you think about it that way, tariffs could be applied. However, doing so would cause international friction. ....Prices are a very strange thing. Simply put, it is determined by supply and demand, but since supply and demand are created by human desire and the supply system, it is very arbitrary. However, the price regulates behavior. When it comes to various human

behavior issues, we are talking about prices. This story is also about relative prices, isn't it? Even if the circulation process is relatively rational and technologically developed, but the circulated product is still expensive, we have to acknowledge that imported items are extraordinarily cheap. In the case of tropical rainforests, for example, when everyone has cut down the trees and there is no telling what will happen to them afterwards, the price is low because the cost of the ecological circulation process has not been applied, which means that the trees are being used at a lower price than they should be. There was a time when oil was used so cheaply that pollution was spread around people became accustomed to the polluted environment. Economists may laugh at me for saying this, but perhaps there is such a thing as the true price. Also, I think that technicians are not enthusiastic about the technology of reuse. Since the technology has advanced so much, I wonder if it is possible to reuse the materials at a lower cost. I think the technicians are also slacking off. But if there is external pressure, they will do it right. I organized the mayors of seven major cities to work on the control of automobile emission, and we were able to get them to a certain point, even though the manufacturers were saying it impossible to achieve it. I also engaged in a fierce struggle with NKK, a Japanese giant steel company, and we succeeded in making them comply with the severe regulations. I don't know much about technology, but what was decisive was the use of exhaust gas. The exhaust gases were being released into the atmosphere, and this was causing air pollution. The way it was done was to suppress the sulfur content in the fuel at the beginning and let the emissions out. That's one way to do it, but if you recover what comes out, it's good for both. The reason why it was not easy to do so was that it was considered an unnecessary cost. However, as emission regulations became stricter and the price of petroleum rose, it became acceptable to recover the emissions. In our case, we were forced to do it because we knew we would not be allowed to do it otherwise. But then oil prices went up, and they decided it was a good idea to use emissions from a cost standpoint as well. I am a planner, not an engineer, so I don't know the details, but I have a feeling that this may be the case with other recycle technologies as well. Corporate behavior is determined by whether it is profitable or not from a managerial standpoint. Since companies are driven solely by business efficiency, price is the most effective inhibitor of this behavior. However, the price mechanism is not something that can be discussed only in Japan, so people choose inevitably lower ones. The Japanese people must have a strong philosophy and make a choice to allocate money to this issue as a part of the national economy. For example, rice in Japan cannot be produced from a business perspective, but for other special reasons, such as the importance of rice as part of the landscape or food self-sufficiency, it is necessary to make some kind of thesis. The government should formulate a thesis and spend the money necessary for the people. The people should fully discuss the necessary philosophy and ideology. However, such discussions are not taking place. We should formulate what is necessary and discuss it in the political process. There are many different political groups, and they are using the budget in a rip-off way. We should stop this, make it zero-sum, and discuss what is truly necessary. However, all they do is talk about reforming the tax system, but there is no discussion on how to spend the money. Urban phenomena have become invisible, but communal life must be maintained. In such a situation, if garbage, for example, is a problem, what kind of philosophy should be adopted? If we have a philosophy and bring technology and society closer together, after about 50 years, things will change.

### **3 What are the resources of a city?**

Q:-When you first started working on Yokohama's urban development, did you have a philosophy about the garbage problem?

T: When I first started, I didn't really understand, but I was interested in what Tokuei Shibata (1924-2018, Director of the Planning and Coordination Bureau of Tokyo Metropolitan Government) and others were doing. The foundation of my city planning is based on a civilization theory viewpoint, so in my head I thought recycling was a good idea, but I did not have much idea of how to deal with it as a local government. Specifically, it is not so much about recycling as it is about the construction of a refuse plant. I joined the City of Yokohama at a time when Suginami Ward, Tokyo, was fighting a "war on waste," so even though incineration is not the only way to do things, a city cannot survive without it. Therefore, the first administrative consideration was how to smoothly construct necessary number of waste incineration plants. In the case of Yokohama, everything was constructed so smoothly that

there was even a movement to invite an incineration plant. The chimney of a waste incineration plant is a familiar symbolic tower of our community, so I thought it would be good to have a sense of community centering on our own waste. That is what I call "Garbage Community" or "Gomi-unity" (gomi means garbage in Japanese) for short. There is, of course, the issue of getting citizens to be aware of this, but what is more important is that the administration involved in the construction of the incineration plant requires a variety of comprehensive administrative measures. However, the government is a vertically divided administration. The problem of garbage is not only about garbage, but also about the entire community. Ordinary government offices tend to treat garbage as the job of the cleaning bureau, but they don't let them do that, and they make them cooperate with the bureau as much as possible. Another thing that has already become common practice is by utilizing the remaining heat from the incineration plant to build a community facility (swimming pool and/or bathing facility). This is also a common practice in the government. Among the administration they are very strict that such a facility should not be included in the budget of the Bureau of Garbage Disposal. I think this is a little difficult for citizens to understand, but in other words, they are saying that such things should be paid for by the municipal welfare bureau, not by the garbage bureau. No matter where they spend Yokohama City's money, it should be the same, but it's not ours because of the vertically divided administration. That's why it's all so disjointed. This was not good enough, so we had the Welfare Bureau and others cooperate with each other, but we made sure that as part of the garbage problem, the Bureau of Garbage Disposal had to deal with such facility issues as well. Anyway, the vertical divisions within the administration were very strong. The most important thing I did was to break down this structure of the administration in every way. If we could do that, local governments would be able to do more. But they don't do that. We can make them cooperate in all kinds of things. How to make them cooperate with each other is another difficult thing, but we thoroughly worked on that kind of organizational and human resource management.

Q:-The structure of the flow of money itself is divided vertically, isn't it? It is said that "30% autonomy" is the result of the local government's low level of independent financial resources, and subsidies from the national government account for a large portion of its revenue.

T: That is still the case, but in the case of Tokyo and Yokohama, it is not a problem if they have the guts to do. In fact, they are 70% self-governing. Thirty percent autonomy means that 30% of the money collected comes from local taxes, and the rest goes to the national government, but 70% of the money goes to the local governments and 30% to the national government. The local governments are the ones who are restricted by the national government, but since they are the ones who are paying out the money, they are the stronger ones. However, the local governments are not a cohesive force because of the vertical rope system of administration. They are only working in a vertical line. Therefore, if we can connect these divided groups, we can do a lot of things. I have negotiated a lot with the national government and various companies, and I have never lost an argument. Those who are only engaged in vertical affiliations will lose the argument. As for individual issues, the national government not only has the authority, but also knows the whole country, so they can't be defeated by logic. In my case, the reason why I don't lose is that I judge everything comprehensively, but the ministry officials can only speak professionally from their ministry's point of view, so the local government is stronger. If you ask what the citizens think, you will never be defeated in an argument. But this is not only about garbage, but also about roads, welfare, and various other issues, including what the citizens think. So, in the debate, we have no intention of losing. But even if you win an argument, it is not easy because the government has the authority. That is why I want local governments to be aware that they are responsible for a wide range of issues related to garbage, even if they are the municipal waste management bureaus. It is not enough to just take garbage and burn it, but they need to think that various community services are also part of the job of the bureau. Another important issue is land use planning. All city governments have to deal with land issues. They don't deal with land issues properly. We have done everything we can do in terms of land issues in our municipalities. The first resource of a city is its land, and if that is properly taken care of, the city will do well. Land is such a limited resource. Therefore, it is important to leave as much open space as possible. Land is something that will disappear. The problem is how to keep it from disappearing, but this is not easy. There are so

many people in the world who want to eat the land, so it is important to have the dynamics and skills to deal with those who are trying to eat it up. There are no organizations that are consciously doing this issue with this in mind. I have done it thoroughly. Other public bodies are doing things according to the standards set by the Ministry of Construction, but they don't have the awareness of "I do this, this is how it should be done in this town, or this is how it should be done in the city. The Ministry of Construction has no idea what they are doing, but they make decisions based on that kind of thinking. That's why it doesn't work. Local governments must thoroughly think about what they are going to do. After that, you have to coordinate with the national government. Well, you have to do it with that kind of mindset. Because we conducted our land use planning based on such a philosophy, it was much better than if we had not done so. As for the garbage disposal, although there is no land for waste disposal in other cities, we are still being saved. If we had followed the Ministry of Construction's advice, we would be in even greater trouble. It is not for the sake of garbage. We need people who think about garbage, but before that, we need people who think about the city comprehensively. We should not listen only to those who are connected to some individual interest group. I don't think that individual, one-off things are not urban way of conception. Of course, one thing is always in conflict with other points of view. If only individual logic is followed, the city will fall apart. That is what I mean by a heterogeneous community.