

SUSHI – *ZEN*, PASSION, SCIENCE & WELLNESS

*On this plate of food
I see the whole universe behind my existence*
A Zen mealtime saying



SUSHI AND *ZEN*

Sushi is a food that nourishes the body, enriches the brain, and is a delight for the eye. Sushi is a healthy food, in which the quality of the raw ingredients, the taste, the chemical composition, the physical texture, and the aesthetic presentation are inseparable entities. Sushi is a food where the pleasure taken in its preparation and the artistry of the presentation are just as important to the whole experience as the meal itself. Sushi encompasses passion, science, and wellness. Sushi is *Zen*.

A CONFESSION

Before going any further, I may as well come clean: sushi has literally become a consuming passion. When I visit a new town and am desperately looking for a sushi bar, I can suddenly relate to why an alcoholic craves a drink or a chain smoker has to have a cigarette. While life may sometimes seem like a series of minor accidents and difficulties, these moments of unadulterated indulgence that we allow ourselves are the spice of life.

The lengths I will go to in search of sushi can be illustrated by an old *Zen* legend which recounts the story of a wandering monk who encounters a hungry tiger. The tiger chases the monk onto the ledge of a cliff. To escape the tiger, the monk leaps over the side, but he manages to grab the branch of a tree which is growing on the slope just under the ledge. While the monk is dangling precariously, he catches sight of another hungry tiger standing below the cliff, patiently waiting for him to fall. As the monk's strength is failing him, he spies a wild strawberry growing just within his grasp. He lets go of the branch, picks the strawberry, and puts it in his mouth, fully aware that this is the last morsel he will ever eat. How sweet was the taste of that strawberry in that fleeting moment!

THE *HAIKU* MOMENT

The Japanese characterize this as a *haiku* moment – a special, brief second when one has a sensation of great insight and enlightenment and at the same time is aware of the transitory nature of the material world. The moment expresses love of life, while accepting that it inevitably must come to an end.

Haiku is a Japanese form of verse which can be described as being both the most minimalist and that which is most constrained. The following is a well known *haiku*:

The old pond
a frog jumps in
sound of water

The verse was written by Matsuo Bashō (1644-1694), considered by many to be the most famous Japanese *haiku* poet. The line in this poem that is the key to its meaning is the last one – just three small words.

学術 *HAIKU* IS A VERSE FORM that arose in Japan at the end of the 15th Century and which rests on a set of strict rules that have been expanded and refined over time.

Among the classical rules for the writing of *haiku* is the requirement that a poem shall consist of three lines with five, seven, and five *onji* (Japanese symbol-sounds, analogous to syllables), respectively. The poet can employ techniques such as similes, contrasts, riddles, narrowing of focus, ambiguity, word play, *sabi*, *wabi*, paradox, and humor.

The essence of *haiku* is bound up with *Zen* philosophy, even though poetry expressed in words in a sense stands in contradiction to the *Zen* concept that words act to inhibit a true understanding. In *Zen*, there are many little flashes of enlightenment, *kensho*, when a deeper reality can be glimpsed in the ordinary things of the world. In a sense, the *haiku* moment is the literary embodiment of *kensho*.

The best known early *haiku* poets are Matsuo Bashō (1644-1694), Yosa Buson (1716-1783), and Kabayashi Issa (1763-1827). A later poet is Kijo Murakami (1865-1938). Examples of *haiku* written by these authors are found in several places in this volume.





“Something from the sea and something from the mountains”. Woodblock print by Utagawa (Ando) Hiroshige (1797-1858).

Jane Reichhold, an American authority on *haiku*, compares *haiku* to fish. According to her, the poems do not come from the writer, but come through him or her. In a similar manner, the *haiku* moment one can experience in turning a fish into sushi and eating it does not originate with the chef; he is merely the agent. The sublime aspect of the experience is particularly found in the *ku* (the short fragment of the poem) or in the appearance and taste of the fish, which cannot be described or explained in words.

Haiku have been characterized as poems composed of that which is only half said. But as Matsuo Bashō says: is there any need to say it all? The same holds true for this book on sushi. In it you will be able to read something about sushi, but not everything, and you will have to seek more knowledge for yourself and acquire your own expertise.

The composition of *haiku* is governed by many complicated rules concerning content and syntax and, over time, there have been various schools which have argued vigorously in defence of their perception of the correct way to write these verses. Matsuo Bashō gives the following advice: learn the rules and then forget all about them. This builds on the *Zen* way of thinking that enlightenment and insight do not come from the acquisition of knowledge, but rather from ‘unlearning’ it.

This is the concept on which I have built this book. There is an abundance of widely varying prescriptions for the right way to prepare sushi and different chefs and traditions all champion their particular points of view. In addition, the internationalization of sushi culture has had a paradoxical effect. On the one hand, it has helped to introduce new ingredients and techniques but, on the other, it has imposed a rather rigid conception of what constitutes sushi. As the latter is contrary to the original idea of sushi, my advice to the reader is as follows: read this book or others on the subject of sushi, learn a few rules and recipes, and then forget them all and let your intuition take over. Seize the *haiku* moment!

THE SCIENCE BEHIND THE PASSION

There is a common saying in Japan that every meal should incorporate “something from the sea and something from the mountains”. The ocean supplies fish, shellfish, and seaweed, while rice, beans, and other plants come from the mountains.

My passion for sushi is grounded in a fascination with how one can use simple, healthy, and pure raw ingredients to compose a meal that will inspire a *haiku* moment. The intensity of this fleeting instant is enhanced by the rediscovery of the beauty inherent in the humblest things.

It is here that we encounter the science behind the passion. Here too, I must unburden myself by making another confession. I cannot help being amazed time and again by the small miracles that occur in a sushi bar and in a kitchen when one prepares food. Fish, seaweed, and vegetables are wonderful to behold and it is awe-inspiring to witness their transformation in the hands of a skillful chef. Why do the raw ingredients look the way they do and what actually happens when we prepare them?

Science is the tool used to satisfy the curiosity of a person who wants to look beyond the physical manifestations of objects and phenomena and, one glance at a time, to recognize and understand inter-relationships which those who are uninterested or uninformed will never comprehend. Science poses questions and the mere process of formulating those leads to a measure of insight even if they remain unanswered. Good, in-depth answers elicit new questions, which in turn lead to further insight and recognition that can intensify the *haiku* moment. Questions may relate to colours, shapes, and patterns and their transformation in time and space. Why is the flesh of salmon and tuna reddish, while that of flatfish is white? What happens when rice is cooked and fermented? Why are some teas bitter and feel harsh on the tongue while others have a smooth, well-rounded taste? How can one preserve vegetables and fruits so that they retain their flavour?

Here we are concerned with chemistry and the chemical reactions that take place between ingredients, with the physical properties of raw ingredients and tools, and with the biology of those living organisms which we use for food. One can easily prepare sushi



AN OLD JAPANESE SAYING has it that when you taste something delicious for the first time, especially the first fresh produce of the season, your life will be prolonged by 75 days. So, if you have never tasted sushi ...

and enjoy the *haiku* moment without knowing the answer to these sorts of question, to say nothing of not even posing them in the first place. But I maintain that asking such questions will serve to sharpen the senses of intellectually curious individuals and that gaining knowledge of the science underlying the ingredients and the techniques employed in their preparation can greatly enhance the overall sushi experience.

DEMOCRACY IN THE SUSHI BAR

At a conventional restaurant you order a meal based on a written menu, you communicate your wishes to a server and then wait, possibly for a long time, until the food magically appears through a door which shields the kitchen and its activities from your sight. This has a completely different feel from what happens when you consume a meal at a sushi bar, probably the most democratic incarnation of a restaurant imaginable. Here you are a player in a dynamic process, over which you can exercise some influence.

It is the ultimate slow food experience, in which you participate in the process in its entirety. You can place your order directly with the chef. You see the fresh ingredients and are able to evaluate their quality



Kibune Sushi in Vancouver,
Canada.

and follow along with their preparation. You can observe the way the meal is presented, which to top it all off is served by the chef himself. There is more – you can even change your order in mid-stream and ask the chef questions while he works. Simply put, there is no culinary culture that can offer an experiential chamber to rival the sushi bar.





The Japanese good luck cat, *Manekineko*, welcomes guests to the sushi bar.

学術

WABI IS ALSO AN EXPRESSION used in Japanese political history. During the period when Edo (Tokyo) and Osaka overtook Kyoto in power and wealth, the latter made a virtue of necessity. The city of Kyoto became the embodiment of *wabi*, where the ideal of beauty and balance was to be found in the humble, the poor, and the worn. Simplicity was perfected.

By knowing a few rules you can transport this venue to your own kitchen. That does not necessarily mean that it is easy to prepare good sushi. This requires practice, patience, and an approach to the raw ingredients and methods of preparation that displays respect and a considerable degree of humility.

Practice is a good master. This is one of the reasons why it is said in Japan that it takes seventeen years to become a fully-trained sushi chef.

For the first couple of years, the apprentice washes dishes and fetches and carries for the chef. Next, a length of time is devoted to getting to know the various ingredients and how to choose fish at the market and clean them. Then the trainee has to learn to use the sushi knife and cut up fish. A period of intensive study follows to achieve perfection in the techniques of preparation and styles of presentation, although total perfection is neither possible nor necessary. This last point is part of my fascination with sushi – there is always room for improvement. And it is important to make something that is good. According to an ancient *Zen* saying, the person who makes something which is not good is worse than a thief who merely redistributes that which is good.

One can gain the impression that sushi is a terribly sophisticated cuisine, which in a way it is not. Sushi reaches sublime heights through the use of fresh ingredients “from the sea and from the mountains”. But its presentation and the enjoyment of the meal can be completely down to earth or up in the clouds, according to how one looks at it. It is *wabi sabi*.

WABI SABI

Wabi sabi is a Japanese aesthetical-philosophical approach to finding beauty and meaning in nature. To the Western mind it often seems vague and difficult to grasp, but that very lack of precision is integral to the concept. *Wabi* signifies an inner quality that can be attached to a person, an animate or an inanimate object, and is characterized by modesty, solitude, sadness, simplicity, or stillness, building on the harmony found in all things in their natural state. *Sabi* stands for the outward traces left behind by usage and the passage of time, perceived as imperfection, insignificance, perishability, and wear. It embraces the melancholic beauty to be found

in old, worn, and dilapidated things. *Wabi sabi* is rooted in the *Zen* idea that these outward manifestations of the ephemeral nature of life and things are the result of an eternal cycle of growth, decay, and death – the evolution of nothing into something and back again into nothing. An understanding of this process encourages one to focus on the fleeting beauty of the ephemeral – to reach for the wild strawberry as did the monk who was caught between two hungry tigers.

Wabi sabi permeates Japanese culture and way of thinking and has had a determining influence on a number of aesthetic expressions and art forms. The composition of *haiku* is one example. Others include the tea ceremony (*chanoyu*), flower arrangement (*ikebana*), landscaping, *Nō*-theatre, and *raku* ceramics. *Ikebana* is based on a triangular design in a simple container; gardening strives to form a whole landscape with a few stones; and the writer of *haiku* tries to express an aspect of the entire universe using just a few sound symbols.

One encounters *wabi sabi* at the sushi bar in the way the room is arranged, in the humility and attentiveness shown by both guest and chef to each other, in the manner in which the food is prepared and presented, and in the utensils which are used during the meal. The most perfect sushi might be served to you on an old, worn wooden plank. Your chopsticks could rest on a rough, irregular stone. You drink tea from a rustic *raku* cup with crackled glaze, which might even be cracked or chipped. The elegant tray on which the *sashimi* is placed might be irregular with, for example, a flaw in the glaze or an uneven rim. All these things are *sabi*. When the chef gives the guest his full attention and does not look down on him or her because of a possible deficiency of sushi expertise it is *wabi*. When

学術 *IKEBANA* ('the way of flowers') was originally a Japanese temple ritual in which flower arrangement was carried out as a meditative art form through which one could cleanse the soul and find harmony and balance. It was practiced only by men and *ikebana* was a component of the education of every *samurai*. The conventional Western approach to floral design focuses on the actual blossoms and their colour. *Ikebana* accords much greater prominence to linearity and simplicity, also emphasizing stems and leaves and the receptacle in which the arrangement is placed.

学術 *RAKU* MEANS something akin to 'pure pleasure' and denotes a distinctly Japanese type of ceramic. It developed in the 13th Century as a reaction to the delicate and overly decorated porcelain which came from China. With its high content of sand and finely ground fired clay, *raku* can withstand being removed quickly from the kiln and placed in cold air or sawdust. The glaze has to be simple and the bottom of a bowl or cup must remain unglazed, as it is said that this is where the soul emerges.



学術 NO GRAVY and preferably vegetarian. One of the secrets underlying the generally healthy, classical Japanese diet is the absence of gravy and rich sauces. Among other reasons, this is because food must be prepared in such a way that it can be eaten with chopsticks. Moreover, Buddhist precepts have periodically prohibited the consumption of milk products and of meats, sometimes even of fish. The traditional food in Japanese Buddhist temples, *shōjin ryōri*, was composed of few ingredients and was strictly vegetarian. It is still served to visitors at a number of temples.

the guest shows respect for the chef's work and appreciates the food for its taste and appearance it is also *wabi*.

When you develop an eye for it, you can see *wabi sabi* in all things, from the grandest to the most lowly. The sushi bar is a good place to start.

SUSHI AND WELLNESS – A LONG AND HEALTHY LIFE

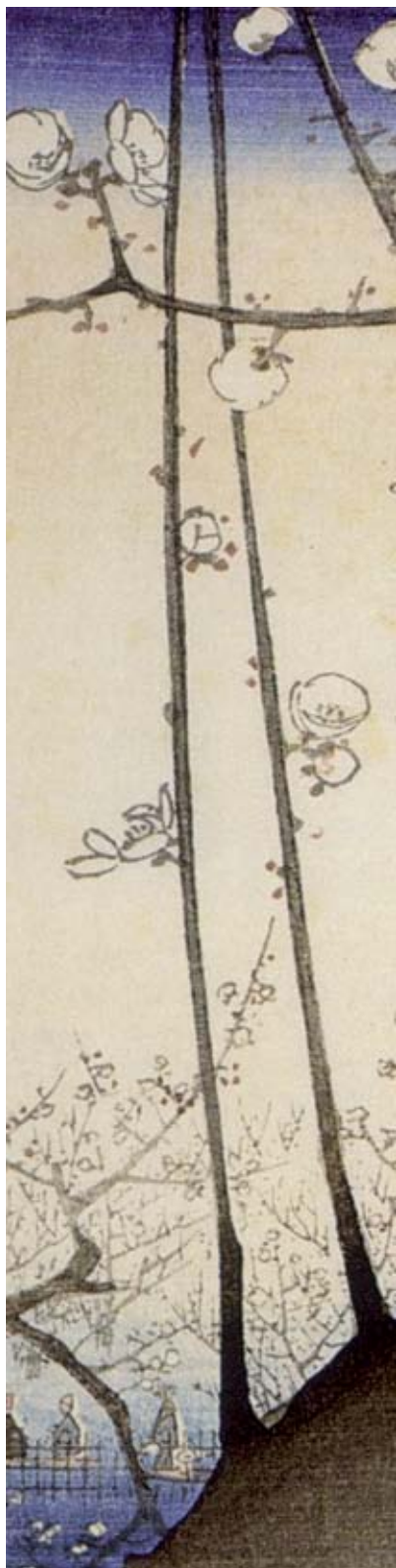
Sushi and the traditional Japanese diet are profitable fields of study for those who want to learn something about how to achieve a long and healthy life.

A Japanese adult eats about 70 kilograms of fish a year, and thereby derives a much greater proportion of his or her proteins and fats from fish than does the average person living in the West. Even though the Japanese constitute only about 2.5% of the world's population, they eat 20% of the global fish catch and, furthermore, they eat about half of it raw. The average Japanese person presently has a life expectancy which is several years greater than that of Europeans and others who follow a Western lifestyle. It is easy to infer that a diet which includes sushi, among other foods, contributes to Japan's favourable position in this comparison, but it is equally obvious that many other factors can also play a role.

In the course of the 20th Century, Western countries have experienced an immense increase in the incidence of chronic, non-infectious diseases that are by-products of their physical and societal environments. Prominent among them are cancer and cardiovascular disease. Rare at the beginning of the last century, cardiovascular disease has in the course of the intervening years become the leading cause of death in the Western world. The mortalities attributed to this disease now exceed the total number of deaths caused by all infectious diseases put together. In the last few decades, there has also been an increase in the incidence of obesity, type 2 diabetes, high blood pressure, and fetal illness. Furthermore, it would appear that the incidence of mental illness, particularly among young people, is now growing at the same rate as cardiovascular disease did earlier.

It is generally thought that this shift in the disease patterns experienced in the West cannot be attributed to genetic changes. The





genetic inheritance of large populations is simply not transformed that quickly. In addition, the human genome is comprised of the surprisingly small number of about 25,000 genes. This hardly provides sufficient scope for variations that would enable changes in disease patterns of this magnitude to take place.

On the other hand, dietary changes can help to explain why deaths are chiefly linked to certain chronic illnesses. Food intake can alter gene expression and lead to a shift in the burden of disease in the course of a relatively short period of time. Those diseases associated with diet are referred to by the umbrella term the *metabolic syndrome*. Strictly speaking, the definition of this syndrome should also encompass a number of mental illnesses. Regrettably, public campaigns and programs to combat the metabolic syndrome have not been very effective. How can this trend be reversed?

Studying the combinations of foods eaten by groups of people who do not yet suffer very much from the metabolic syndrome can serve as a great inspiration. The emphasis on fish in the traditional Icelandic and Japanese cuisines and the olive-oil based Mediterranean diet are known to result in a low incidence of heart attacks and a long life expectancy. But the details of what effect the different elements of the diet have on each other are not known and it is likely that many factors are at play. In the meanwhile, it can be observed that those societies that begin to adopt a Western diet – some elements of which are fibre deficiency, large amounts of meat, overcooked and deep fried fish, a paucity of vegetables, and an excess of carbohydrates – increasingly are also manifesting disease patterns that are typical of the West. For example, if Icelanders start to eat less fish or Japanese to consume more fast-food hamburger combos, it can be expected that in the future these populations will collectively start to suffer from the lifestyle diseases that are now so common in many Western countries.

Fats *per se* play a vital role in human nutrition, but the types of fats consumed and how they are handled are also of key importance. A diet that is high in saturated fats, or in unsaturated trans fatty acids which are produced when plant oils are solidified to make margarine, is closely linked to the increase in cardiovascular disease. There is no doubt that the consumption of certain types of unsaturated fats is a determining factor in maintaining good health,

both physical and mental. Superunsaturated fatty acids from oily fish, the so-called omega-3 fatty acids, contribute to lowering the risk of cardiovascular disease, reducing the cholesterol count, and decreasing the risk of cancer.

This is where sushi enters the picture. It is well known from investigations into mortality amongst Inuit and Japanese that their low incidence of cardiovascular disease is linked to a high consumption of fish.

Another significant group of unsaturated fats are the so-called omega-6 fatty acids, which are common in soybeans, also a major component of the Japanese diet. Omega-6 fats contribute to the production of certain eicosanoids, the vital hormones which regulate blood flow and strengthen the immune system. It is important to balance the intake of omega-3 and omega-6 fatty acids.

Scientific research has shown that the increase in psychiatric disorders can be attributed to an imbalance between omega-3 and omega-6 fatty acids in the diet. The present state of knowledge in these matters is still rather limited and insufficient to lead to concrete recommendations which go beyond general nutritional advice. But there are indications that just as cardiovascular disease was the Achilles heel in Western societies in the 20th Century, the central nervous system – particularly the brain – will be the next area of vulnerability.

It is a fact that sushi and fresh raw, preferably oily, fish together with seaweed can contribute to a balanced diet in which omega-3 fatty acids are well represented. In addition, sushi is low in calories and pleasantly filling. Soybeans and seaweed are rich in many important minerals and antioxidants which help to reduce the damage done to the machinery of the cells in the body.

Even if only a little is known about what can increase the possibility of having a long and healthy life, it is a virtual certainty that a moderate intake of calories and a diet which contains good, healthy fats are major factors in retarding the aging process.

All these indicators lead to the conclusion that sushi is a healthy food.



WHAT IS SUSHI?

The origins of sushi are rooted in fish preservation. Fresh fish starts to decompose quickly, but in earlier times there were no effective means of cooling or freezing it. The only possible way to prevent fish from spoiling in transit or in the warehouse was first to cure it in salt and then to ferment it. It was found that allowing the fish to ferment together with cooked rice resulted in an interesting taste and a pleasing texture. Sushi had been invented.

A BIT OF SUSHI HISTORY

Sushi is mentioned for the first time in a Chinese dictionary supposedly from the 4th Century, in this instance referring to salted fish that had been placed in cooked or steamed rice, which caused it to undergo a fermentation process.

It is not at all certain whether sushi was actually invented in China. It is thought that sushi was introduced to Japan in the 9th Century, but its origins are lost in the realms of the unknown. In this period, it was still common practice to drink milk and eat meat, but as Buddhism spread and the eating of meat was prohibited, people increasingly turned to the consumption of fish. It became necessary to devise new ways to store and prepare fish. This paved the way for the development of the Japanese sushi culture.

The combination of cooked rice and fermented, salted fish is called *nare-zushi*, which means aged sushi. The most widely known form of early *nare-zushi* is known as *funa-zushi* and was first prepared in the Shiga prefecture in Japan over a thousand years ago. *Funa* is a type of golden carp, which is common in Lake Biwa close to Kyoto. The carp was caught and salted at the start of summer. It was then prepared by being soaked in water to remove some of the salt, placed in a layer of cooked rice under pressure, and fermented for half a year or longer. After such a long fermentation, presumably only the fish was eaten and the rice was discarded.

Funa-zushi is also known from other countries in South-East Asia, among them Korea. In the 15th and 16th Centuries, a shorter fermentation period was introduced, typically of one month. The result was called *nama-zushi* (raw sushi) and, in this case, the rice was also eaten.

Modern sushi is related to *nama-zushi*, in which the fermentation of the cooked rice is hastened by the addition of rice vinegar. Production of rice vinegar grew rapidly in Japan at the start of what is known as the Edo period (1603-1867). The shogunate moved from Kyoto to Edo (Tokyo) and the production of rice, and with it the ancillary production of rice vinegar, skyrocketed. By adding rice vinegar to the cooked rice it was possible to shorten the fermentation period, but the process still took place under pressure. This type of sushi, which goes by the name of *haya-zushi*, is prepared in



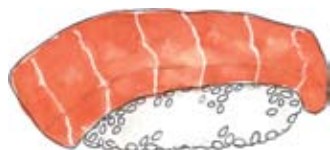
Sushi. In Japanese the expression 鮓 means 'preserved fish' or 'fermented fish in rice and salt'. The Chinese *kanji* symbol on the left stands for fish. The two symbols on the right mean something like 'good taste'. Another common expression for sushi is 寿司.

学術 IT IS SAID THAT sushi was invented by an old Japanese couple who, out of the goodness of their hearts, had put out some leftover rice for a sea eagle that had built a nest close to their house. Later, when they discovered a fish in the nest, they took it home and ate it. They found that the fermented decaying rice had imparted a good taste to it – so they ate the fish and discarded the rice.

珍談 IT IS SAID THAT sushi based on vinegared rice was invented in Edo (Tokyo) because the inhabitants, who were notorious for their lack of patience, did not want to wait for fermentation slowly to run its course. But it took a long time before modern *nigiri-zushi* spread from Tokyo to other parts of the country.



A sushi kiosk in Edo. Woodblock print by Utagawa (Ando) Hiroshige (1797-1858).



Nigiri-zushi is probably the best known type of *nare-zushi*: a simple, well-formed and slightly elongated ball of rice topped with a piece of fish.

the course of a 24-hour period and must be consumed immediately thereafter. The invention of *haya-zushi* is attributed to the Japanese medical doctor Matsumoto Yoshiichi who discovered that rice vinegar tenderized the fish and gave the rice a pleasant taste.

In the mid-1700's, the fermentation period was shortened to just a couple of hours with the introduction of *hako-zushi*, still made as a special form of sushi. Because it is prepared so quickly, it does not really involve fermentation *per se*. *Hako-zushi* is prepared by placing a layer of vinegared cooked rice together with filleted fish in a small wooden box which compresses the rice. To serve, the resulting block of fish and rice is cut into slices.

Tradition has it that in the 1820's Hanaya Yohei (1799-1858) from Edo invented or elaborated the modern form of sushi, which is called *nigiri-zushi*. It consists of a simple ball of rice, shaped by hand, with a piece of fish placed on top of it. The rice used is freshly cooked, after which rice vinegar and salt are added. This can be considered 'speed fermentation' of only a few minutes duration. The fish is completely fresh and does not have time to be preserved by contact with the vinegared rice and, in contrast to the original *nare-zushi*, both fish and rice are eaten immediately after preparation. Pressure, apart from that applied by the hands to shape the rice ball and attach the piece of fish, is no longer employed. In this way, sushi was transformed into an early version of fast food. *Nigiri-zushi* has come to symbolize sushi as it is now known around the world.

There is little doubt that *nigiri-zushi* was intended for ordinary people who in the course of a busy day could, without much fuss and bother, grab a couple of pieces of sushi at one of the many outdoor kiosks found all over Edo in the 19th Century. This was much like the current practice of casually picking up a ready-made sandwich or a hot dog. After the great earthquake of 1923, the sushi-stands in Tokyo moved indoors and were transformed into proper bars or restaurants.

The evolution of sushi did not stop at *nigiri-zushi*. In Japan it has continued to develop both as an everyday food and as a form of culinary art with a wealth of local variations. An example of the latter is *oshi-zushi*, prepared under pressure and usually with mackerel, which is characteristic of the Osaka area (Kansai). *Oshi-zushi* can



One of the earliest illustrations of *nigiri-zushi* comes from the famous Tokyo sushi shop of Hanaya Yohei (1799-1858), which closed only in the 1930's. The illustration was adapted by an unknown artist from pictures drawn by Kawabata Gyokusho (1842-1913).

学術 *Edomae-zushi* or *nigiri-zushi*?
Nigiri-zushi is also known as *Edomae-zushi*. *Edomae* refers to the small bay in Edo in front of the old palace that stood on the same site as the present-day imperial precinct in Tokyo. Fresh fish and shellfish caught in the bay were used locally to make sushi, which was known as *Edomae-zushi*. It has, however, been many years since these waters have been a source of seafood. Now the expression *Edomae-zushi* is employed as a synonym for high quality *nigiri-zushi*.

be considered a modern version of *hako-zushi*. Another example is *sugata-zushi*, which consists of a whole fish cut open and stuffed with sushi rice and then presented in its original shape. Different regions of Japan utilize different fish for this dish.

Sushi rolled in sheets of seaweed, known as *maki-zushi*, seems to have been invented before *nigiri-zushi*, possibly in the mid-1700's or even earlier. The rolls were pressed together using a simple bamboo mat, a practice which continues to the present day.

In the course of the 1970's, interest in sushi spread to North America. Since then a succession of the best Japanese sushi chefs have opened restaurants abroad, particularly in the United States. During the past decade, sushi has become a global phenomenon, given a significant helping hand by a heightened interest in Asian cuisine and culture and the intense focus on a healthy diet.

To give but one example: California has become a sort of Mecca for modern sushi-culture, and the Californian sushi chefs have introduced numerous exciting new elements, experimenting with vegetarian sushi dishes, using spices not traditional in Japan, and local fish and shellfish.



Rolled sushi, a California roll.

珍談 IT IS A DUTCH CUSTOM to eat the small herring from the North Atlantic and the North Sea, which are caught in the first weeks of the herring season at the end of May, as ‘nieuwe haring’ (new herring). The fish have been lightly salted, and frozen at sea, leaving them nearly raw, and are consumed immediately after thawing and the final cleaning, when the heads are cut off and the innards removed. To eat one, take the fish by the tail, lean your head back, and let the fish melt in your mouth. In accordance with tradition, you can also dip the herring in raw onion before you dispatch it.

Special sushi rolls (*maki-zushi*) have taken on whole new forms in Californian sushi bars, in fact, one of the now standard rolls – with avocado and crabmeat – is even called a California roll. In addition to this, a great deal of experimentation involving sushi and other Japanese specialties takes place under the umbrella of fusion cuisine.

It is interesting to note that, despite the fact that the original sushi, i.e., fermentation of rice together with fish, was found in many parts of Southeast Asia and probably also in Polynesia, it is only in Japan that this type of food has been refined in the course of the past thousand years. Perhaps the Koreans would take issue with this conclusion.

SUSHI IS VINEGARED RICE WITH SOMETHING ON TOP (*TANE*) OR INSIDE (*GU*)

The main principle in every form of modern sushi is a combination of vinegared cooked rice either with something placed on top (*tane*, *neta*) or with a filling (*gu*). The same ingredients can play a role both as *tane* and as *gu*. That which is *tane* in *nigiri-zushi* becomes *gu* when it is used to stuff a *maki-roll*.

There are four classical types of *tane*. *Akami* are red or dark *tane*, for example, tuna and salmon. *Shiromi* are white *tane*, such as flat-fish with white muscle flesh. *Hikari-mono* are shiny *tane*, typically mackerel and herring with the skin left on. *Nimono-dane* are *tane* which have been cooked or simmered, often octopus, some bivalves, and eel. *Hokanomonono* are *tane* which are not encompassed by the above categories, for example, shrimp, roe, and sea urchin.

In rolled sushi, *gu* is the designation for everything other than the rice – fish, omelette, *tofu*, spinach, cucumber, sprouts, other vegetables, crabmeat, mushrooms, green *shiso*, pickled radish (*takuan-zuke*), sesame seeds, and so on. Before they can be used, some types of *tane* and *gu* have to be prepared, either by cooking, simmering, salting, or marinating, in order to make them edible or to bring out the right flavours. Others are eaten completely raw, in some cases after having been frozen for a period of time.

The question is: how fresh must raw *tane* and *gu* be? In the case of sushi fish, one speaks of *ikijime*, which is fish that is consumed right away after it has died and before *rigor mortis* has set in. In order to limit the struggling of the fish, it is usually killed in iced saltwater. Sometimes this takes place right behind the sushi bar where the fresh fish is then cut up and immediately made into *tane* by the chef. This is often a variety of white fish, as the flesh of this type of fish has a firm texture which is not made more tender by natural decomposition. Other fish need to be ‘ripened’ before they are eaten and these are referred to as *nojime*. They have gone through *rigor mortis* and have been frozen for a period of time. As a consequence, their taste and texture have changed due to natural decomposition. *Nojime* intended for sushi have to be eaten as soon as they have been defrosted. Red fish, like salmon and tuna, are commonly treated in this way.



Sushi in the famous Matsuno sushi store in Edo. Woodblock print by Utagawa Toyokuni III (1786-1864).

A 16th Century Nordic fishmonger.
Several different types of preserved fish are being sold: dried fish, smoked fish, and salted fish in barrels. Based on Olaus Magnus: *Historia de Gentibus Septentrionalibus* (1555).



THE NORDIC ANSWER TO SUSHI

There is a well-known Nordic variant on sushi, namely, an age-old tradition of preserving fish by combining them with other foodstuffs which contain a large proportion of carbohydrates. An example of this is 'kalakukko', fish baked in bread dough, still prepared in some rural districts of Finland.



'Kalakukko', traditional Finnish fish bread, in which the fish is baked in dough, thereby preserving it in bread.

In the Middle Ages it was common practice to conserve salmon or herring by lightly salting them and sometimes adding flour or barley malt, wrapping them in bark (often from birch trees), and then burying them in the ground. In the cool soil, the fish underwent a fermentation process with the help of lactic acid bacteria, which, together with the *enzymes* contained in the fish itself, preserved the fish and transformed it into 'sursild' (sour herring) or 'gravlaks' (salmon buried in the ground), both of which have a sour and sharp smell and taste.

In the 1700's this Nordic sushi technique became more sophisticated, introducing a way to use less salt. The fish is placed under pressure in a cool environment to absorb the salt and a little sugar, possibly with some seasonings such as dill or peppercorns. Although the fish is not completely preserved by this process, it will keep for a few days after it has been cured. This method of preparation is now also used for other fish, for example, 'siika' (Baltic whitefish).



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SUSHI VARIATIONS



Handshaped sushi: *Nigiri-zushi*



Rolled sushi: *Uramaki* (inside-out rolls)



Rolled sushi: *Hosomaki* (slender rolls)



Battleship sushi: *Gunkan-maki*



Rolled sushi: *Futomaki* (thick rolls)



Pressed sushi: *Oshi-zushi*



Handrolled sushi: *Temaki-zushi*



Scattered sushi: *Chirashi-zushi*