

## INTERVIEW | Architect Kengo Kuma Weaves Nature Into New National Stadium's Design

The December 15 opening ceremony for the New National Stadium in Tokyo inaugurated what is to be a major venue for the Tokyo 2020 Olympics and Paralympics. It also represents a personal triumph for architect Kengo Kuma, 65, who was brought in after design and budget problems caused the initial design to be scrapped.

Kuma's design incorporates wood and greenery to create a truly “Japanese” sports venue with a warm, natural atmosphere. In an exclusive interview with Sankei Shimbun staff writers Kensaku Amano and Masaaki Sasaki, Kuma reflects on the twists and turns of a “drama in which I have had no control.”

### How do you feel now that the New National Stadium project is finished?

I feel relieved that it is like I imagined it should be, with lots of green.

### Would you go over again for our readers what makes the design special?

I was lucky enough to experience personally the 1964 Tokyo Olympics. That was also the era that saw the completion of the Tokaido Shinkansen and the Metropolitan Expressway (Shuto Kosoku Doro). Concrete buildings were going up one after another, and to a child's eyes they looked really impressive.

So how should the spirit of 2020 be expressed? I feel it should be the complete opposite of the 1964 image. With our towns having become full of concrete, we need to bring back wood. That is the message I would like to express to the world.

I would also like to let Japan's children feel that wood is returning to their communities.

### Is society recognizing the value of wood?

Yes, there's tremendous demand for its use. That has been especially true over the past few years. What with the stress from IT and the tsunami of AI (artificial intelligence), people are increasingly feeling that the human factor is being marginalized. So, they are yearning for a return to communities in which wood holds a prominent place.

### What was the motif for the New National Stadium design?

The inspiration was the five-story pagoda at the Horyuji temple near Nara. The eaves on the outer periphery of the stadium have multiple overlaps. If you look up at that five-story pagoda, the first thing your eye will notice is that, next to the eaves, there are decorative features. Because they are located beneath the eaves, they are not affected by rain and the sun. That's a reason why, even though the building was built in the 7th century, Horyuji is still standing — even after 1,400 years.

In coming up with my design, I learned a lot from Horyuji, and its design provided various hints.

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## What provisions did you make in your design to cope with the summer heat?

I realized that the opening ceremony for the Summer Olympics was to take place during the punishing July heat. Although there is roofing in the part of the building where the spectator seating is located, it will not be closed at that time. So instead of relying on air conditioning, I designed the building to rely primarily on natural wind.

That's because one distinctive feature of Japanese architecture is to allow natural breezes to flow out below the eaves. We consulted experts on wind and also conducted computer simulations. We also had to consider wind direction data for the nearby Gaien gardens.

We had to determine from which directions the wind comes during summertime, and then designed the eaves angled so that the breeze would be channeled to where the spectators will be seated. We wanted to take advantage of comfortable feeling air, without having to rely on air conditioning equipment or the use of petroleum. You might think of this as a model project.

## Were there hurdles to using wood?

Well, you see, tremendous strides have been made in the area of wood technologies. For example, cutting-edge processing technologies or coating technologies. But they are recent advances. I think what we did would have been impossible a decade ago.

We used mostly steel frames for the main structural parts of the building. Wood was primarily used for the truss portions of the main roof, which is what most catches the eye when a person looks up. I don't believe wood has been used in this fashion in any other stadium worldwide.

In Europe or North America, they look at things from a bird's-eye perspective, and build everything with a huge frame, not really thinking about how things look to the human eye. We Japanese choose our materials based on how we see things from ground level.

While walking about, we discover all kinds of things by looking up. That is one of the distinguishing features of Japanese architecture.

## The original design for the New National Stadium was done by the celebrated architect, the late Dame Zaha Hadid. However, that design had to be thrown out because of ballooning costs and other issues.

As a matter of fact, I've lost out to Ms. Hadid a number of times in architectural competitions. Looking at her proposals, they are impressive when viewed as a model, and so on. But I think mine would be better in terms of the actual experience. That way of looking at a professional rival is only natural.

In one sense, Ms. Hadid's architectural achievements are symbolic of an era in which form won out. My architecture is for an age in which the experience is foremost. I was aiming to create architecture appropriate for the period after the age in which form won out. Ms. Hadid was determined to see her own vision truthfully rendered in form. I am grateful to her being there, since it ended up confirming my own position.

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### **What was your motivation for getting into design?**

When I was 10 years old, it really seemed that everyday life in Japan was being completely transformed. The Olympics served as a stark dividing line between what had come before and what was to come after. The huge role that the Olympics played in society could be acutely felt.

I felt that if you took on a challenge, you would end up being rewarded. That feeling was born thanks to the [1964] Olympics. Although time in everyday life still seemed to flow differently, I felt that challenging new things would bring happiness to everyone.

### **What was your starting point as an architect?**

It was during the 1964 Tokyo Summer Olympics. I decided to become an architect after being very moved upon seeing the Yoyogi National Gymnasium, designed by Kenzo Tange. It gave me tremendous confidence to think that a Japanese could design a building that surpassed those in every other country.

In that magical time, time flowed in a special way, and I experienced that time as something special. So, I decided to accept the challenge. In one sense, I chose to use wood because it presented a challenge to me. I felt that [the 2020] Olympics offered the ideal opportunity, and that if I offered this vision of the future, it would be properly evaluated.

### **What message do you think the New National Stadium has for the world?**

Even without the Olympics, Japan is receiving a lot of attention. In this age where environmental protection looms so large, the special Japanese sensibility to nature has much to offer. If the National Stadium has a message for the world, it is that even more attention is going to be paid to Japan than has been the case in the past.

This represents a tremendous chance for Japan. Even people who normally pay no attention to architecture are sure to have their interest piqued when they see how in Japan wood was used in constructing such a building. I want people around the world to realize that Japan has a nature-friendly culture. It really is a great opportunity.

### **How will the National Stadium be used after the Olympics?**

What happens after the cheering stops is very important. The building will continue to stand for decades after the Olympics have wound up.

But the more time passes, the greater will become the allure of the wood. It will become ever more inviting in feeling.

Since the location of the stadium is within the grounds of the chinju no mori sacred grove of the Meiji Shrine, having a building where people can enjoy themselves is a real plus for Tokyo as a whole.

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## What changes will the National Stadium cause?

I truly expect that it will cause changes in the city. By serving as a symbol, Mr. Tange's building brought about changes in Tokyo. His building has the feeling of a beautiful sculpture.

In contrast, I would propose my National Stadium instead as a kind of "corridor."

I would like to see it transform the surrounding area into a place to enjoy in countless ways. Although it is difficult to extend or structurally alter a concrete structure, it is easy to rework sections in which wood is used. Therefore, I hope that fuller use will be made of it.

A building can be reworked in order for it to be made better use of. So, actually, that is something that should be welcomed. If a use is found for a building that the designer hadn't even imagined, he can't help but be happy about it.

## How would you say your life has been entangled with your design for the stadium?

Many elements of chance have been at work. There was the time way back in 1964 when I became determined to become an architect. There was the selection of Tokyo for the second time as host for the Olympics and Paralympics.

Then there is the fact that the National Stadium site is quite near my home. Since fate was at work here, I feel that I have been part of a "drama over which I have had no control."

Source: **INTERVIEW | Architect Kengo Kuma Weaves Nature Into New National Stadium's Design**  
<https://japan-forward.com/interview-architect-kengo-kuma-weaves-nature-into-new-national-stadiums-design/>

## 隈研吾さんインタビュー 新国立「空調機に頼らず」「日本建築の特徴」

2020年東京五輪・パラリンピックのメインスタジアムになる新しい国立競技場（東京都新宿区）が完成し、12月15日に完成式典が開かれた。デザイン案が急遽変更になるなど紆余曲折あったものの、木材がふんだんに使われ、木のぬくもりが感じられる日本らしいスタジアムに仕上がった。設計に携わった建築家の隈研吾（くま・けんご）さん（65）が産経新聞の単独インタビューに応じ、「自分ではコントロールできないドラマだった」と振り返った。

### 国立競技場が完成した

緑の色が濃く、想像通りにできて安心している。

### 改めて建物の特徴は？

僕は幸いにして1964年の東京五輪を味わっている。あの時代は東海道新幹線ができたり、首都高速道路ができてきた。コンクリートの建造物がぼんぼん立ち上がって、格好いいなと子供ながらに感動した。では、2020年らしさとは何か。それは1964年の感動とは全く逆のものではないか。街がコンクリートだらけになっている中で、木が取り戻せるようになればと、世界に対しメッセージを送りたいと思う。日本の子供たちにも、木の街に戻れるんだよと発信したい。

### 社会が木を求めているのか

それはすごくある。ここ数年、特にそういう気がしている。IT（情報技術）のもたらすストレスや、AI（人工知能）が席卷し人間の居場所がなくなりつつある中で、木でできた街に帰りたく感じているのでは。

### 設計のモチーフにしたものは？

法隆寺の五重塔だ。スタジアムの外周には軒庇（のきびさし）が複数重なっている。五重塔も、見上げたときに一番目に入る軒のそばに細工が施されていて、庇の下にあるから雨や日に当たらない。だから7世紀に建立した法隆寺が1400年以上も長持ちしている。今回の設計に当たって、法隆寺をいろいろ勉強していき、さまざまなヒントを得ている。

### 暑さ対策はどう設計に取り込んだか

7月の暑いときに五輪の開会式をやるのは分かっていた。建物の観客席部分には屋根はあるが閉じていないため、空調機に頼らず、風を中心に設計している。庇の下に自然の風が抜けていくのが日本建築の特徴だから。風の専門家を入れて、コンピューターシミュレーションもした。外苑の風向データもあるから、夏の期間にどの方向から風がくるか、その風を観客席に呼び込むような角度で大庇を設計した。空調機とか、石油に頼らないで気持ちいい空間をつくらうと考えた。これがモデルプロジェクトになると良い。

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## 木を用いてつくるのはハードルが高かったのでは？

木の技術は、すごく進歩した。最先端の処理技術とか、塗装の技術とか、ちょうど今だからできた。10年前だったら無理だと思う。メインの構造部分は主に鉄骨で、人が見上げた時に一番目に入る大屋根のトラス部分に木を使った。そういう木の使い方は、競技場では世界にない気がする。欧米は、人間の目線から考えるのではなくて、全体を大きなフレームで組み立て、俯瞰（ふかん）的に見ている。僕ら日本人は地上の目から、素材をとらえている。地面を歩きながら、いろいろ見上げながら見えてくるのが、日本建築の特徴だ。

## 新国立競技場の最初のデザイン案はザハ・ハディドさんによるものだったが、総工費の膨張などで白紙撤回になった

ザハさんには、設計コンペで何度も負けている。ザハさんの案は模型などで見ると格好いいが、体験してくれれば僕の方がいいと、勝手にライバル視していた。ある意味でザハさんの建築が形で勝負する時代の象徴だとすると、私の方は体験で勝負する時代の建築。形で勝負する次の時代の建築をつくりたかった。ザハさんに対して自分の思いを正直に形にしたいと思っていた。自分の立ち位置を確認する上でザハさんはありがたい存在だった。

## 設計におけるモチベーションは？

僕は10歳の時に、本当に日常が全く変わるような、五輪の前と後で全く違う状況を体験した。五輪が社会に果たす役割の大きさを実感できた。何か挑戦すれば、それなりに報われる。それが五輪をきっかけに生まれる。日常とはまた別の時間が流れるから、新しいことに挑戦すれば、みんなが喜んでくれる。

## 建築家の原点は

僕は1964年の東京五輪が開催されたときに、丹下健三さんが設計した代々木競技場を見て感動して建築家を志した。世界のどの建築よりも格好よく、日本人もすごいなという自信が持てた。特別な時間が流れ、特別な時間を体験した。だから挑戦をしようと。木を使うのはある意味、僕にとって挑戦だった。五輪だからそれができるし、未来を提案すれば、ちゃんと評価されるものと感じていた。

## 国立競技場をどう世界に発信していくか

日本は五輪がなくても注目が集まっている。今の環境保護の時代に、日本人独特の自然に対する感性が期待されている。国立競技場を通じて世界に発信すれば、今まで以上に日本のことに注目が集まる。日本にとってもビッグチャンスだ。普段は建築に関心がない人にも、日本は木を使ってこんな建築がつかれるんだと興味を持ってもらい、日本は自然に優しい文化だということを世界に知ってもらう、いいきっかけになる。

## 大会後の使われ方は？

やはり祭りの後が大事。大会後、何十年も建物は存続していく。時間がたてばたつほど木は味わい深くなって、より親しみやすくなる。この場所は明治神宮という鎮守の杜（もり）の中にあって、そこに楽しい建物があるというのは、東京全体にとってもいいことだ。

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## 国立競技場は何を変えるか

街をきつと変えてくれると期待している。丹下さんの建物はシンボルとして街を変えたが、建物は美しい彫刻であるという感じ。国立競技場は逆に回廊みたいなものとして提案している。あの周辺を楽しくさせるきっかけになってほしい。コンクリートの建築は増改築が難しいが、木を使った場合はその部分の手直しがしやすい。より使いこなしてほしいと期待している。手直しされるというのは、建物がうまく使われているということだから、むしろ大歓迎。設計者が想像していない使い方をしてくれるとうれしくて仕方がない。

## 自身の人生で競技場の設計に関わったことの位置付けは？

いろんな偶然が重なった。1964年のときに建築家になろうと思って、2020年に東京が再び五輪・パラの開催地になるとか、国立競技場が自分の住んでいる所の近くにあるとか。運命的なもので、自分ではコントロールできないドラマを感じている。

出典:隈研吾さんインタビュー 新国立「空調機に頼らず」「日本建築の特徴」

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