CONSCIOUS DREAMS

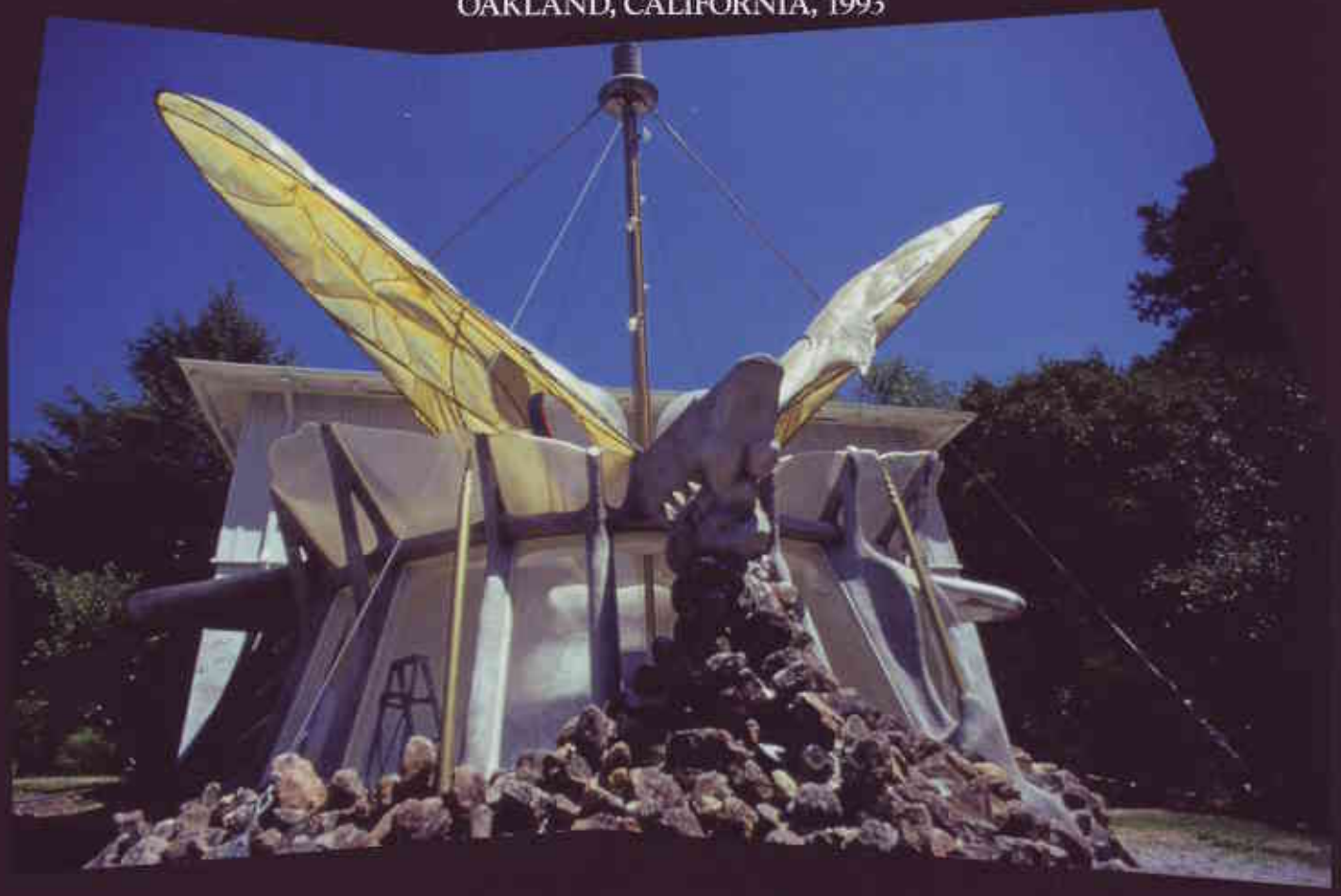
EUGENE TSUI IS A RENAISSANCE MAN WHO WANTS TO CHANGE THE WORLD BY REALIZING TRULY BEAUTIFUL AND INSPIRING ARCHITECTURE.

RAHEL WILLHARDT TEXT
TSUI DESIGN & RESEARCH PHOTOS

THIS PAGE **EUGENE TSUI WEARING ONE OF HIS OWN CREATIONS.**

REYES RESIDENCE

OAKLAND, CALIFORNIA, 1993



'INSPIRATION COMES FROM COLOUR, DETAILS – ASPECTS THAT INVITE US TO TOUCH AND TO COME INTO CLOSE CONTACT WITH A BUILDING' EUGENE TSUI

ARCHITECTURE HELPS HUMAN BEINGS TO grow beyond themselves. At least this can be said of an architecture that refuses to be confined by financial considerations, building conventions and neighbouring development. Proof can surely be found in the futuristic designs of Eugene Tsui, a resolutely determined architect who has strong convictions about nature and architecture.

Draped in a majestic cape, Tsui – a young-at-heart, 50-year-old Californian of Chinese descent – expounds the philosophy behind his work. 'The idea behind bionic design is not to copy nature, but to understand the intelligence of nature,' says Tsui with regard to his island architecture. Believing his statement is not easy, as my eyes tell me that caterpillars and other insects have played an important role in establishing the form of some of his designs. Other projects appear so fantastical and colourful that I expect a Jedi knight or Darth Vader himself to appear round the next bend.

More than an interesting organic form, the beetle-shaped floating city and its shores are capable of withstanding a tsunami. And the ligh skeletal structure of the mountain-like mega-cit another visually attractive project, rises 3.5 km into the air in the event of an earthquake. Incor-porated into Tsui's ecological living spaces for overpopulated areas are renewable energy sourc-es as well. These designs are a cross between Jule Verne's Propeller Island and Japanese Metabolism

Visionary building plans are invariably accom panied by questions. Who will inhabit these mobile islands? What about human scale in an environment with kilometre-high façades? The reply is that island inhabitants will be people wh

REYES RESIDENCE

THE EXTENSION AND RENOVATION OF THE REYES RESIDENCE WAS THE FIRST PROJECT IN WHICH EUGENE TSUI PURSUED AN 'EVOLUTIONARY' ARCHITECTURE. BORROWING NATURAL PHENOMENA AS A BASIS FOR HIS DESIGN, TSUI CREATED A BUILDING WITH MOVABLE ELEMENTS THAT RESPOND TO THEIR ENVIRONMENT. A GOOD EXAMPLE IS THE RECREATION ROOM, WHICH FEATURES A WING-LIKE ROOF WITH HINGED FIBREGLASS 'DRAGONFLY WING' STRUCTURES THAT OPEN AND CLOSE WITH THE TURN OF A CRANK. IN MANY CASES, THE ORGANIC FORMS IN THE HOUSE CAME ABOUT THROUGH EXTENSIVE IMPROVISATION. ONE SCULPTURAL INTERIOR FINISH, FOR INSTANCE, IS THE UNDULATING WALL TREATMENT ACHIEVED BY APPLYING A TYPE OF FIRE-RESISTANT PLASTER OVER ROPE 2.5 CM IN DIAMETER.

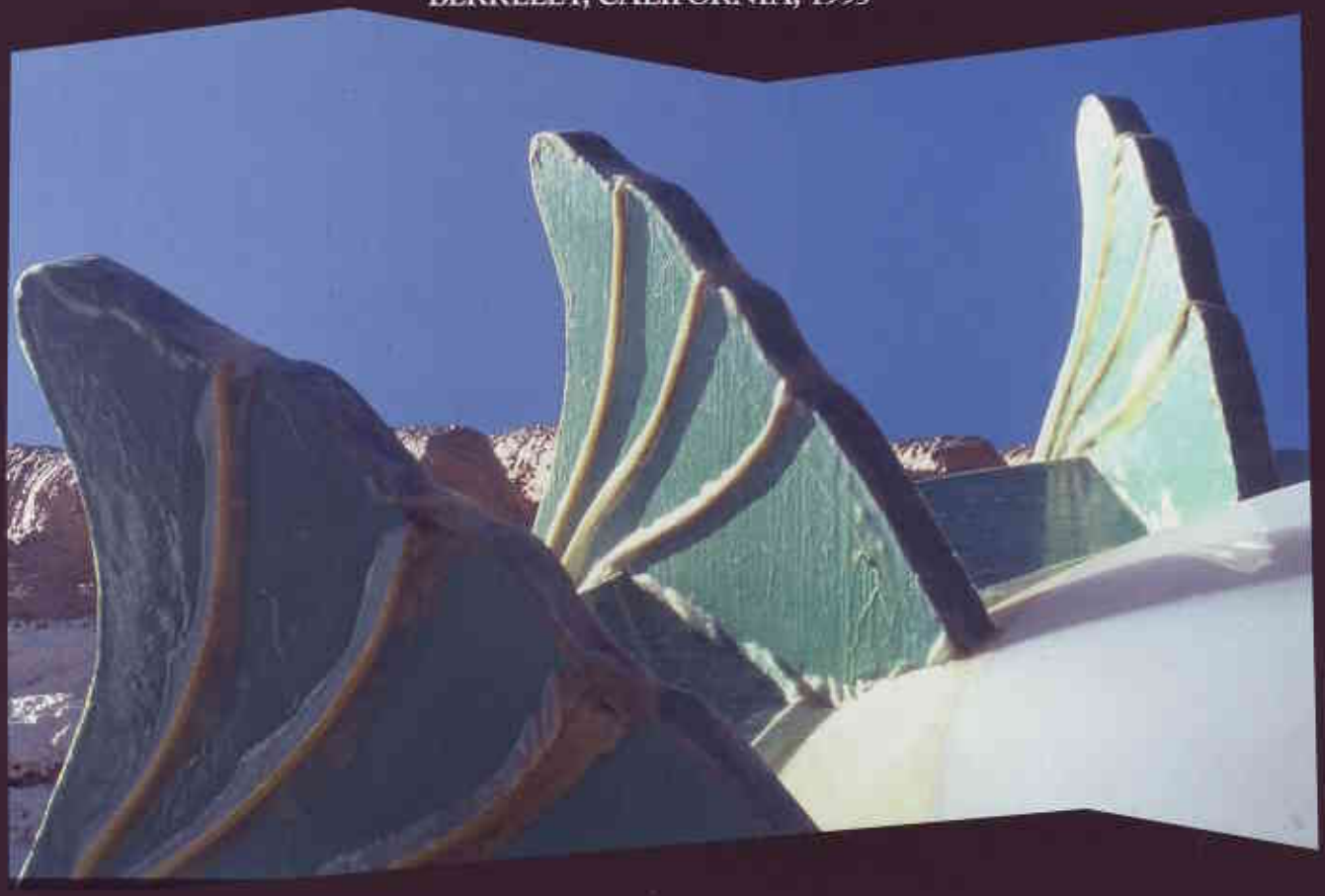
are interested in a life unhampered by national identity. And the scale of the façades is as natural as that of any glacier. The human connection is revealed in the interiors, explains the architect. Later, he eloquently illustrates his point by showing me several offices and some of the dozen detached houses that he's designed, all inspired by nature and, for the most part, located in the United States. Highly imaginative sculptures with cave-like spatial effects, these works will not countenance any clash between the graceful concrete walls and the interior spaces. Many are reminiscent of Bedouin dwellings, whereas others, provided with round windows and anchored by cables, have a ship-like atmosphere. Yet others, with their large-scale references to Art Nouveau, resemble futuristic designs for the theatre. Common to all is the love of decorative detail, preferably carried out with recycled or natural materials, such as shells. I saw offices with built-in flowerbeds and colossal water basins slung under a glazed roof to assist the air-conditioning system.

In the case of Tsui's built work, of course, the principles of construction borrowed from nature are essential to the form. Sometimes this form is that of an indestructible being like the tardigrade, a creature that served as inspiration for a house built to withstand natural forces like earthquakes and floods. Sometimes it is the wings of a dragonfly, which suggest a new way of regulating light and air in a building. Tsui creates inhabitable sculptures with an extraordinary quality of life, around which a few architectural mysteries continue to hover.

Dr Tsui, you've been quoted as saying that if architecture fails to address our emotional needs it is not architecture. How many examples of architecture fitting your definition have been built so far?

TSUI RESIDENCE

BERKELEY, CALIFORNIA, 1995



SOME PROJECTS APPEAR SO FANTASTICAL AND COLOURFUL THAT I EXPECT A JEDI KNIGHT OR DARTH VADER HIMSELF TO APPEAR ROUND THE NEXT BEND

Very few. Our general environment does not encourage the human condition. But that's where architecture begins. It awakens excitement, makes people feel creative, arouses a desire in us to be more than what we are. When we are conscious of these feelings, we care about our environment and are willing to participate actively in the future. That's where architecture exists.

Can you give me an example of the type of architecture that inspires people?
Let's say Gaudí, for instance. You probably know that people who want to live in Casa Mila are added to a four-year waiting list. They love the building. They love being in a creative environment. Inspiration comes from colour, details – aspects that invite us to touch and to come into close contact with the building.

It seems that people either fall instantly in love with your designs or don't like them at all.
Yes. For investors, my work is a no-go, because to them it has no resell value. Ecologically minded people are enthusiastic about this architecture, and so are those who are not afraid of being different. With the turn of the millennium, there was an overall increase in understanding. People seemed to realize that we must stop looking backwards and focus on the new century. All of a sudden, I got a lot of calls. It was remarkable. A farmer and a priest in Wisconsin, for example, wanted a centre of ecology shaped like a giant ring. Someone else wanted a hurricane-proof building. And so forth. Then 9/11 happened, and now there is that fear again about the economy and terrorism. Architecture is very much affected by the wellbeing of society.

TSUI RESIDENCE

THE 220-M² HOUSE THAT TSUI LIVES IN IS A PRECISE ELLIPSE IN PLAN AND CONTAINS FOUR BEDROOMS, THREE BATHROOMS, A CIRCULAR LIVING ROOM, A SUNKEN OUTDOOR PATIO AND A CARPORT. THE DUAL-LEVEL STRUCTURE UTILIZES A SYSTEM OF RECYCLED STYROFOAM AND RASTRABLOCK REINFORCED WITH STEEL AND CONCRETE, MATERIALS WITH WHICH THE ARCHITECT ACCOMPLISHED AN OBJECTIVE HE AIMS FOR IN NEARLY ALL HIS DESIGNS: THE REALIZATION OF A BUILDING THAT IS FIREPROOF, WATERPROOF, TERMITE-PROOF AND EXTREMELY EARTHQUAKE-RESISTANT. 'THIS STRUCTURE IS BASED UPON THE WORLD'S MOST INDESTRUCTIBLE LIVING CREATURE, THE TARDIGRADE,' SAYS TSUI. 'INTERNATIONALLY TOUTED AS THE WORLD'S SAFEST HOUSE, IT FEATURES AN OVAL, REINFORCED-CONCRETE FOUNDATION OVER A SERIES OF LARGE PERFORATED DRAINPIPES THAT IMMEDIATELY DISPEL ANY WATER BUILD-UP.' THE HOUSE HAS NO STAIRS. HIGHLIGHTING THE CORE LIVING AREA IS A SUSPENDED SPIRAL RAMP WITH STEEL CABLES RADIATING FROM THE SKYLIGHT. THE UPPER LEVEL FEATURES A SERIES OF SPECIALLY DESIGNED TRUSSES MODELLED ON THE BONE MARROW OF A SEAGULL. SUBSURFACE SOLAR TUBES FOR HEATING WATER ARE POSITIONED TO CORRESPOND TO THE SUNBEAM MOTIF ON THE UPPER HALF OF THE EXTERIOR WALL. THESE TUBES HEAT WATER THROUGHOUT THE DAY AND RADIATE THE STORED HEAT INTO THE INTERIOR AT NIGHT. THE SUBSURFACE SOLAR-HEATING SYSTEM WAS CONCEIVED BY STUDYING THE BONE AND CAPILLARY STRUCTURES OF TWO DINOSAURS, THE DIMETRADON AND THE STEGOSAURUS. BOTH REPTILES UTILIZED A FORM OF BIOLOGICAL SOLAR HEATING.

How do people react to your built designs?
Motorists stop their cars just to look at the buildings, even those designs that are ten years old. Partly it's because they stand out so much from their surroundings. Neighbours, in particular, are afraid of this. My houses get a lot of criticism before they are built and for a while after they are built. But in the end they prove to be inspiring for many. An owner of a resold house, who didn't know that I was the architect, once told me that the house had influenced his decision-making to the point of changing his life. Three months after he moved in, he decided to quit law school and become an artist, a choice that made him happier, as well as his wife and kids, who responded to his new-found happiness.

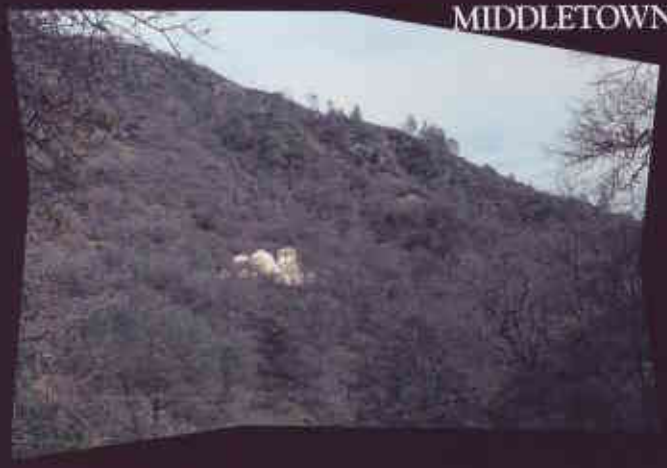
You are not just an architect. You are an artist and a designer of fashions and furniture. As an amateur boxer, you became Super Middleweight World Champion. You've won countless medals in gymnastics and have given guitar concerts. Can you summarize your mission in life?
To change the world we live in and to raise the level of possibility of freedom and creativity for everyone in every culture. That's a big dream!

Marx tried to do the same.
Who? Marx? Yes, I know. But it didn't work. You cannot change people by imposing a structure on them. You have to change people from the inside, by generating in them the desire to be more than they are. Years of experience have given me the feeling that I can do this.

Retail architecture also puts a lot of effort into influencing human behaviour. Can you explain the basic differences between a Tsui house and a shop design?
You have to recognize the distinction between

WATSU CENTER

MIDDLETOWN, CALIFORNIA, 1996



WATSU CENTER

ON A MAJESTIC HILLSIDE IN NORTHERN CALIFORNIA IS AN UNUSUAL BUILDING CONSISTING OF FIVE SPHERES, EACH WITH A GROUND FLOOR AND AN UPPER STOREY. THE COMPLEX ACCOMMODATES A SCHOOL OF THERAPEUTIC MASSAGE CALLED WATSU, WHICH IS PERFORMED IN WATER. THE SPHERES CONTAIN CLASSROOMS, OFFICES, SLEEPING QUARTERS, RESIDENTIAL QUARTERS, A KITCHEN AND A STUDIO. EACH SPHERE IS SURROUNDED BY A CONTINUOUS TROUGH OF WATER, ABOVE WHICH ARE A SERIES OF HOLLOW TUBES THAT DRAW IN FRESH AIR, WHICH IS COOLED AS IT MOVES ACROSS THE TROUGH. ONCE INSIDE, THE AIR WARMS AND RISES, PASSING THROUGH A SERIES OF OPEN VENTS ALONG THE PERIPHERY OF THE UPPER FLOOR AND CONTINUING TO RISE, FOLLOWING THE CURVING WALLS OF THE SPHERE UNTIL IT REACHES THE PEAK, WHERE IT EXITS THROUGH A VENT.

work with a utilitarian purpose and work with an emotional and artistic purpose. The function must be there, of course, but it has to go much further than function. My personal motivation is to activate people. To share the feeling that we can create beautiful things. You may well wonder what architect doesn't think his building is beautiful. But I think if you would ask architects for a serious answer, not many would choose the word 'beautiful' to describe their buildings.

Do you have an affinity with certain contemporary architects?

My favourite architect is actually the artist Niki de Saint Phalle, who did 12 beautiful, giant buildings in Tuscany. And there's a Mexican architect, Javier Senosiain, who is building sculptural works that look like a snake or a shark coming out the ground. Others are British architect Kathryn Findlay, who made the starfish house, and Friedensreich Hundertwasser. Some of the more recent architects start to be creative and end up with a result that's very machine-like. There's a coldness to it. And I think this is wrong. I even find something lacking in the work of Norman Foster and Daniel Liebeskind. I have a problem with how they finish a building. It can be perfectly put together, but the human element is missing. Part of it is not the fault of the architects but the fault of the training of architects. Architecture students are pushed to see things from a distance. They are not seeing the experience – what it is like to be in and around the building. Schools don't teach that. They teach the overall concept, the 3D model. What about the experiential aspect? That's what a building is. You experience it.

Your sketches favour the freedom of creation. How do you incorporate structural requirements?

'FOR INVESTORS, MY WORK IS A NO-GO, BECAUSE TO THEM IT HAS NO RESELL VALUE' EUGENE TSUI

I work simultaneously from the outside in and from the inside out. My first concern is always the purpose of the building. It has to do more than simply stand up. It has to be aerodynamic and to withstand earthquakes, hurricanes, tsunami waves, flooding and fire. I tend to address the extremes and not just ordinary conditions.

You built a house in California with a structure based on the world's most indestructible living creature.

In that case, the requirement was to build a house that would be as indestructible as possible. Part of taking that prerequisite seriously was to find the most indestructible thing in nature, and it turned out to be the tardigrade. Studying its structure, I saw that the creature is a sort of oval combined with a series of parabolic arches, and its profile features a catenary arch as well. The oval and the arches have the ability to dissipate and spin off stress that's applied to the tardigrade. So that's part of the secret. And I applied my discoveries to a building.

Your main idea is to translate natural shapes into architecture?

No, no. The most important is: how do you make the building the ultimate answer – one that cannot be improved – to the requirements, whatever they may be. The reason why nature is good at coming up with the best solution is that nature works by finding the ultimate answer to any given problem. That's what I try to do. Take the dragonfly house, for example. I felt this was the ultimate solution: wings that would open and close to cool and heat the house, to create light and fresh air, to offer a view of the sun and the stars...

ECOLOGICAL HOUSE OF THE FUTURE

BAO AN, SHENZHEN, CHINA, 2002

ECOLOGICAL HOUSE OF THE FUTURE

THIS PAVILION WAS DESIGNED AS A MODEL RESIDENCE FOR VISITORS TO THE SHENZHEN CITY SEASIDE GARDEN ECOLOGICAL PARK. ITS INTENTION IS TO EDUCATE THE PUBLIC ABOUT THE NEED FOR DWELLINGS THAT UTILIZE AND INTEGRATE ECOLOGICAL TECHNOLOGIES. AN INDOOR CATCH POND AND WATER CHANNELS CONNECTED TO A ROOF POND CREATE A RECYCLING WATERFALL THAT AERATES WATER. THE CATCH POOL IS A MAN-MADE WETLAND FILLED WITH SPECIAL BACTERIA-EATING WATER PLANTS AND MARINE LIFE. THE POOL OF WATER ABOVE THE LIVING AREA FILLS THE PAVILION WITH A DRAMATIC AMBIENCE AS SUNLIGHT REFLECTING OFF MOVING WATER GLISTENS, GENERATING A FEELING OF BEING UNDERWATER IN A SWIMMING POOL. DOMICAL SKYLIGHTS OPEN AND CLOSE BY MEANS OF A TWISTING MECHANISM, ALLOWING FRESH AIR TO ENTER AND HOT, TRAPPED AIR TO RISE AND EXIT. THE HOUSE IS MADE OF SPRAY-ON CONCRETE OVER STEEL REBAR. BROKEN SEASHELLS AND GLASS MARBLES HAVE BEEN APPLIED INSIDE AND OUT FOR AN ARTISTIC EFFECT.

How do you cope with the difficulty of getting your proposals off the ground?
That cannot be helped. But it is heartbreaking. I've been talking to Norman Foster's people. They say that one in ten gets built. Even them! This is why I'm pushing in another direction – following a path that I call 'absolute architecture'. Surprisingly creative architecture sometimes requires the architect to step in and become the real-estate developer, in an attempt to educate the public about the possibilities of architecture.

What role does product design play in your overall plans?
There are three ways of working: for clients, with research grants, and from a personal 'I just want to do this' feeling. Let's look at it in terms of fashion design. The clothes I wear show that I'm a person who talks about self-expression and who is living what he says. If I did a suit for you, I'd ask you to tell me your favourite colour, texture and material. We'd discuss your outlook on life and what you do. I'd adapt the basic outfit or even radically change it to meet your needs. But many people are not brave enough to wear a cape, for example, even at a time when actors wearing capes are in one movie after another: think of Lord of the Rings and Harry Potter. If it's freezing cold outside, why not wear a nice, warm cape? It requires a certain sense of self-confidence. When you wear a cape, people are going to look at you. It's something I've experienced all my life. If you decide to be yourself, you have to face the consequences. You'll be singled out, because we live in a world with little evidence of individuality. We have succumbed to monotony.

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