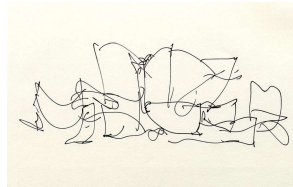


“I am interested in finishing the work, but I am interested in the work not appearing finished, with every hair in place, every piece of furniture in its spot ready for photography.”



“I prefer the sketch quality, the tentativeness, the messiness if you will, the appearance of in-progress, rather than the presumption of total resolution and finality.”

“I love the texture of this paper and I love the fact that you can do this. That I can just go, I never take the pen off. So, I would make shapes like this... tactile...”

“You have to hold the image in your head while you’re doing it, and I can’t hold the image for longer than 3 minutes, I think I made 3.4 minutes once, I clocked it.”

These are comments by Frank Gehry, describing his **work as inspired by the sketch**. He begins every project by sketching, quick gesture drawings, often a single **continuous line**, a **race against decay**, quicksilver play to **capture the fleeting idea**, the feel, the essence.



1:05

From the very beginning and throughout his career, Gehry has been exploring this **quality found in sketches, raw, course, natural**.

He has this example, where he rips a piece of paper,



creating a **raw, irregular, natural edge**.



For him, the eternal challenge is to **replicate the essence and feel** of this rough, raw, **soft edge from the hard**, standardized, manufactured materials in building construction.



1:10

In 1969, designed and manufactured a line of furniture called **Easy Edges**, made from corrugated cardboard **layered in cross-laminations, die cut**, and glued



to create a **lightweight, durable**, and **inexpensive** (\$15-\$115) furniture. In fact, to demonstrate the structural strength, he set a VW car atop three chairs.



The design drew from the **continuous line of his sketches**, exploring this idea of creating a **soft edge from hard materials**.



This continuous line parti became a **snake motif**, a metaphor for the irregular, rough, sketch quality, continuous line thread that would continue throughout his career both literally (snake lamp) and metaphorically.



In 1979, the Easy Edge furniture line morphed into **Experimental Edges**, made by a similar process, but with a commercial cardboard commonly used in hollow-core doors. Just as solid, but with a shaggy, **ripped edge of paper**.



Although never produced and sold commercially, this new variation came closer to Gehry's pursuit of **replicating the soft edge**.

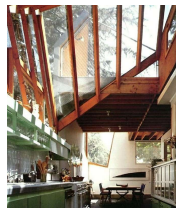


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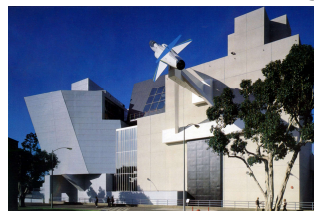
In 1978, addition and renovation to his two-story, pink, gambrel roof bungalow on a corner lot in Santa Monica. Continuing his **resourceful use of commonplace** materials, as in his corrugated cardboard furniture, he utilized **corrugated metal, chain link fencing, plywood** and **exposed wood stud framing**.



More importantly, these materials used in an architectural context became a cometary on the **pervasiveness these harsh materials in the urban environment**, without design intent, a consequence of low cost containment/security.



For Gehry, these were **democratic materials**, low-cost **affordable**, of the vernacular, **every-day environment**, making a statement on the **politics of architecture**, the psychological impact of the harsh materials making up the urban environment.



1:25

From 1982-87, tapping the Venturi notion of architecture as billboard, Gehry experimented with a series of **'duck' buildings**, beginning with the California Aerospace Museum (Los Angeles, 1982).



Binoculars on the Chiat/Day Building (Venice, 1985)



and then most significantly, Fishdance Restaurant (Kobe, 1986)



At that time, this new wave of Post-Modernist architects such as Venturi, were looking back in time, using **historical references in their architecture**. Gehry thought, if you are going back, why not way back? 300 million years, to fish.



So, Gehry studied the **Japanese paintings** of fish (Hiroshiga),

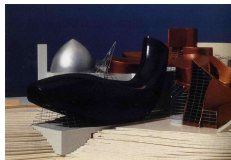


1:30

More important than a literal reference, the fish became a **study in movement**, a way to eliminate the static nature of architecture, create a dynamic sense of flow. And, how to construct such forms, both **structurally** and **external envelope**.



Fish, like snakes, became a motif reoccurring throughout his career, in his pursuit of creating movement in architecture, the way the Japanese painters did with fish.



Around this time, he was commissioned to do a pool addition (**Lewis house**, 1987)



1:35

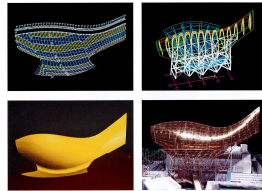
And what began as a collection of forms (fish, snakes, geometries), evolved into a single form as **collage** in the Vitra Design Museum (1987)



This translated into a third iteration in his furniture designs (Bentwood, 1989), replacing cardboard with wood, maintaining **lightness**, curvature of **line**, and **soft edge** by **weaving thin strips of laminated maple veneer**.

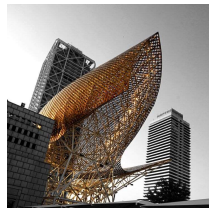


Collage weaving led to Vila Olimpica hotel (Barcelona, 1989), with the **tail, head and fins cut off** the fish



1:40

More importantly, use of **CATIA** (Computer Aided Three Dimensional Interactive Application) a French aerospace industry software (Dassault Systemes),



to increase the sophistication of **structural design, connection details**, and the **smoothing of surface envelope**, not possible with traditional drafting methods. **Surfaces curving in two directions, structural members curving in two directions, and slumped envelope forms.**

“The computer is a tool, not a partner. An instrument for catching the curve, not for inventing it.”

“The more we can migrate the physical world into the computer, the more we can set it free, reconsider reality from a new perspective.”



1:45

CATIA also enabled **calculation and fabrication of cladding** for the exterior envelope of complex surfaces curving in two directions, creating a collage of forms on the Frederick Weisman Art Museum (Minneapolis, 1992).



Stainless steel, flat lock seam panels, enabled an architectural form without differentiation between roof and walls, one **continuous sculptural form**.



While the rest of the industry's designs were limited by their off-the-self architectural software, Gehry **developed his own, modifying CATIA**. Enabling him to create forms previously impossible



in a **variety of materials** (Nationale-Nederlanded Building, Prague, 1992).

1:50

[10 minute break]

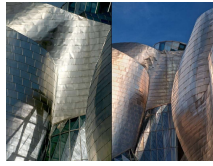


2:00

In 1994, all of this came together in Gehry **signature work**, Guggenheim Museum in Bilbao, Spain.



Visible is the **movement of the fish form** and the **sculptural continuity** without differentiaition between roof and wall,



2:05

On a more conceptual level, Bilbao displays Gehry's handling of materiality that made his name with the renovations to his home back in 1978. By using thin titanium metal panels, critics pointed out the 'oil cans' and the rattling noise they created when **blowing in the wind**. Museums historically were made of stone, creating a sense of weight, importance.



Through the **use of soft, sensuous, curvilinear form**, with the sense of **lightness and movement of a flying Dutchman**, the slightest turn of the wind creating luft and flutter of the sails, transformed the building **beyond physical materiality** to the **realm of ethereal poetic metaphor**.



2:10

During this time period, from 1987-1995, Lewis house went through dozens of iterations, a **laboratory to study and develop these ideas** before realizing them in these larger built works.



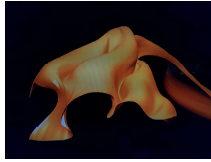
One of the develops occurred in when a piece of **fabric was placed on a study model**



Inspired by the marble figures of Claus Shluter and what Gehry calls the 'dip', was trying to create the **sense of softness with hard materials**, as the historic sculptors and painters have done.



Fabric was waxed, to manipulate the form in model,



then recorded digitally with a three dimensional scanner, transferring the models dimensions and coordinates onto the computer, to be manipulated and smoothed,



the digital design is then fabricated in a scaled model, to confirm material and connection details before full scale construction on site (Pariser Platz 3, Berlin, 1995).



2:15

However, with all of these physical and metaphysical manipulations of form, the most important aspect for Gehry is what he refers to as the humanity in architecture.



Returning to 1991, Walt Disney Concert Hall (Los Angeles), featured in the 5th International Exhibition of Architecture of the Venice Biennale, the first curvature distortion of the rectilinear box, by the slightest torque of the corners,



It was the acoustical studies at 1/10th scale models, to understand and control the musical experience.

“So the audience ‘feels’ the orchestra and the orchestra feels the audience, so they play better, and then the audience likes them better, back and forth, ...”

“What I always look for (in the architecture) is the humanity of it, (how the architecture affects you)”

“It gets very emotional, these things.”



Donor's wall, typically engraved in marble, is **laser cut in fabric**. From across the entry hall it appears like a granite wall, but in reality refers back to the **commonplace materials of his house**, the **transformation of material as in Bilbao**, while also speaking to the technology of today with the **CNC letter engraving**.



2:20

In 2000, Conde Nast Cafeteria in New York, utilized CATIA to **slump glass** in complex forms, curving in two dimensions.



Pushing design, materials, fabrication, and technology forward.



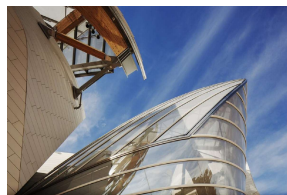
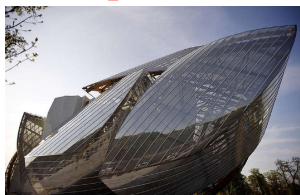
In 2014, **Foundation Luis Vuitton** in Paris did with glass, what Bilbao did with metal panels.



At unveiling: "I want everything to look like my drawings."



for this building, the **metaphor of a cloud**.



2:25