

Introduction

Behrens and Mies maintained deep connections with the ongoing classical tradition in their new architecture of steel and glass. They used classicism to tame technology.

There are also other ways of exercising aesthetic control over standardization and mass production.

7.1 The Dom-ino

L'Esprit Nouveau → written by Le Corbusier in 1921.

He wrote propaganda for what he called “a new architecture”

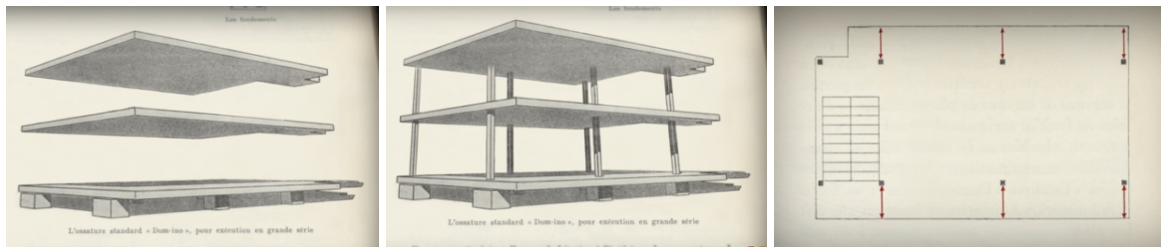
We must create a mass-production spirit for the mass-produced house. He was beginning to conjure a new architecture that would respond to the challenges imposed by modern industrialization and mass production of houses using standardized building parts.

"A great epoch has begun.
There exists a new spirit.
Industry, overwhelming us like
a flood which rolls on toward
its destined ends, has
furnished
us with new tools, adapted to
this new epoch, animated by a
new spirit.
The problem of the house is
the problem of the epoch."

He also wanted to reconcile these challenges with the great architecture of the past. For him, that was the classical architecture of Greece and Rome → A Machine For Living.

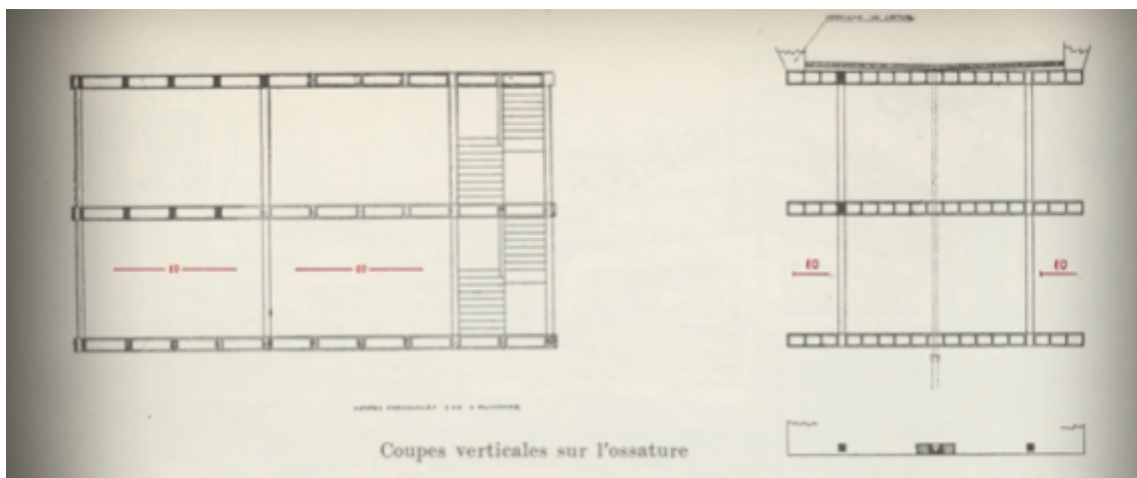
The Dom-ino house

- Conceived in 1914
- More of a diagram than a building
- It was a superstructure, a chassis onto which any number of variations of houses could be outfitted.
- Not bound by room layout or decorative trim, there's no enclosure yet, no walls. Just plan and section.
- Understood as a primitive hut for the modern, an emblem, a paradigm of mass production and standardization.



Structure

- 3 horizontal slabs, the first slab is on six box-like footings that raise it slightly above the ground
- The columns, that seem to go through the slabs, hold up the next two slabs
- It's to be read as a constructional integer, a unit that would be the basis for any building
- The columns are set back from the long side of the slab, but very close to the short side of the slab, which makes a clear differentiation between front and side. Important to notice, because we'll come to see how he develops that.
- The columns also mark off equal bays, which makes a kind of rhythm, proportional relationship between the bays
- The footings emphasize the building's relationship with the ground. It's neither buried or really suspended, just pulled up.



Objet-type

- The dom-ino is an example of what Le Corbusier called an objet-type, object type
- He celebrated the grain silos in North America, storage containers, automobiles, ocean liners and other things from the machine age that he saw as materializations of pure form
- The volume of these object types were important to him, but also how they had been refined over time
- In his paintings, he also painted a lot of daily life objects: glasses, plates, pipes, bottles, guitars, pianos. He was interested in them because of their simple shape and contour, but he thought that even daily life objects, viewed in light, could trigger fundamental sensations and effects

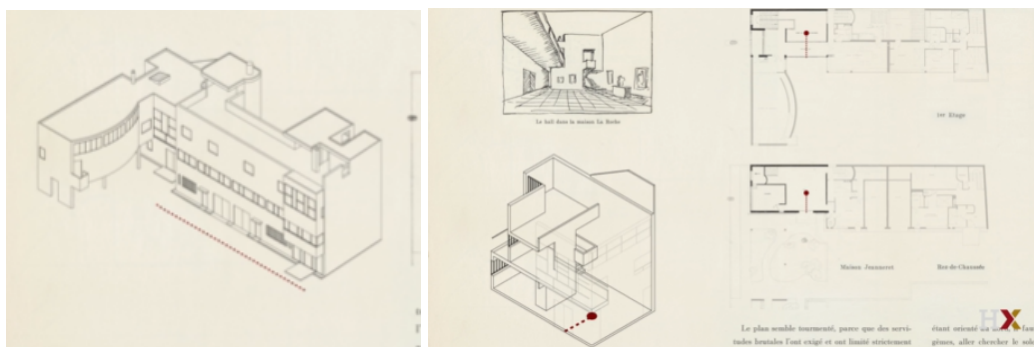
Example



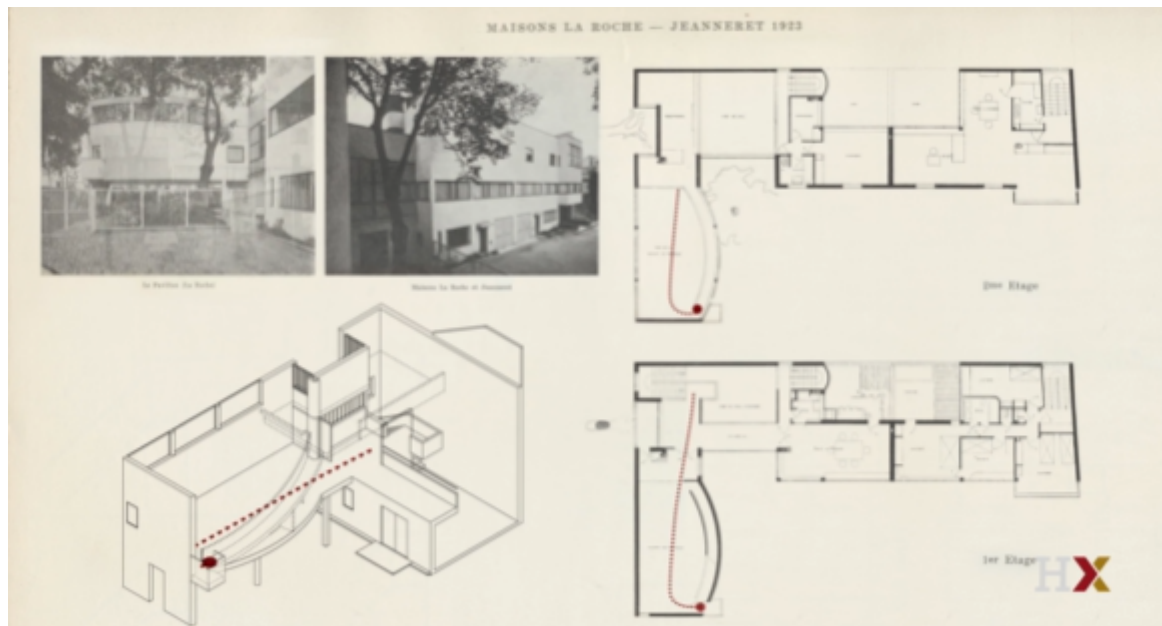
- Comparison between ancient temples and automobiles
- He understood that the Greek temple was a kind of objet-type that had, over centuries, been evolved and refined and had become more perfect
- He compared that with automobiles, which also were refined and improved over time
- He makes the point that in both cases, one has to start with the standard of a strict diagram in order to move forward to perfection
- The lesson is that the ancient temple and the modern automobile are objet-type that can be refined over time, but you have to start with a standard diagram to achieve that perfection

7.2 Villa La Roche - Jeanneret

- Designed an L-shape building where families could live. The bridge between the two sections would be a gallery that was raised up off the ground on columns. That elevation was treated as a terminus of the cul-de-sac.



- You approach the building toward this curved surface
- Turn 90 degrees to the right to enter the La Roche house
 - Three story hallway, a prism with an area that's nearly equal to all the other major living spaces combined
- When you go up the stairs, at the very top there is a balcony and you're immediately oriented back to the space of the entry hall, to the open space where you just came from
- From there you can choose multiple paths that take you to further 'moments of stasis'



Every view of the geometry and the compositional features of the house must be taken in as a result of movement. Through walls, surfaces, around figures. The motion is choreographed in a narrative of pure form.

The house is perceived as a geometrical construction by walking through and around the main space, in a process of rotation through the space.

There are moments of pause in this movement, that are designated by balconies, handrails, where you can rest. Maybe an aperture, or a window where you can register your body and measure it against your surroundings.

During these moments of stasis, you look across the space in a frontal way. The moment of status establishes a perception of frontality, context.

2 kinds of, what we might think of as knowledge/information produced by this:

- Frontality is normally perceived at a distance, at a prospect. It might be something you scan, but you're usually looking at it in a kind of perspective that produces a pictorial space.

- Pictorial space is a space that is very like that in Le Corbusier's painting, is a space that cannot be entered or circulated through. It's viewed from a distance, assigned a frontality, and it gives order to that frontal sensation.
- Against this, Corbusier stages a different kind of experience
 - It produces a different kind of knowledge, that one can only have by being up close to things. It requires movement through and around space.
- The dialectic of frontality and rotation combine to produce a kind of spatial and formal knowledge. That produces architectural information in the architectural imagination.

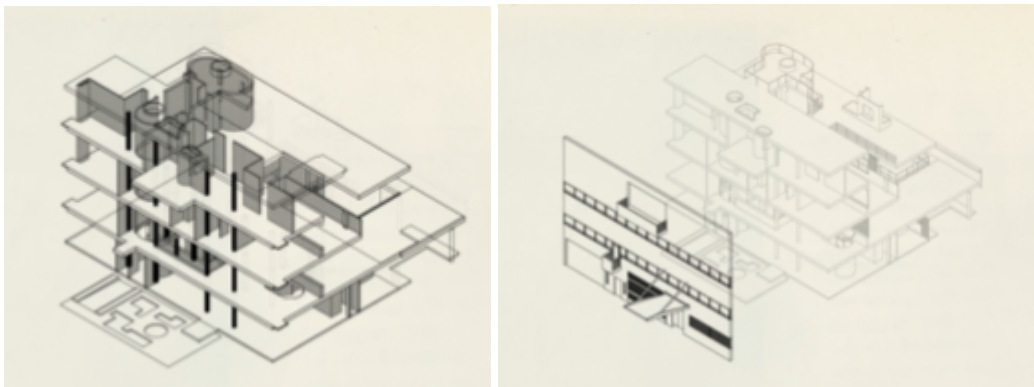
At Villa Roche, he was able to explore some of the properties of the Dom-ino diagram

- The use of reinforced concrete system
- Horizontal slabs which allow the free arrangement of program and circulation
- The non-load-bearing wall
- The relationship to the earth where he explored raising some of the rooms on pillars

He wasn't able to explore all of the dom-ino system, but what he found was a way of supplementing the system with a formal vocabulary for architecture

The objet-type from his paintings (bottles, plates, guitar contour) could provide such deep effects when experienced visually, he wanted to make analogs of those object types in the architecture. The balconies, apertures etc. became architectural vocabulary that was analogous to the objet-type in the paintings and supplemented the objet-type of the Dom-ino system itself.

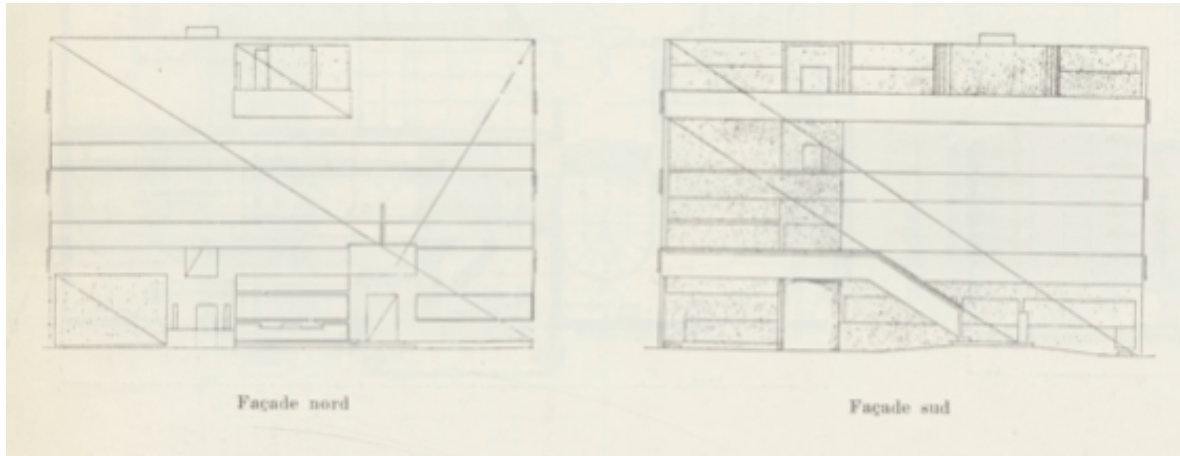
7.3 Villa Garches



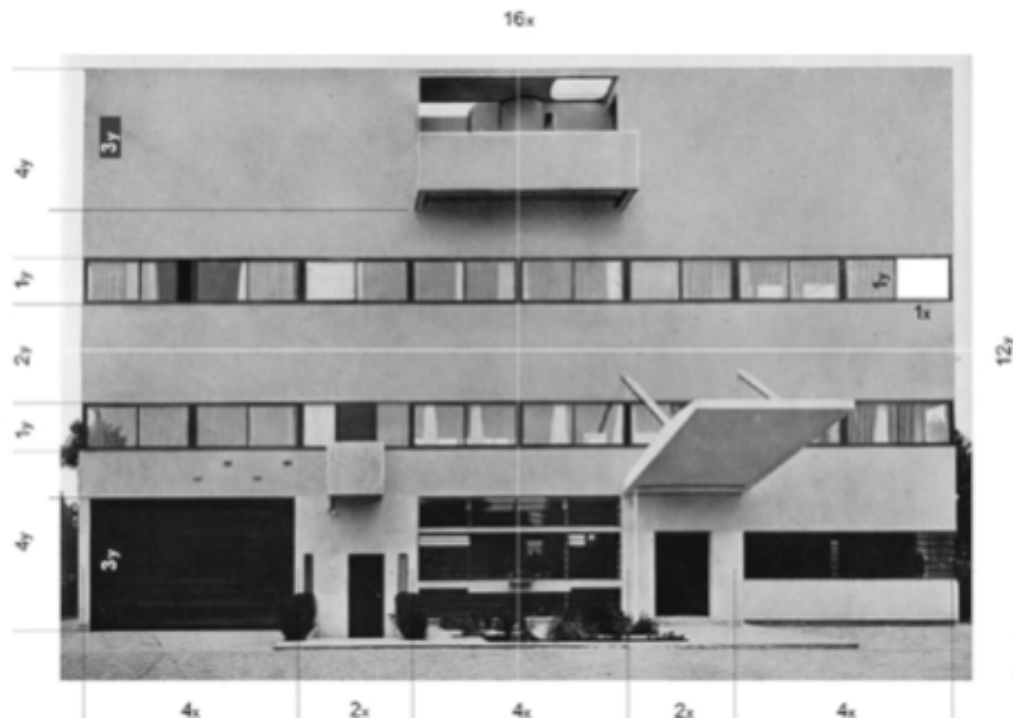
The villa

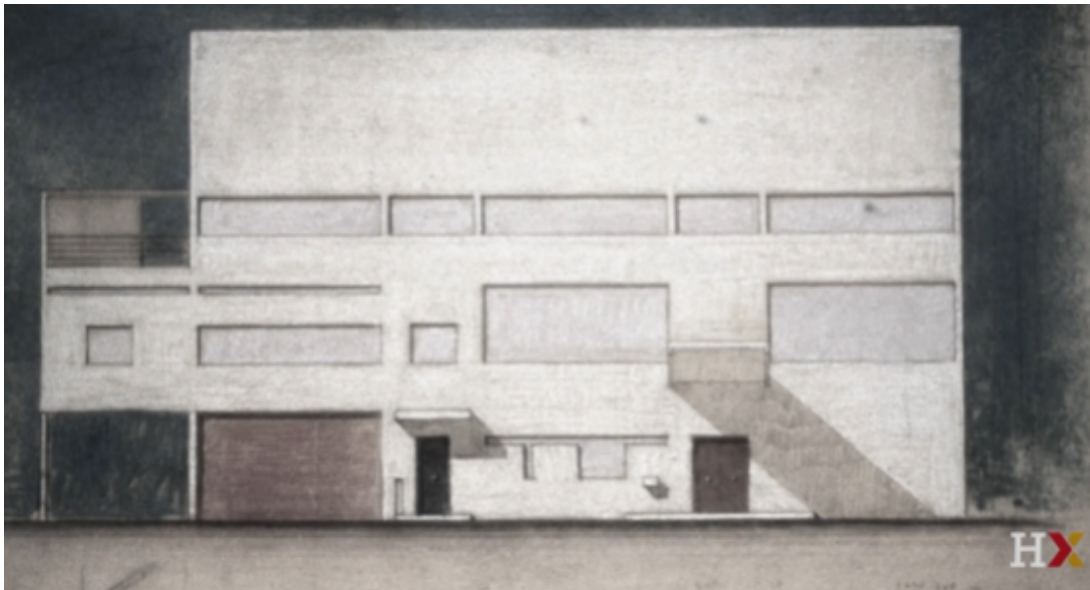
- Is a very different kind of translation of the Dom-ino system into a suburban house
- Has all the features: column grid, horizontal slabs, its relationship to the earth
- Separation of the structural columns from the interior walls, non-load-bearing walls with ribbon windows/elongated windows
- There's a balcony that projects in front of the wall plane, furthering the implication of pulling the columns back

- There's again this idea of movement and stasis, frontality and rotation
- When you enter the site, the building is already slightly off-centre, so there's already the idea of an implied need to rotate

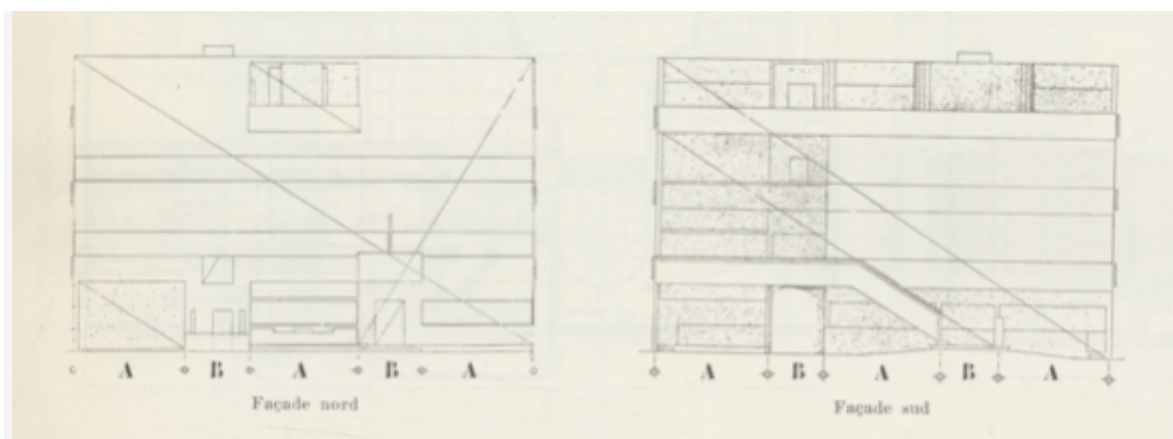


We can also start to perceive, even if it's unconsciously, regulating lines of the facades. Diagonals from the top corner to the opposite bottom corner. Other lines that are developed off that diagonal, either parallel or perpendicular. It gives the sensation of a very strict order, but at the same time it allows for endless variations of openings, balconies, punctures.





The wall envelope/wrapper defines that volumetric quality that Corbusier sees as defining objet-type. The column grid at Garches, is not the square column grid of the Dom-ino plan. It's rather a kind of geometric grid that has a rhythm of base sizes.



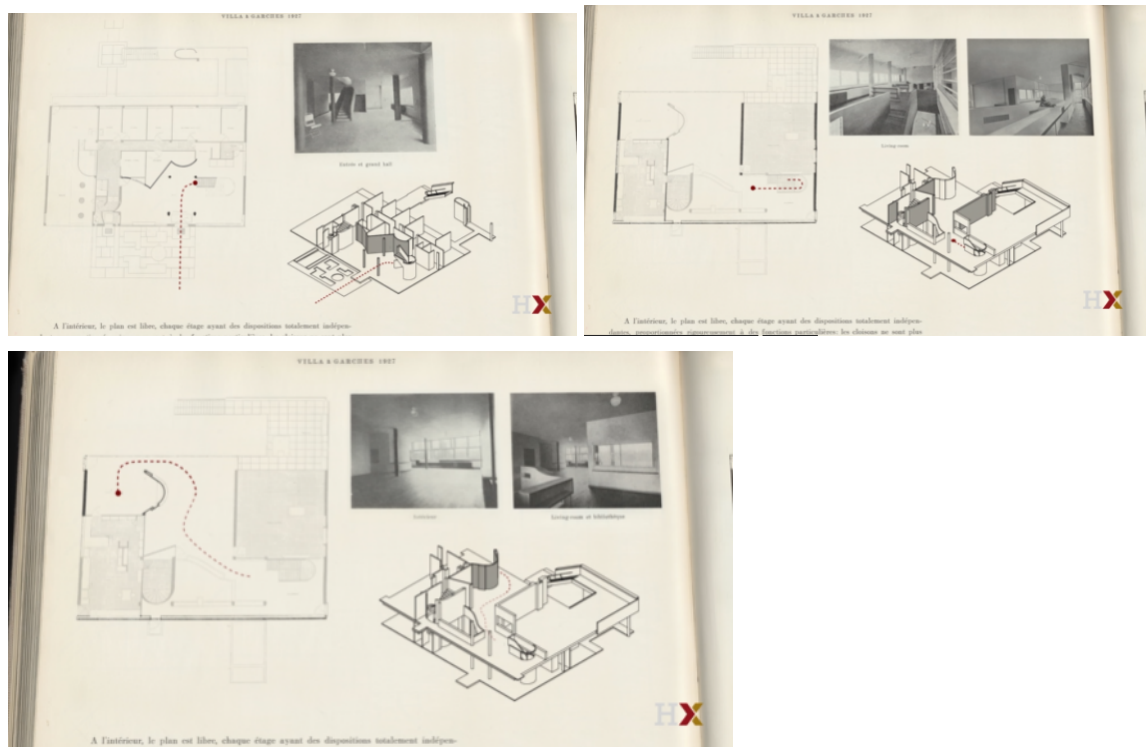
A - B - A - B - A. Or the proportions of the base is 2 to 1, 2 to 1, and 2.

Colin Rowe (historian) compared the patterned geometric grid with Palladio's Villa Malcontenta. Within the column grid, free of the structuring function of that column grid, are curvilinear stairwells and rooms with curved partitions that are very similar to those objet-type of Purist paintings. Many critics have seen the villa as something like a 3D Purist painting.

Corbusier himself saw the curved shapes inside the column grid as what he called 'compressed organs' of the house. Often the curves indicate spaces of intense bodily performance, like a stairwell.



On the front of the house is a main entrance, with above it, a large awning. Located symmetrically to the main entrance is another smaller service entrance, but above that entrance there's a small balcony. This way, there's some kind of symmetry, but it's not exact repetition.



When you enter the entry hall, there are freestanding columns. Because they are freestanding apart from the wall, they operate almost like a little framing device that creates a moment of stasis after the long movement along the side of the building and through the front door and into the entry.

We then see a curved wall, symmetrically placed within that frame. Also a diagonal wall to the left. Those spatial forces almost compel us to turn to the right and find the main stair that will take us up to the primary second floor.

The vertical surfaces that divide the space on the second floor are perpendicular to the two long outside walls. The curvilinear wall of the dining room also makes an enclosing space for the dining room, it has a view on the garden. But the curve also sets up an axis, which defines the center of the living room on the opposite side.

This is again a more complicated version of rotation and frontality.

On the top floor, there's an enormous terrace with a sauna. The sauna is also like a compressed organ of the building. It's a very intense bodily space. It has a lozenge-ish shape, like a little organ. He also placed it there to make the terrace kind of look like an ocean liner. It is a healthy space, but also an industrial space. Corbusier thought it represented modern industry and modern spirit.

7.4 The Five Points of a New Architecture

After being able to develop and refine some of the attributes of the Dom-ino system in actual buildings, Corbusier developed his manifesto of "The New Architecture" → The Five Points of New Architecture.

It would be a universally applicable language. It was the logical outcome, and the correct use of, both available technologies of construction (like the concrete frame), but also a vocabulary that provided the spiritual needs to supplement the technical needs.

The Five Points was promotional. It was intended to familiarize a lay, international public with the ideas from the new architecture.

The five points

The five points are at once technical and architectural

- The pilotis
- The roof garden
- The free plan
- The ribbon window
- The free facade

1. The pilotis

The pilotis are the columns that derive from the columns in the Dom-ino system. They raise the slabs above the ground. By the time he's developed the pilotis in the villas, he's more interested in using the pilotis to lift the building off the ground. In that way, the piloti is a reversal of a classical podium, which anchors the building to the earth. It's also the reversal of the traditional domestic basement, which he viewed as unhealthy.

The pilotis accepts the European convention of the "piano nobile", the noble floor, the main floor. This floor is one floor above the ground.

The pilotis also has implications for the sectional distribution of occupation, even at the urban scale. He wanted to raise the space of occupation above one floor and leave the ground open for recreation, circulation, transportation. This would, urbanistically, imply a new and more democratic space.

This way, the surface of the earth was free for spontaneous and varied uses. Raising the building on pilotis also replaces the basement.

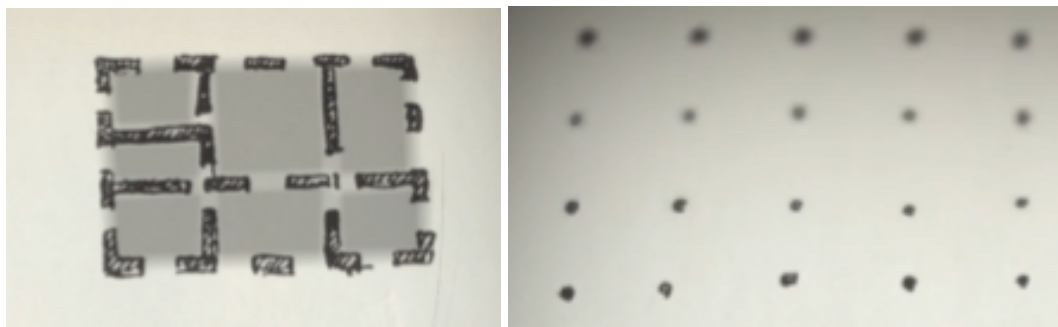
2. The roof garden

The roof terrace or garden on the roof would replace the pitched roof and the attic with an open air room. Reinforced concrete made each floor plate structurally homogeneous, so that the top floor plate would be just as strong as the floors.

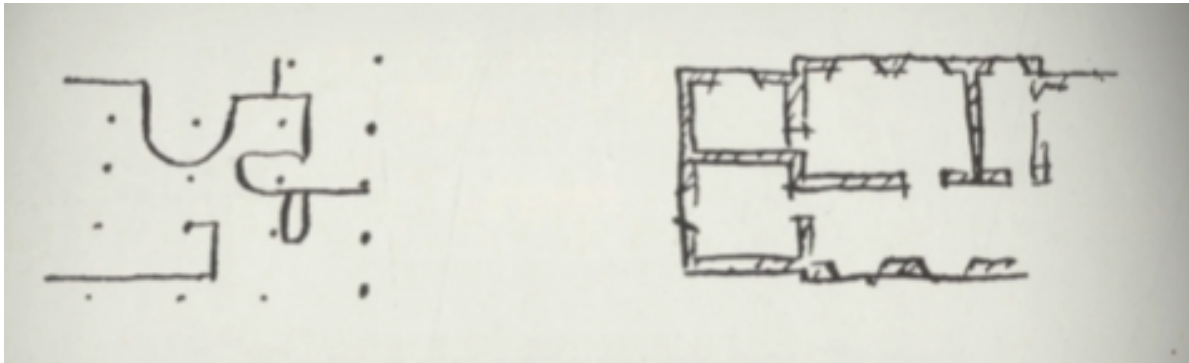
It summarizes Corbusier's conviction about the healing quality of the house itself. On the roof garden, there was a regenerative and inspiring force. Hygienic exposure of the body to the sun. The terrace recalls pre industrial life, which was lived more outside. It also suggested the hygienic pleasures of relaxation and traveling on the ocean liner, one of modernism's objet-type.

3. The free plan

The free plan is opposed by what Corbusier calls the paralyzed plan. The paralyzed plan is a plan of rooms that are discrete from the other, created by walls that are themselves load-bearing. This means that the rooms have to be of a certain size and shape. They have to be entered through doors and punctured by small windows.



The free plan allows much more open arrangement, size of space and interpretation of spaces. It's a separation of space and structure.



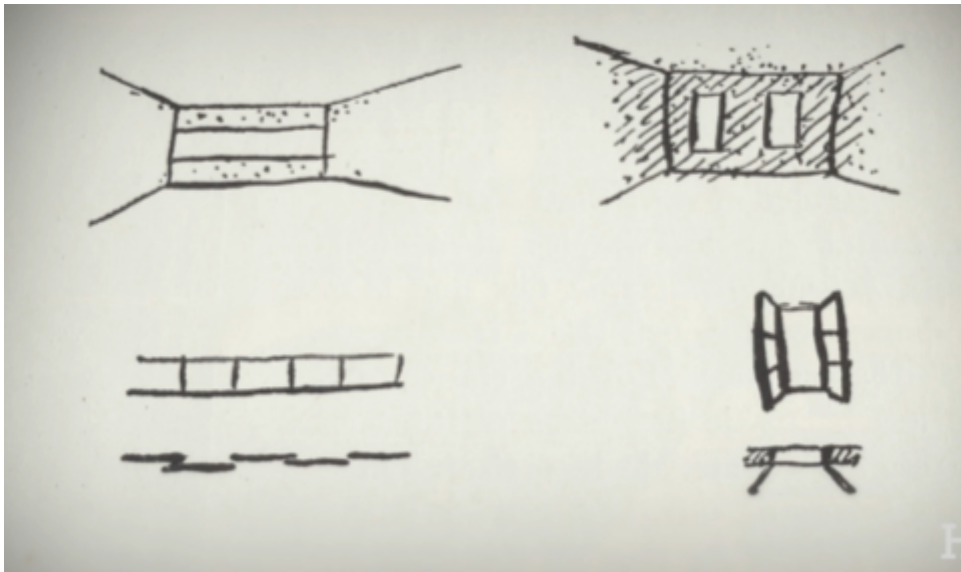
This is the moment where the technical side of the Dom-ino diagram changes a building's structural method, but has an effect that isn't about technology at all. It's about creating new possibilities for space and form.

4. The ribbon window

The ribbon window can be cut into a wall, because the wall is not load-bearing. This makes it possible to create one really long window instead of having to place only smaller ones to keep the wall structurally sound.

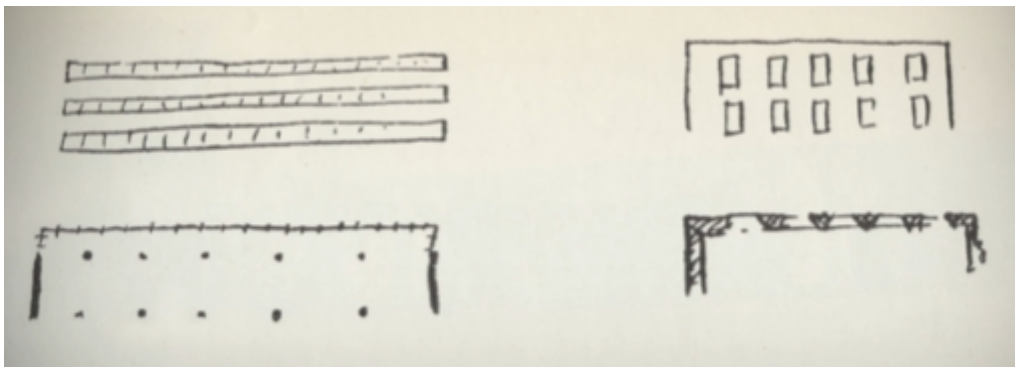
It also negates the normal window, which is about one individual positioning himself in a vertical rectangle. The ribbon window is a collective window, not individual. It also doesn't stabilize a one point perspective but rather creates a panorama. It's like a cinematic version of a window instead of a painterly version. We can think of it as an analog of a tracking shot in a movie.

Corbusier insisted that though it was developed for domestic use, it could become a standardized, mechanized and mass-produced element for all types of buildings.



5. The free facade

The free facade establishes the compositional pictorial availability of the surface wall. It also allows the wall to be more thin and membrane-like. A thinner wrapper that encloses the building and emphasized the volumetric qualities that were so important to Corbusier.



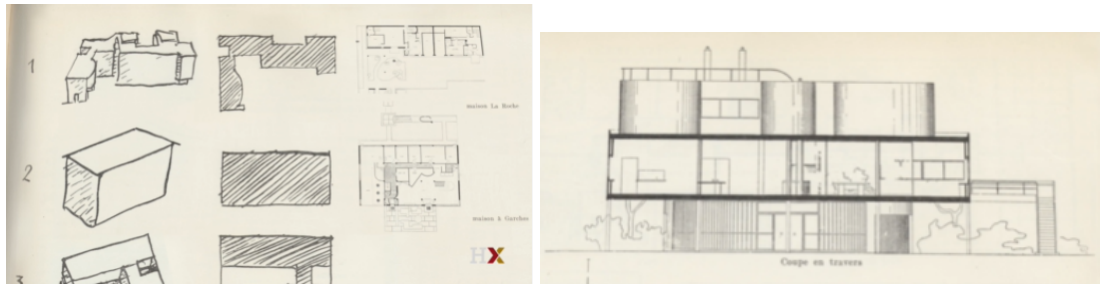
This type of wall allows the window to be extended without interruption, but it also allows for other kinds of openings.

7.5 Villa Savoye

The choreographed movement through space punctuated by moments of stasis, could constitute another point of the new architecture. Later, Corbusier will give this the name 'architectural promenade'.

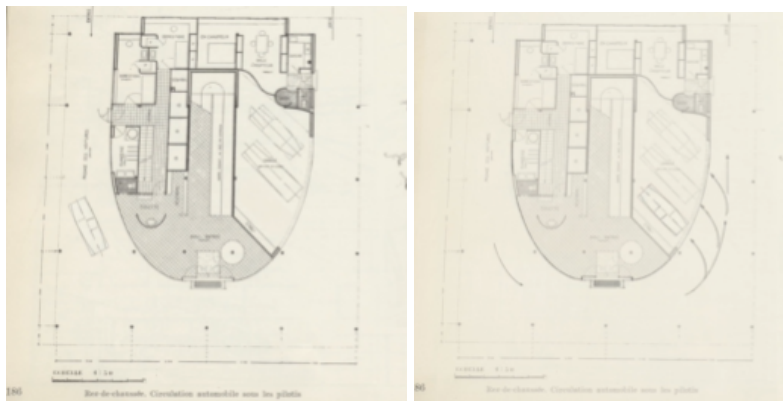
"You enter:
the architectural
spectacle at once offers
itself to the eye:
you follow an itinerary
and the perspectives
develop with great
variety; developing a play
of light on the walls
or making pools of
shadow."

Large windows open up
views of the exterior
where the architectural
unity is re-asserted."
"Here, reborn for our
modern eye, are historic
architectural discoveries:
the pilotis, the long
windows, the roof garden,
the glass facade."



The Villa Savoye is the epitome of the functional stratification of the section. Raising the pilotis to free the ground plane for movement, transportation, recreation. The house above is completely ordered, while the ground below is available for other things.

For the first time, there is also a coupling of objet-type, of which the villa is only one. The second one is an automobile, that is able to move through the pilotis, around the building. The curving/turning radius of the automobile perfectly suits the rotation of the parking space.



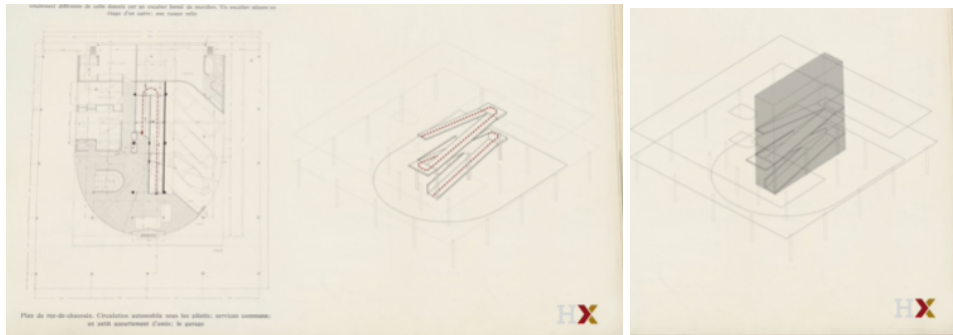
Two objects interact and come together.

When you enter, you immediately see a ramp, and juxtaposed, a sink. There's an assemblage of different objet-type: sink, ramp, lamp, table, pilotis. It doesn't seem domestic at first, but it gets domesticated by its assemblage and interaction with each other.

The ramp and sink seem a strange combination, but actually it's not just two industrial types coming together. You will also find entries like this in religious buildings, where you first cleanse yourself and then enter slowly, ascending to a sacred space.

The architectural promenade

- It begins at a moment of stasis where the sink and the ramp have come together
- The ramp becomes the instrument of that promenade and it operates in two ways
 - It operates as a path
 - or as a space of vertical space. It cuts through the horizontal slabs and establishes a vertical slice of space that unites the slabs.



- There's also a stair that provides a parallel but different kind of vertical circulation
- The combination of ramp and stair connect to each other as you move through. They connect at the landing on the top floor.
- Here you have a choice: go to the living area or move through the glass curtain wall to the large terrace.
- Those two spaces interact in a very porous way, there's nearly no distinction between them. With good weather you could slide the glass doors open and it would become the same space.
- There, you can go up the ramp one more time which brings you to the highest point of a second roof terrace. Here you have a view on the distant fields and woods.

Conclusion

- You've moved through an environment of industrialized glass, lamps and automobiles into a more refined space. But it's still a minimalist space with white walls. At the top, you get glimpses of the natural landscape for the final moment of pause. In this building (and the others), rotation is initiated by the surfaces of the walls themselves, by balconies puncturing through walls, by apertures in the walls, by a curvilinear surface that confronts us and makes a kind of pressure on the space.
- The ramp becomes the armature that more strictly controls that rotation, but it still opens up variability. Vision that is constantly framed by the interaction of the ramp as an armature, the vertical walls and apertures as framing devices. You're now not moving through the house in a strictly frontal way, but in a more variable way. Moments are framed, pauses are caused by the ramp itself and its interactions with other parts of the house.

- The ramp is also a device for connecting with conditions outside of the house, the eternal goods: access to the earth, to the sky, to open air for physical health. All these are made possible by what he called a 'machine for living'.
- The machine, this object type, the house itself, diagrams potentials for occupation. The diagram, which is the house, constructs a world. It's not just an immediate world, but also a world yet to come. The machine for living constructs a new type of reality.
- In 1930 Corbusier pondered over the houses he had built over the previous decade and he singled out compositions: the different ways in which the houses had responded to the initial Dom-ino diagram. He contrasted the hectic Ville La Roche, the difficult design of the prism of Garches, and he found spiritual satisfaction in the Villa Savoye. It was an easy, practical type and a synthesis of the genre that had begun with the Dom-ino. It was the machine for living in the new world.