



Charlotte Perriand's Drawings. The Graphical Representation of a Modern Life

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Abstract. This paper analyses the graphics of Charlotte Perriand, going from a more technical vision, as in the methodological, right through to the most phenomenological, in the search for a suitable representation for the modern way of living. Both approaches contribute to the final academic learning process with abstract systems that are strictly taken on in order to be able to foresee space and objects in three dimensions. The path from the natural language in her first notes, through to the graphic, more abstract language, demonstrates the level of specificity used by means of different graphic sources. The knowledge of methods used for portrayal sought a continuous experimentation from the very origin of the creative process; the drawing, and this meant that this was part of the crystallisation of the architectural thinking. The complementarity of graphic mechanisms such as the Diedric system, axonometric projections, conical perspectives and even the dapping in the technique of photomontage shows her desire to express not only the detail but also the 'pathos' of new architecture. The critical analysis of her graphic collection will demonstrate what the work of this pioneer of modernity meant and how it drove forward the general aim of those who wished to give architecture and furniture a life of emancipation.

Keywords: Charlotte perriand · Drawings · Conical · Axonometric Projection

1 Introduction: L'oeil En Eventai

Graphical systems are instruments of architectural communication that represent, in addition to reality, the phenomenological intentions linked to the spaces of life. In the same way that the poet Noël Arnaud in his book *L'État d'ébauche* affirmed "I am the space where I Am", (Bachelard 1957, p. 172), the contemplation of Charlotte Perriand's designs (1903–1999) seems to claim "I want to be in the space I draw."

In the first three decades of the XXth C., architecture looks for renovation in line with social changes. The break with the past forced problems to be solved, which needed time for crystallization, such as the exploration of a graphical language adapted to the modern habitat. The new home required a furnishing and interior design removed

from the tradition that collaborated in the values of an old society and a shift towards a time of mechanisms and positivism.

The analysis of Charlotte Perriand's contribution to architecture has been always linked to the projects of Rue de Sèvres' atelier and her relationship with Le Corbusier and Pierre Jeanneret and also with the other young architects of the workshop with whom she collaborated, such as Junzo Sakakura, Ernest Weissemann, Alfred Roth, Kunio Maekawa, Norman Rice, José Luis Sert and Nicolas Kolly.

At the conference "The Adventure of furniture", given by Le Corbusier in Buenos Aires (1929), he presented Madame Perriand only as "... our associate for the installation of the houses..." (Le Corbusier 1999, p. 135), nevertheless, recent studies have shown the value of both her contribution to the atelier and her own projects subsequently carried out by herself, or collectively with other architects—Jean Prouve, Paul Nelson, or Jean Borot, Niemeyer, Candilis Josic & Woods-(Espiegel 1996).

Her known expression "l'oeil in éventail" reflects her creative approach; a look at the artistic and architectural, the social and political context, referring to a permanent observation of the material environment both natural and manufactured, that allowed her a reinterpretation sometimes far removed from the usual logic (Barsac 2011, p. 38).

Her descriptive graphic design is analyzed across her evolution in time including from the initial academicism to the most synthetic abstraction. The aim is to demonstrate her consonance with the spatial experience and plastic arts sought in her creations.

2 Learning: Natural and Graphical Language

Charlotte Perriand's academic training begins at the École de l'Union Centrale des Arts Décoratifs (UCAD) whose teachings, led by decorator Henri Rapin, promoted her preference for handcrafted work. The learning of the pictorial technique received in the school was complemented with her own interest in drawing from her childhood, demonstrated both in her notes on nature made in the Garden of Plantes, as well as in the sketches of nude model made under the teaching of the painters Bernard Boutet de Monvel or André Lhote. (Perriand 1998, p. 19).

Her attraction to architecture, a nuance that soon she confesses to Henri Rapin (Barsac 2014, p. 28), encourages her to continue her training at L'École d'art applied by Paul Compellit, receiving the teaching of Maurice Dufrené (1956–1975), President of Salon des Artistes Décorateurs and decorator of Galeries Lafayette. The exercises of Dufrené, as Perriand confesses in her autobiography, enabled the pupil to be introduced to the true activity (Perriand 1998, p. 19); For example, in claiming the design of a room for a "rich American", he forced the pupils to think globally in the design of objects, furniture and fabrics. And in order to define the proposals, the orthogonal diédric projection was learned as a system capable of concretizing in the two-dimensional plane and in true magnitude what was imagined: chairs, tables and even powder room objets (Fig. 1).

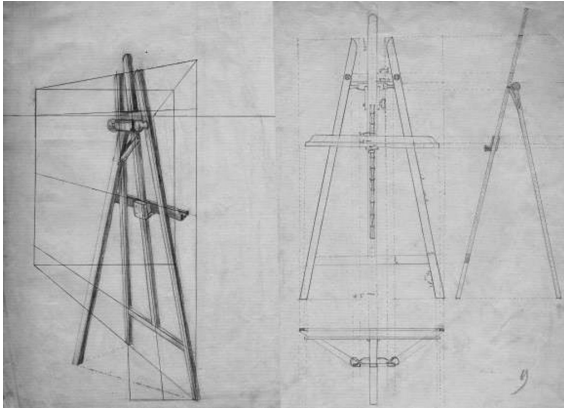


Fig. 1. Charlotte Perriand's easel design, made in the second year of *l'École of l'Union Centrale des Arts Décoratifs*, of Paris, 1921–1922. AChP

Considering by order of specificity, the natural, the graphic and the architectonic as the three languages of expression of the architect (Sainz 1990, p. 21), it can be said that Charlotte Perriand can be placed in this first stage of learning experiences with the first two types.

Natural language reflects a tangible reality and, being the most generic, it is necessary in order to be able to do the next ones.

The quick sketches of human nudes or moving animals together with the thoroughness of lines and colors that portrays the natural world—shells and plants—lead her to an experimentation that includes three phases: the stimulation of vision, the activation of the imagination that processes, manipulates and filters the captured information, and finally the development of the tactical skill across the different graphical tools: pencil, charcoal or goauche.

The fusion between eye, hand and mind creates an alternative image that include both the visual record previous to the drawing itself, and the memory concentrated in the whole process of kinematic action (Pallasma 2012, p. 99).

In this sense, the designs from her time at the *École de l'Union* that show a hen in eight different positions (Fig. 2) recalls the strategy followed by the professor Javier Segui de la Riva in his classes of formal analyses design at the ETSAM. In them, he asked the student to draw hens that had been brought into the classroom. Perriand's quick strokes and indiscriminate markings are in line with the objective of this pedagogical resource aimed at drawing a living being in constant movement, reflecting spontaneous gesture and tensions caused by the lack of rest of the animal. The initial pupil's uncertainty was answered by Segui with an invitation to sketch the visual essence captured by each one of them: "... So, do I have to draw its tension? Do I have I to draw its soul? Yes, draw the spirit of the hen..." (Segui de la Riva 2002).

In 1770, Roland Le Virloys defined the drawing as the action of "expressing, representing something with the pencil". In this definition, the drawing is the seed of the creative activity. In the same way, it should be remembered that the English word

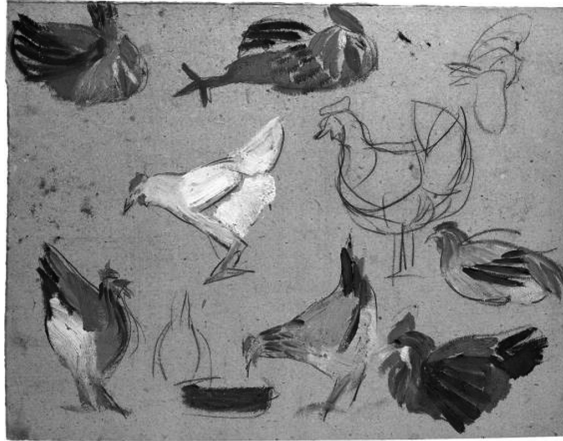


Fig. 2. Natural drawing, moving hens. Charlotte Perriand 1920–1922. AChP

“drawing” also means “to extract” that is to uncover internal images and feelings recorded by the mind in the observation of the outside world (Pallasma 2012, p. 101).

In 1798 the French mathematician Gaspard Monge established descriptive geometry’s basis and codified in orthogonal projections, perspectives and axonometrics the systems of exact representation of any existing or imagined reality. From this moment, the drawing of the architect avoids the arbitrariness by basing itself on a network of scientific laws (Sainz 1990, p. 51).

Charlotte Perriand’s training in graphic language appears in the second year’s tasks (1921–1922) in the L’École de l’Union des Arts Décoratifs. This teaching allowed her to project detailed objects of furniture indistinctly in orthogonal projection or diedric system with multiple visions, in central projection or perspective and finally in parallel or axonometric projection.

Plans, sections, and elevations offered what the action of drawing meant for Quatremère de Quincy, “to express, to represent something with the help of the lines or the strokes that form the contour of the objects that it imitates” (Marchán 1984). And the paper-aligned layout facilitated the translation of points and dimensions from one to another for reading. In diedrics drawings of chairs, garden benches, sofas and furniture, Perriand added axonometric representations and central projections in order to integrate their objects into her imagined spaces.

Perriand’s knowledge of the laws of perspective is evident in the designs of tiles and floorings, whose geometries and colors were moved to perspectives as they would be captured by the eye. To represent the objects and the space as they appear before our eyes was the reason why the scientific establishment of the graphic laws of this type of projection perspective was produced three hundred years before orthogonal projections of a more abstract character (Sainz 1990, p. 123).

The construction lines of drawings as in the study for *Un Salon de musique* with the Neuf muses’ murals of 1924 (Fig. 3), done for the International Exhibition of Decorative Arts of 1925 with a wrought iron grating (Melgarejo 2011b p. 29) demonstrate Charlotte Perriand’s graphic submission to the rules of perspective.



Fig. 3. Perspective's study of paving design's, 1922. Charlotte Perriand. AChP

The scope of view, the approach of the viewpoint, the line of the horizon, the height of the observer or the distance to the painting are within view of the spectator in these first drawings. Parallel lines in the space converge in a common vanishing point multiplying it as inclined geometries, triangles or curves are introduced into the flooring

These initial exercises in perspective together with charcoal sketches of outdoor Parisian elements, such as bridges, introduce Charlotte Perriand in proper architectural language, integrating objects in imagined spaces.

3 Architectural Language

Of the three forms of expression and communication that architects have-natural language, graphic language and architectural language, only the third one makes reference to the works of new creation, being the most specific of the three.

In her learning period, Charlotte Perriand had acquired the skill of graphic drawing, understanding dexterity as the trained practice needed to exercise any trade.

In her first drawings she represents the spaces imagined in conical and axonometric perspectives. But as the creations evolve over time, her sketches became more complex, showing the close connection between the hand and the head.

The integration in the same paper of simple drawings next to sketches done in perspective help her to corroborate her true spatial intentions.

This simultaneity reflects an architectural thought that, linked to the hand, corroborates what Sennet said about it "... Every good craftsman maintains a dialogue between concrete practices and thought. And that dialogue evolves into habits that set a pace between the solution and the discovery of problems..." (Sennett 2009, p. 21).

3.1 Central Perspectives, Conics

Charlotte Perriand, following the advice of her teachers Dufresne and Rapin exhibited her creations for the audience from the beginning.

Her first success was in the Autumn Salon of 1927 in Paris with the set up of *Le Bar sous le toit* which was a true reproduction of her apartment's hall located at the *Place Saint Sulpice*. Its roof, typical of Parisian top floor apartments, enclosed a space equipped with a curved bar top, stools and a couch accompanied by a low table. Its illumination by a window located between two sloping surfaces of the roof showed a dwelling that moved away from the traditional, setting up a festive meeting place in the domestic environment. The furniture of the bright steel bar top, or the blue-violet and pink leather armchairs, brought a modern look closer to an industrial aesthetic than a domestic atmosphere. The drawing of this model published in 1929 in the journal *Intérieurs* (Fig. 4) showed this space with a central perspective whose rays came from a single vanishing point, appearing distorted due to the sloping of the apartment walls. The efforts to express the brilliance of the materials showed her difficulty with chromatic use, which would later be solved thanks to the simplification of the graphic technique with contour lines of roof, walls and ground, and flat colors mainly primary, on selected surfaces.

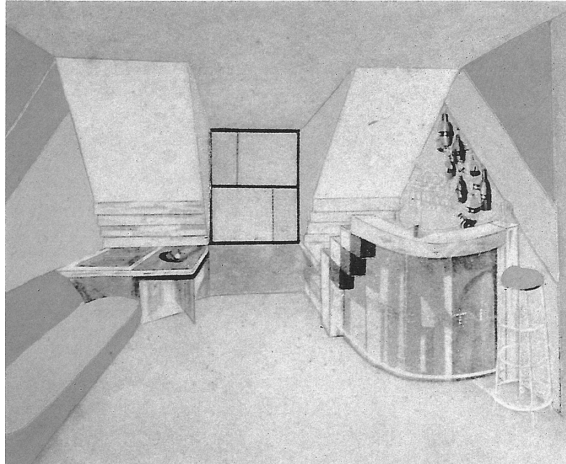


Fig. 4. *Le Bar sous le toit*, Charlotte Perriand, *Autumn Salon, Paris 1927*. Published in *Intérieurs* Fig. 40, in 1929. AChP

Le Bar sous le toit, for Charlotte Perriand, meant the chance to work in the atelier of Le Corbusier and Pierre Jeanneret who, after contemplating the set up, did not hesitate to welcome her as collaborator for the interior equipment of their projects.

Her first involvements were the interior and furniture of Villa La Roche in Paris—Auteuil (1923–1925) and the domestic equipment of Villa Church in Ville d'Avray, where she introduced innovations in storage in the area of order and harmony to achieve the transformation of the interior of the dwellings (Melgarejo 2011a, p. 218). But her first work published, once included in the study of the *Rue de Sèvres*, was the installation *Salle à manger*, exhibited at the *Salon des Artistes Décorateurs* in 1928. The perspective drawn from this installation—published in 1929 in the magazine

Intérieurs-looked for the balance of planes and orthogonal lines thanks to synthetic graphics. The integration of color reflected the influence of the D'Stijl movement who advocated plastic art, forgetting the prismatic character of architecture to transform it into a plurality of planes; the chromatic use emphasized the novelty of materials like the red leather in the chairs or the black rubber-neoprene of the surface of the table in addition to the wooden furniture. The general aesthetics took into account aspects such as form, function and economy as well as the absence of decoration and, all this made reference to the postulates of the neoplastic architecture enunciated by Theo van Doesburg (Doesburg 1925).

The *Salle à manger* drawing allowed for the space to be seen by the eye, however, on analyzing its references, the intentional non existence of rigor in the strokes can be verified. The prolongation of the elements' contours of the drawing shows the lack of academic precision. The line of the horizon situated at the height of the observer, has the vanishing point of the dihedral formed by the kitchen furniture and the wall perpendicular to the one where the dining room table rested. However, the rays corresponding to the profiles of the ceiling beam or those of the orthogonal cutting of the false ceiling displace their vanishing points to a height lower than the line of the general horizon of the rest of the drawing. A similar situation would occur if the flooring or even the outline of the table was prolonged (Fig. 5).

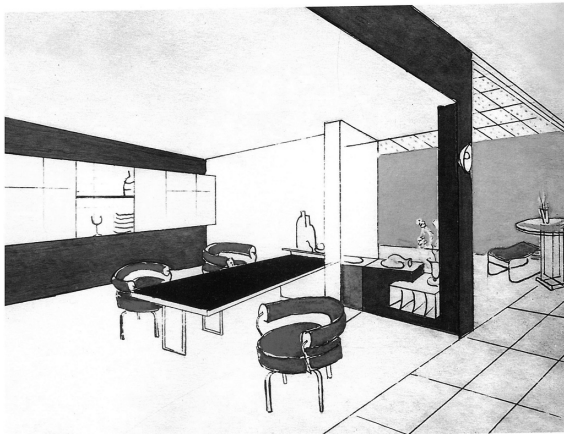


Fig. 5. *Salle à manger 28*, Charlotte Perriand en el *Salon des artistes Décorateurs, Grand Palais*, 1928. Published in *Intérieurs* Fig. 40, en 1929. AChP

This lack of accuracy in the central perspectives was detected by Mara Partida when she analyzed the apartment drawings of Nungesser-et-Colí of Le Corbusier. Her conclusion pointed to the intentionality of Perriand not to reproduce objectively the space and objects, but to synthesize the perceptual sequence of the spectator (Partida 2003, p. 129).

The inclusion of the equipment, from the origin of the project, meant one of her greatest achievements of the new architecture for Charlotte Perriand. And it required, in

addition to its representation in two dimensions, plan and section, drawings that express the visual perception of the inhabitant. In this sense, the multiplicity of sketches of Le Corbusier's apartment exemplifies the almost photographic verification she had set out to do.

This type of inaccurate representation manipulated the perception of the spaces, emphasizing one of the architectonic paradigms of the D'Stjil's postulates which referred to the integration of the time factor in architecture:

...The new architecture does not only have space, but it also has time as a plus. The unification of space and time gives the architectural vision a more complete aspect... Contrary to frontalism, born of a static conception of life, the new architecture will enjoy a great richness thanks to the polyhedral development of space-time... (Doesburg 1925, pp. 18–19)

The opening of the viewing angle or the multiplication of the vanishing points were graphical mechanisms of spatial manipulation that managed to introduce the observer into the temporal sequence of the architecture itself. And these mechanisms were used in projects such as the Villa Martínez de Hoz in Buenos Aires (1930) (Fig. 6) or the proposed Travail et Sport and Salle de Culture Physique published in *Répertoire de Gout Moderne* in 1927.

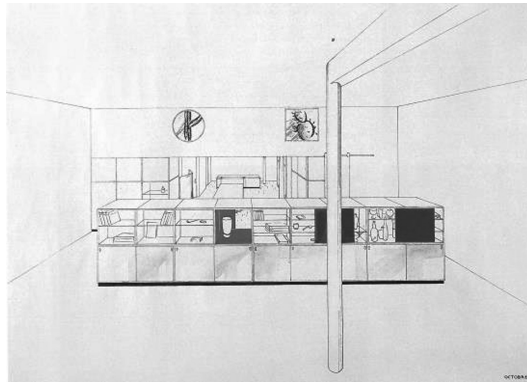


Fig. 6. Perspective rendering of the bedroom of Villa Martínez de Hoz, Buenos Aires, 1930. AChP 30.018

That graphical representation of the spaces reached its limit of distance of the vision of the retina in the photomontage of the installation entitled *Un équipement intérieur d'une habitation* carried out together with Pierre Jeanneret for the Autumn Salon in 1929 (Fig. 7).

In the drawing, the space was framed by the standard *cassier* that outlined the scope of the proposal and on it, as pieces of a collage; Perriand introduced photographs of real furniture. The reality of the images along with the graphics of the drawing offered a new type of inhabiting under the impact of an experimental method of simultaneous vision.

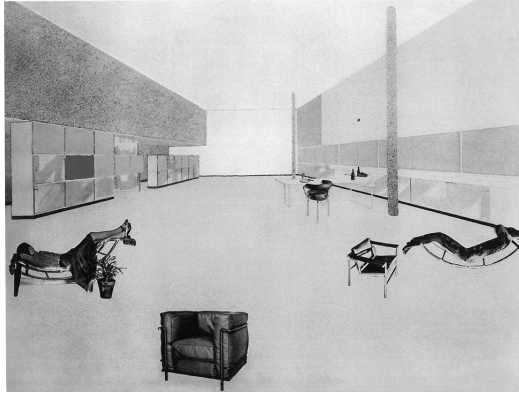


Fig. 7. Photomontage of the installation *Un équipement intérieur d'une habitation, Salon d'Automne, 1929*, Charlotte Perriand y Pierre Jeanneret. AChP

The lack of coinciding of the points of view and of the escape of the objects with those of the global space of the scope distorted the perception turning it into an exercise of abstraction. The dimension of the cropped photographs and above all, their location on the floor plan, showed the plastic resource of collage, used by the Bauhaus, Russian constructivism, that, far from trying to mimic reality, sought to transform it as a symptom of A New World (Molina 2014, p. 38). The photographs of the *Fauteuil à dossier basculant*, the *Fauteuil Grand Confort* and the two images of the *Chaise Longue* placed in the foreground of the photomontage, were objectively outside the size envisaged in the perceptual visualization of spatial framework. This discordance is demonstrated by including the main escape lines in the photomontage and those that represent the objects in the photographs.

3.2 Axonometric Perspectives

The expressive freedom of these drawings in conical perspective is still calibrated by rigour, when, as a extra element, Perriand represents many of those same projects and objects in oblique parallel projections—Axonometrics, that, when built as if they were long distance perspectives, allow for the three dimensions of space in a synthetic drawing to be shown reliably.

The D'Stjil movement exhibition at Leonce Rosenberg's Gallery in Paris in 1923, aroused interest among architects for the use of axonometric design.

The drawings of the projects such as the "*Maison d'Artiste*" and "*Hotel Particulier*" made by Théo van Doesburg and Cornelius van Eesteren, used the axonometric perspective from a higher point of view with an angle of 45°. This approach allowed the visualization of the three dimensions of space without any sort of hierarchy. The graphic system and chromaticism shown in this exhibition was taken to be representative of the new architecture by the Parisian architects in their projects.

Charlotte Perriand did not hesitate to use military projection in her first designs of furniture and interior spaces. With this system she showed the vocation of converting her projects, whether furniture, installations or architecture, in tangible realities.

In examples such as her proposal *Travail et Sport* (Fig. 8) and *Salle de Culture Physique* she combined drawings in a central perspective with axonometric projection of the same spaces. This double graphic strategy allowed her to define both spatial perception, which incorporated the time factor, through the manipulation of viewpoints, and the true magnitude of imaginary, thanks to parallel projection.

Military projection is a system that preserves the dimensions of the XY plane—the plan—and thus curves or circumferences could be drawn in true magnitude without needing transformations to ellipses of difficult graphing. These advantages were ideal for pub-

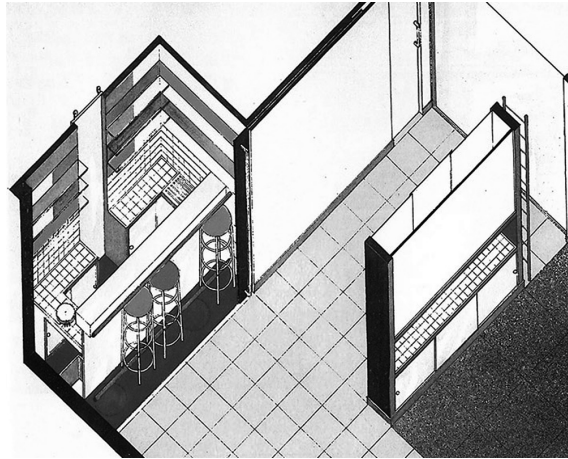


Fig. 8. *Travail et sport*. Charlotte Perriand, 1927. Bar and kitchen view with sliding door and relaxation space transformed into inner garden published in *Répertoire du goût moderne II*, Fig. 21 and Fig. 20, 1929. *AChP*

lishing and expounding accurately and at the same time with visions far from the traditional for certain types of furniture, like stools, tables for typewriters or office furniture.

Thanks to this attempt to exhibit, the graphical system of the axonometric perspectives became an instrument for projecting the content of her sketch-books and allows the spectator to see the combination of the representation of the object in the space together with its constructive detail.

The freehand drawings of plans, sections and elevations of chairs, tables, and *cassiers* demonstrate an architectural thought that projects the final image simultaneously to its constructive definition.

That same simultaneity between the representation in two dimensions—plans, and three dimensions—perspectives, appears in a homotetic way in her architecture.

Sketched of her proposal for the study of the module of 14 m² per inhabitant (Fig. 9), the stand for the *Internationale Raumausstellung* of Cologne in 1931, or later her proposal for the *Maison au bord de l'eau* (1934), *The Weekend House* (1934,) (Fig. 10) demonstrate that the spatial check in perspectives of what was drawn in the plan was a tool used with profusion, thanks to her initial learnings.

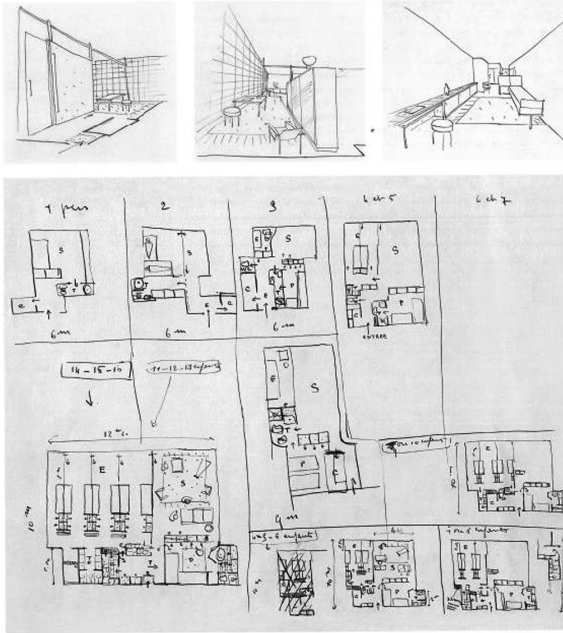


Fig. 9. 14M2 module study per inhabitant, 1928–1930. Charlotte Perriand AChP 20.140

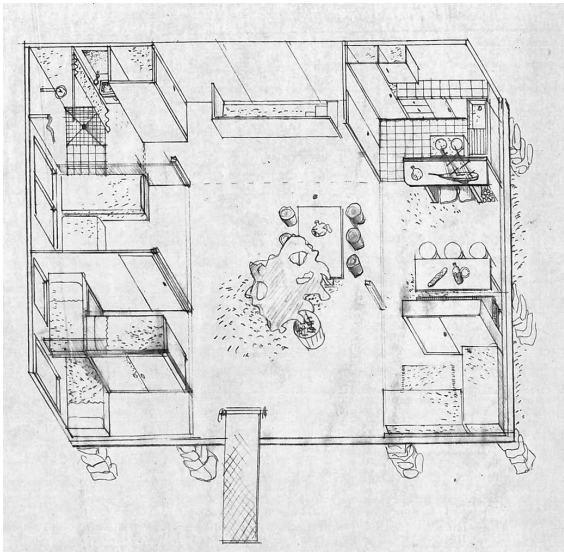


Fig. 10. Axonometric of Weekend House, 1934, Charlotte Perriand. AChP 34.012

4 Conclusions

The interest of Charlotte Perriand's drawings lies in the evidence that designing establishes a mutual reference between thinking and making (Aicher 1994, p. 12).

The multi-directionality of a mind that simultaneously draws plans and sections of the space, together with perspectives that corroborate perception, compel to think of a foresighted look that continually visualizes the imagined reality. This graphic exercise was possible thanks to the learning of the different graphical representation systems as tools of *recherche patiente*.

The scientific syntax of the drawings in seasoned projection with modern resources, such as chromaticism, photomontage, and inclusion of the time factor, showed the conceptual abstraction of the underlying thinking of the architect.

The gradual rereading of the teaching received over time, together with the later self-experimentation with innovative dyes, allows for the affirmation that Charlotte Perriand tried to graphically capture the plastic of the spaces of a yearned for modern way of living, breaking with the decorative tradition of domestic interior space.

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