

FIG. 1  
Le Corbusier, *Les Constructeurs*, July 31, 1960, *Science et Vie*, August 1960, Paris, France: Source: Library of Congress, Washington D.C.

# THE CHIASM: THE INVERSE PARALLEL OF LE CORBUSIER

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DOI: <https://doi.org/10.4995/lc.2023.19871>

**Abstract:** The “axis” is ubiquitous in Le Corbusier’s architectural *oeuvre*. “The Chiasm: The Inverse Parallel of Le Corbusier” examines the concept of the axis in the essays, “Architecture, Pure Creation of the Mind” and “Architecture, The Illusion of the Plan” published in *Vers une architecture* (1923). Le Corbusier writes: “a sense of the harmonious that gives rise to a resonance” and “the trace of an indefinable absolute preexisting at the core of our being.” And decisively, “This must be the axis along which man is organized”. The axis Le Corbusier described is, in fact, a chiasmic device he employed in his writings, drawings and architecture.

Chiasmus, conceptually defined, is the “inverted repetition of grammatical structure.” Inversion, as two sides of the axis, identifies representations of things related and simultaneously different. The twentieth century French philosopher Maurice Merleau-Ponty identifies the chiasm as a concept to describe the body as sensible and sentient, a reflection in relation to the self, others, and the perceived world. Merleau-Ponty uses the chiasm to clarify reversibility and the phenomenological experience.

Merleau-Ponty’s theories of chiasmic inversion substantiate the chiasmic structure that supports Le Corbusier’s ideology and his search for a harmonious *milieu* that is based in the axis.

**Keywords:** Le Corbusier, axis, chiasm, parallel, inverse.

**Résumé :** L’« axe » est omniprésent dans l’œuvre architectural de Le Corbusier. « Le chiasme : Le parallèle inversé de Le Corbusier » examine le concept de l’axe tel qu’il est présenté dans son essai, « Architecture, Pure création de l’esprit », publié dans le manifeste *Vers une architecture* (1923). Le Corbusier écrit : « des proportions qu’on sent harmonieuses parce qu’elles provoquent au fond de nous, par delà nos sens, une résonance, sorte de table d’harmonie qui se met à vibrer. Trace d’absolu indéfinissable préexistant au fond de notre être ». Et il affirme résolument, « Ce doit être l’axe sur lequel l’homme est organisé ». L’axe que décrit Le Corbusier est en fait un dispositif chiasmique qu’il emploie dans ses écrits, ses croquis et son architecture.

Défini conceptuellement, le chiasme est l’« inversion symétrique d’une structure grammaticale ». Cette inversion, comme les deux côtés d’un axe, identifie des représentations d’objets liés entre eux tout en étant différents. Au 20<sup>e</sup> siècle, le philosophe français Maurice Merleau-Ponty utilise le concept du chiasme pour décrire le corps comme sensible et sentient, un reflet en relation avec soi, autrui et le monde perçu. Merleau-Ponty utilise le chiasme pour clarifier la réversibilité et l’expérience phénoménologique.

Les théories de l’inversion chiasmique formulées par Merleau-Ponty soutiennent la structure chiasmique sur laquelle s’appuie l’idéologie de Le Corbusier et sa recherche d’un milieu harmonieux basé sur l’axe.

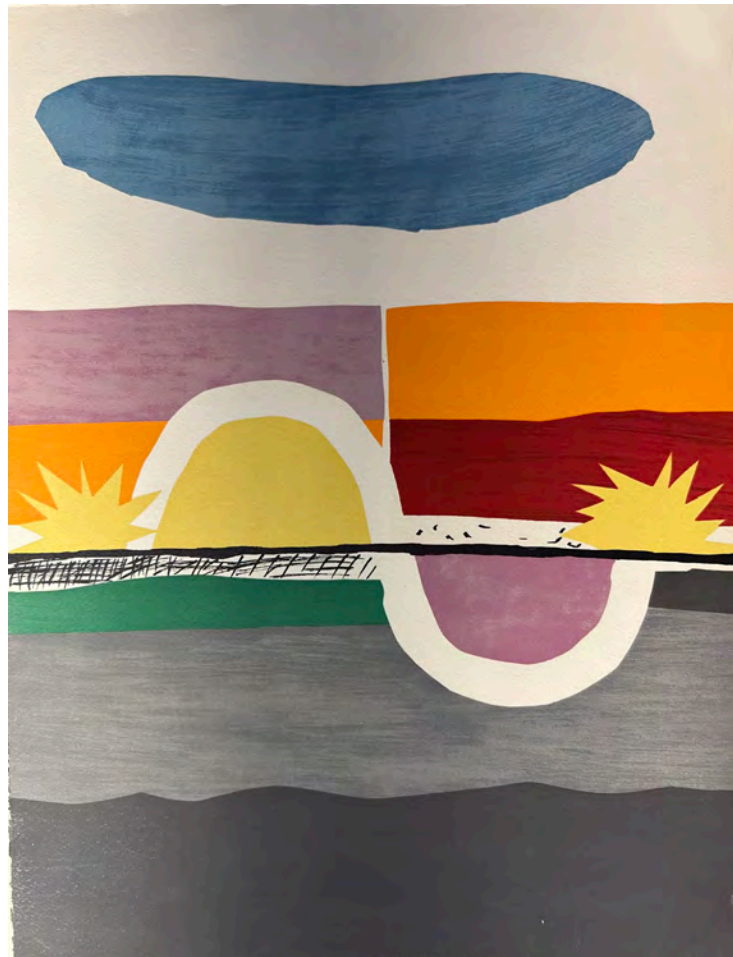
**Mots clés :** Le Corbusier, axe, chiasme, parallèle, inversé.

**Resumen:** El «eje» está omnipresente en la obra arquitectónica de Le Corbusier. «El quiasmo: El paralelo inverso de Le Corbusier» examina el concepto de eje tal y como se presenta en su ensayo «Architecture, pure création de l'esprit», publicado en el manifiesto *Vers une architecture* (1923). Le Corbusier escribe: «Las proporciones que sentimos son armoniosas porque provocan en nosotros, más allá de nuestros sentidos, una resonancia, una especie de caja de resonancia que empieza a vibrar. Una huella de un absoluto indefinible preexistente en lo más profundo de nuestro ser». Y afirma resueltamente: «Este debe ser el eje sobre el que se organice el hombre...». El eje que describe Le Corbusier es en realidad un dispositivo quiasmático que utiliza en sus escritos, sus bocetos y su arquitectura.

El quiasmo, se define conceptualmente como la «inversión simétrica de una estructura gramatical». Esta inversión, como los dos lados de un eje, identifica representaciones de objetos relacionados y simultáneamente diferentes. En el siglo XX, el filósofo francés Maurice Merleau-Ponty identificó el concepto de quiasmo para describir el cuerpo como sensible y sintiente, un reflejo en relación con el yo, los demás y el mundo percibido. Merleau-Ponty utiliza el quiasmo para aclarar la reversibilidad y la experiencia fenomenológica.

Las teorías de Merleau-Ponty sobre la inversión quiasmática fundamentan la estructura quiasmática en la que se basa la ideología de Le Corbusier y su búsqueda de un entorno armonioso basado en el eje.

**Palabras clave:** Le Corbusier, Eje, quiasmo, paralelo, inversión.



**FIG. 2**  
Le Corbusier, *Milieu A1*.  
1947-1955. From *The Poem of The Right Angle*,  
example number 168,  
original lithograph on Arches  
paper. Source: The Library  
of Congress, Rare Books  
and Special Collections,  
Washington D.C.

The 'axis' that Le Corbusier described both theoretically in "Architecture, Pure Creation of the Mind" and technically in "Architecture, The Illusion of the Plan," highlights a chiasmic structural device that Le Corbusier employs in his writing and architecture, both in the realms of the sensory and the sensed. Le Corbusier seemed committed to explore within his practice a conceptual structure that was based in a chiasmic ideal. Le Corbusier's intrigue with a chiasmic framework can be found in the fundamental idea of the 'axis,' that over the course of time, conceptually developed the architect's vision of an intertwining, a concordance to link man with the environment.

Chiasmus finds its origin in classical beginnings. Chiasm from the ancient Greek '*khiasma*', meaning two things placed crosswise. The root *khi*, meaning the mark of the "X"<sup>1</sup>. The conceptual origin of Chiasmus has been identified with *hysteron proteron* (Greek meaning the latter before) and throughout history as a philosophical method to establish the underlying unity of conceptual opposition. Chiasm as a method of harmonious resolution of oppositions can be considered a kind of symmetry and closure<sup>2</sup>. The notion of chiasm is evident in Le Corbusier's foundational development and has evolved across his oeuvre. For the purpose of this argument, Chiasm is understood as a theory rendered by the French philosopher and phenomenologist Maurice Merleau-Ponty (1908 - 1961).

In his life's work, Merleau-Ponty was committed to phenomenological studies based on the ideas of encroachment, intertwining, reversibility and the notion of chiasm<sup>3</sup>. Merleau-Ponty used the chiasmic structure to describe the sensible and the sentient characteristics of the body as a reflection. A reflection that exists in relation to the self, others and the world perceived as a kind of doubling - an outside as an inside, or things as intelligible or invisible. Likewise, Le Corbusier recognizes the sensible and sentient relationships between the natural world, the built world, and their collective inhabitants. Although Le Corbusier and Merleau-Ponty lived and worked contemporaneously in Paris during the early and mid-twentieth century, it is not known that the two men were familiar with the work and theories of the other.

Merleau-Ponty's body of work was based on his principle thesis, *The Phenomenology of Perception* (1945). This publication was followed by *The Primacy of Perception* (1946), "Eye and Mind" (1961), and posthumously, "The Intertwining – The Chiasm" in *The Visible and The Invisible* (1964). These works were published succeeding Le Corbusier's early thought process and work process; however, Merleau-Ponty's enduring philosophical and phenomenological theses can be applied as a lens through which to illuminate and reconceptualize Le Corbusier's methods and accomplishments. It is worth examining the thought process and the work product of the architect and the philosopher each in relation to the other.

Le Corbusier makes use of chiasmus as a theoretical construct to narrate, illustrate, and form his vision. He writes: 'the quality of features and the quite distinctive value of their unifying relationships'<sup>4</sup>. For Le Corbusier the architect, the chiasmus as an ordering schema provided a physical and theoretical tool to guide his work. In his later years, Le Corbusier further embraced chiasmic ideals and openly incorporated and interweaved his painting ritual alongside his well-established writing and architectural practices.

In 1960, Le Corbusier's sketch entitled *Les Constructeurs* is published in *Science et Vie*. The drawing depicts hands interwoven to describe the interdisciplinary relationship between the architect and the engineer. The image is a description of a professional collaboration and can also be read as a reflection of earth and sky, dark and light composed as a chiasmus set above entwined hands<sup>5</sup>. This sketch, *Les Constructeurs*, can also be seen as an example of the evolution of a broader vision that is based in a chiasmic concept. A concept that is notably established years prior in "Aesthetic of The Engineer, Architecture" in *Toward an Architecture* (1923). The essay is an interpretation of the engineer and the architect as oppositional allies and is recreated in *Les Constructeurs*.

Chiasmus as a concept, is defined as an "inverted repetition of grammatical structure"<sup>6</sup> and the word 'chiasmus' is recognized in the second century. 'Invert', derived from the Latin *invertere*, meaning to turn inside out, turn upside down, turnabout, upset, reverse, or transpose<sup>7</sup>. Maurice Merleau-Ponty identifies chiasm as a way to further his

understanding of the concept of reversibility and the phenomenological experience. A closer inspection of 'chiasm' allows one to reconsider the play of "opposites", a construct often associated with Le Corbusier's writing and architectural practice over time. Inversion, as two sides of the axis gives us two parts, related and similar, but also different. "The plan proceeds from the inside out; the exterior is a result of the interior"<sup>8</sup>.

Le Corbusier's evolution of thought, both in the written word and the built form, can be considered a development of the 'axis' he conceived of in his early essays "Architecture, Pure Creation of the Mind" and "Architecture, The Illusion of the Plan"<sup>9</sup>. The axis that acts as a center pole around which something revolves, to spin or to repeat. From the Old French *revolver*, meaning to happen again, to go over or repeat<sup>10</sup>. At the same time, revolve is a word at the core of "revolution"<sup>11</sup>. Revolution to mean rebellion or anarchy. Le Corbusier writes at the close of *Toward an Architecture*, "Architecture or revolution"<sup>12</sup>. The "*double entente, un mot à,*"<sup>13</sup> the double entendre and the axis. An ambiguous and provocative play of words that began Le Corbusier's inverse parallel. The axis sets the stage.

### ***Les Constructeurs***

The French periodical *Science et Vie* (founded in 1913 - present) is a journal dedicated to topics in the development of the sciences, technology, and their practical applications in daily life. The August issue of *Science et Vie* published in 1960 includes the article "Le Corbusier et les Constructeurs," accompanied by the architect's drawing titled *Les Constructeurs*. (Fig. 1)

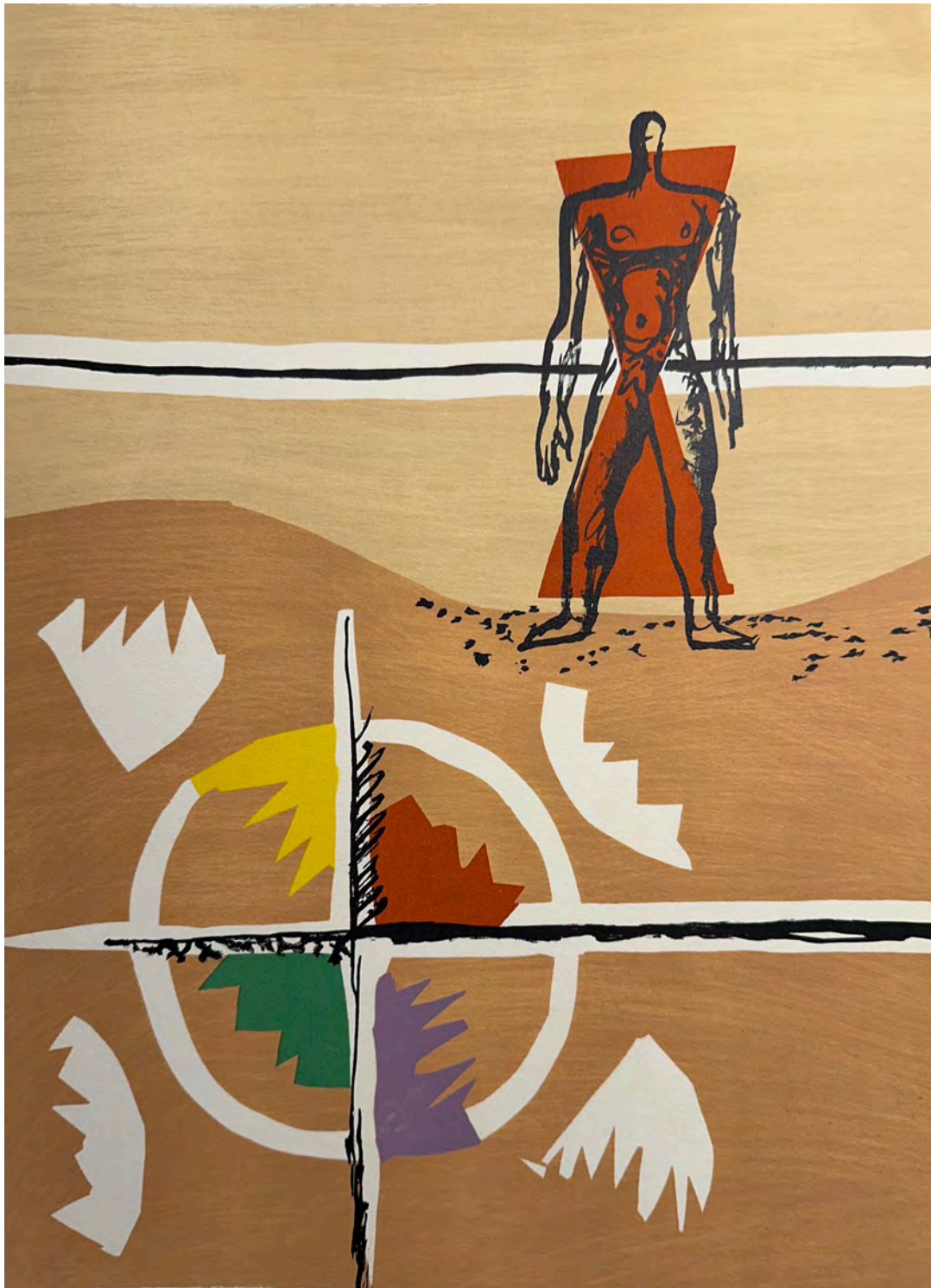
The drawing, *Les Constructeurs*, depicts two hands entwined to represent the relation between the architect and the engineer. The engineer's domain is rendered with a hatched area tied to the earth beneath the horizontal line of an axis. The architect's domain is rendered as a stippled area and connected to the sky above the horizontal line of the axis. The engineer occupies the left side of the axis and the architect the right side of the axis and the entwined hands describe the interrelationship of the two domains, as a synthesis of their respective contributions to the built environment<sup>14</sup>.

*Les Constructeurs*, published toward the end of Le Corbusier's life, is an image based in ideas that were developed throughout his lifetime. Fragments of the drawing can be traced to earlier images that spanned decades of Le Corbusier's *oeuvre*. In *The Poem of The Right Angle* (1955), the iconostasis that Le Corbusier designed as a series of lithographs, was the organizing composition for the poem. These images also made a contribution to *Les Constructeurs*<sup>15</sup>.

At the highest level of the Poem's iconostasis, the "*Milieu*" is represented by the color green, the alchemical symbol of the primal matter of the universe. Three of five images within the *milieu* are reflected in *Les Constructeurs*. The "reflected images" include A1 the movement of the sun against a horizon line (Fig. 2); A3 the circle divided in quadrants as the cardinal points (Fig. 3); and A5 the entwined hands (Fig. 4).

The *Milieu* in *The Poem of The Right Angle* is translated to mean environment; although, *milieu* can also mean the middle, or the center, perhaps as indicated in the central point of an axis, an intersection, or a joining at a midpoint. This meaning has potential significance in Le Corbusier's interpretation of the *Milieu* and presents as a substructure within a larger vision.

Looking further back into Le Corbusier's idea of the axis, he writes in *Science et Vie* that the drawing *Les Constructeurs* evolved as a reconsideration of the relationship of the architect and the engineer. Taken from the image on the book cover of *La Maison Des Hommes* (Fig. 5) Le Corbusier writes: "During the occupation, I had created the A.S.C.O.R.A.L. and I had a sign emblematic, delimited the task of the builders – all in contact with each other but different from each other – the architect's tasks, the engineer's tasks. And I placed the sphere of the architect at the top and the sphere of the engineer at the bottom"<sup>16</sup>.



**FIG. 3**  
Le Corbusier, *Milieu A3*,  
1947-1955. From *The  
Poem of The Right Angle*,  
example number 168,  
original lithograph on Arches  
paper. Source: The Library  
of Congress, Rare Books  
and Special Collections,  
Washington, D.C.

Le Corbusier goes on to describe his changed view: "1959. In the book mentioned above I gave a quarter turn to my drawing; the engineer and the architect are horizontal to each other; both at the same level but changed with different duties and responsibilities"<sup>17</sup>.

*Les Constructeurs* finds its composition in the evolution of a fundamental idea based in the notion of a central axis to describe a relationship. *Les Constructeurs* is a palimpsest built upon an axial theme that for Le Corbusier has crucial meaning in both the applied and experienced world, in addition to, the ideological and abstract world.

Le Corbusier writes: "And on the sphere of the architect appears a reflection of engineering; the reflection of the knowledge of physical laws. And on the sphere of the engineer on the other side, a reflection of architecture: the reflection of human problems"<sup>18</sup>. The axis is a physical construct and simultaneously a theoretical one.

The axis as a chiasmic structure is a form of thought that allows oppositions to be bound into unity<sup>19</sup>. The chiasm or chiasmus is derived from the Greek word meaning 'crosswise'. The letter shaped as an "X", and the Greek letter "chi", are used figuratively to indicate the arrangement of two things placed crosswise. As a rhetorical device, chiasm has roots in ancient Greek, Hebrew, and Latin texts that are typically researched for their conceptual and philosophical inferences as an inverted parallelism<sup>20</sup>. It was in the second century that distinction is recognized between antimetabole and chiasmus; antimetabole as a repetition of the same words in reverse, and chiasmus as the inverted repetition of a grammatical structure<sup>21</sup>.

Technically, in literary theory, chiasmus is defined as a reversal of grammatical structure in successive phrases or clauses. It is sometimes related to the term antithesis, from the Greek *antitithēkos*, "placed in opposition"<sup>22</sup>. In theory, chiasmus is understood as a means of mediation, to intervene and to resolve a difference. Philosophically, chiasmus is most often associated with the phenomenological ideologies of Maurice Merleau-Ponty, specifically, in his later work, "The Intertwining – The Chiasm" in *The Visible And The Invisible* published posthumously in 1964. At the start of the essay, Merleau-Ponty writes of the visual world: "What is this talisman of color, this singular virtue of the visible that makes it, held at the end of the gaze, nonetheless much more than a correlative of my vision, such that it imposes my vision upon me as a continuation of its own sovereign existence? How does it happen that my look, enveloping them, does not hide them, and, finally, that, veiling them, it unveils them?"<sup>23</sup>.

The philosopher Claude Lefort, Merleau-Ponty's colleague and the book's editor, explains that in the course of the edited text Merleau-Ponty includes the following notes: " [...] it is that the look is itself incorporation of the seer into the visible, quest for itself, which *is of it*, within the visible [...] a connective tissue of exterior and interior horizons"<sup>24</sup>. It is the "connective tissue" between the inside and the outside that Merleau-Ponty uses to describe the phenomenological experience in an effort to mediate two places each that informs the other. To understand the interior self in the realm of the exterior world, Merleau-Ponty describes "a circle of the touched and the touching, the touched takes hold of the touching [...]"<sup>25</sup>. It is this reversible experience, of two sides, both physically and spiritually, (Le Corbusier sometimes describes spiritual as 'emotion') that captivates Le Corbusier as a practical method but also as a more universal ideal.

Le Corbusier's "axis", the origin of his own chiasmic thinking, is first documented in the essay "Architecture, Pure Creation of the Mind" (*Vers une architecture*, 1923). It is here that Le Corbusier states the meaning of the axis as the alignment with nature and the larger universe<sup>26</sup>. Alignment with the axis is derived from unity and clarity and thus can bestow harmony. Alignment (from the French *alignement*, from "*aligner*", to arrange in a line) can also be thought of as an arrangement, a positioning, a calibration, an order, or a sequence that is most notable in consonance with the natural world<sup>27</sup>.

Le Corbusier embraced the concept of alignment as an ideology and methodology to establish order in the chaotic existence of post-war France. The young Le Corbusier, then Charles-Édouard Jeannerette, and his partner Amedée Ozenfant, saw the years following World War I as much more than a time for renewal. It was time for revolution. The two men became partners in the pursuit of a "Purist ideology" to define the modern world that lie ahead.

Their manifesto, *Après le cubisme*, expressed the Purist perspective through the act of painting and stated in their manifesto that “Purism” is a word used to “designate a single *intelligible* word to be characteristic of the modern *spirit*”<sup>28</sup>. Originally an artistic movement, Purism developed as an ideological campaign. The charge of Purism was to preserve French ideals founded in a previous time and to simultaneously move toward a contemporary vision for France. The Purists were positioned at the threshold of a greater modern movement. Two existences to be aligned: a national identity based in the past and ravaged by war opposite the proposed modern future that lie ahead.

### ***The Purist Endeavor***

At the start of the twentieth century, post-war Paris in 1918 is poised to assume the mantle of an innovative and contemporary culture. At first light, the early impact of the ‘new spirit’ in Paris could not be foreseen. Thinkers, artists, and visionaries of the time captured a revolutionary momentum to expand upon their contemporary theories and visions for the new world that lie ahead. New ways of seeing and thinking coupled with experimental aesthetics and thriving modern technologies defined a period of time that was considered boundary crossing and revolutionary. In post-war Paris (1918-1925), the Purist artists, writers and thinkers were motivated by the origination of emerging modern ideals. ‘Modern’ expression was found in diverse forms and defined the ethos of a new age. The ideals of the time were documented in the journal *L'Esprit Nouveau*, first published in 1920. The ‘mise au point’, the focus of the post-war artists, was to reestablish tradition, and at the very same time develop an advanced and contemporary France.

The Purists pursued dual objectives that were exceptionally different, a vestige of the past and the other an aspiration toward the future. A dichotomous scenario on a vast scale to encompass the physical and emotional reconstruction of a war-ravaged country. The pursuit would need to address the exterior physical community and interior spiritual infrastructure of a nation. Clarity, intelligibility, and transparency were the dominate themes of the Purist mantra. The social reality of the day gave itself to an openness that allowed for the undertaking of innovative technologies with advancements in communication, transportation and building techniques. Innovations that altered the creative perspective<sup>31</sup>.

The Purist movement called for a rational sensibility, a cultural aesthetic that rejected excess and embraced clarity. The Purist movement was influenced by the machine age - a time that encouraged the intertwining of art with new technologies that arose in the post-war environment. The technologies and materials that would alter and improve the way in which the world moved forward had an appreciable impact in the realm of the artist’s endeavors. Purism ultimately became more than an art movement as its influence extended to industrial design, interior design, architecture, and urban planning. The navigation toward the future, with a respectful inclusion of the past, was a monumental endeavor shrouded in the form of an artistic movement. This early effort can be more loosely defined as a duality to join the past and the future.

The movement did, however, produce the writings that became a foundation of the modern movement and Le Corbusier’s chiasmic process.

In the introduction to the second printing of *Vers une architecture* (1924), Le Corbusier reflects with the question: “How to talk about architecture with elegant detachment, about architecture as resulting from the spirit of an era, at a time when this spirit is still obscured by the unbearable rags of a dying era?”<sup>32</sup>. A complicated time when reconstruction is both a physical and emotional construct, architecture assumes an expansive significance.

Within *Toward an Architecture*, the essays “Architecture Pure Creation of the Mind” and “Architecture, The Illusion of the Plan”, Le Corbusier establishes ‘the axis’. In “Architecture Pure Creation of the Mind” he writes: “in pure accordance with nature and, probably, with the universe: an axis of organization that must be the same as the one along which all phenomena and all objects of nature align”<sup>33</sup>. The axis for Le Corbusier is the unifier and the mediator that bestows an alignment and thus a “possible definition of harmony”<sup>34</sup>. Additionally, Le Corbusier writes: “If we stop in front of the Parthenon, that is because the sight of it makes an inner chord sound; the axis is touched [...]”<sup>35</sup> The axis is to be understood as a force of sensation within each one of us.



### “Pure Creation of the Mind”

Le Corbusier maintained a lifelong fascination with the Parthenon that was in various ways a focal point of *Vers une architecture* (1923). Le Corbusier is impressed by elements of the Acropolis that are reimagined in his early work and are inherently related to the larger landscape and universe they inhabit.

The scale of Le Corbusier's precedent, the Acropolis, is vast. The horizon line that joins earth and sky are his precedent and composes a sublime landscape. It's as if Le Corbusier strived for an architecture to take in the entirety of the universe that included the sky and the air, and the infinite landscape as does the Parthenon that frames spectacular views of the Greek countryside. The arrangement of the Greek temples along a meandering promenade presents the landscape from the inside and out. The temples are deferential to the earth and sky they intend to honor. The idea that the outside is always an inside and the ordonnance, the arrangement of parts in cooperation with the axis<sup>36</sup>, begin to define Le Corbusier's architectural ideology.

“The axis is perhaps the first human manifestation; it is the means of every human act”<sup>37</sup>. Architecture based on axes is the orderly arrangement of parts and the axes drives the goal. As architecture they are the play of solid, light and space that amounts to a “sensory sensation”<sup>38</sup>. The arrangement of the physical world and the interrelation with that world that provides a response. It is these early themes in “Architecture, The Illusion of the Plan” that set in motion Le Corbusier's architectural theories based in the chiasm.

Le Corbusier writes: “The axis of the Acropolis goes from Peiraeus to Pentelikon, from sea to mountain. From the Propylaea perpendicular to the axis to the far horizon to the sea: a horizontal perpendicular to the direction that the architecture has imprinted on you where you stand, an orthogonal perception that tells”<sup>39</sup>.

What is the perception telling us? In this case, Le Corbusier does not describe the built form, but rather telling of the path it provides and unbuilt forms, the natural forms, the horizon, the mountains, and the sea. The ‘modern landscape’ for Le Corbusier is a mirror of the ancient landscape. Revered and respected in its majesty, the architecture is the means by which we take in the endless void, the distant horizon, and the infinite sky - what Le Corbusier years later described as ineffable space. This powerful physical image and the bodily experience Le Corbusier described is based in the ancient landscape and underpins the chiasmic diagram that formed the architect's theories and praxis.

### The Axis & The Chiasm

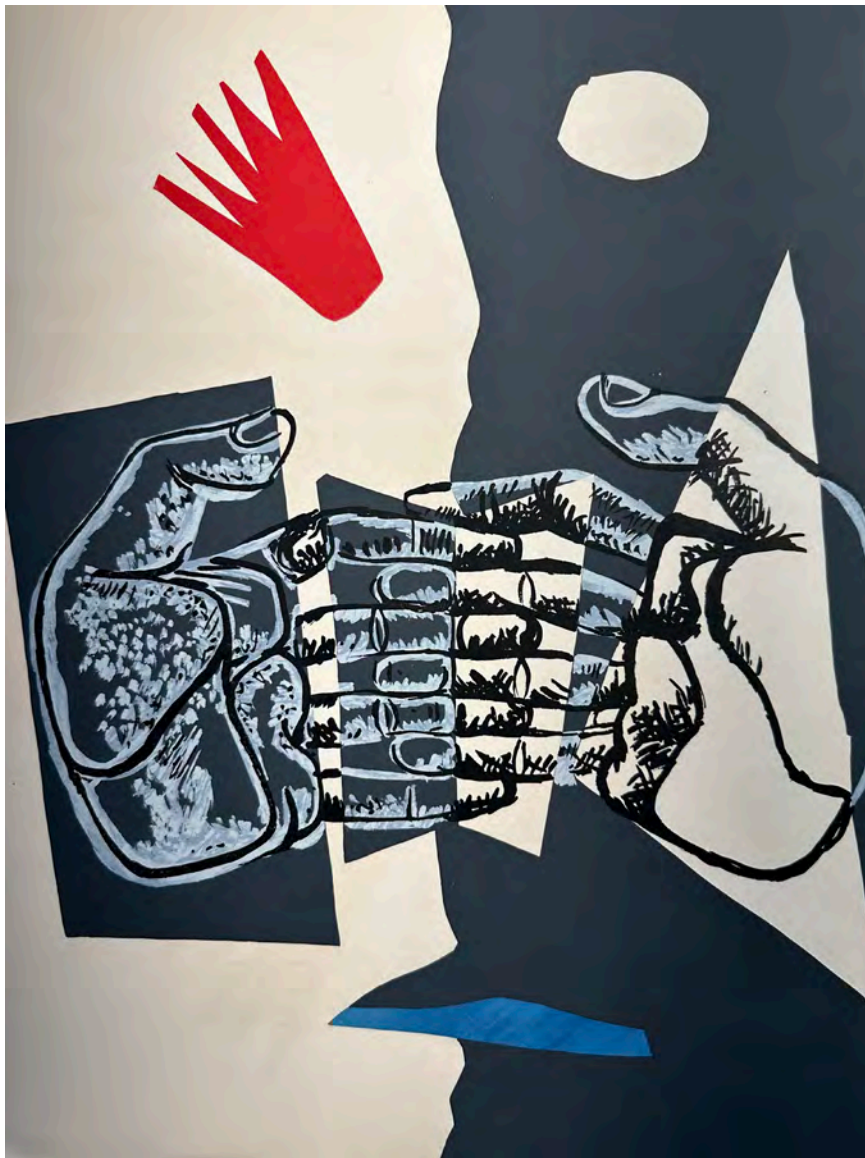
Axis, from the Greek *axon*, “axis, axle, wagon,” and from the Sanskrit *aksah*, “an axle, axis, or beam of balance.” The general sense of a “straight line about which parts are arranged” comes from the 1660's<sup>40</sup>. The axis is also defined as a center pole around which something revolves, a word at the core of “revolution”.

Chiasm, as previously noted, is represented by the Greek letter chi (X), meaning to place crosswise and historically employed as a rhetorical device. Merleau-Ponty, whose philosophy is most associated with the word today, equates the chiasm with an operation of thought. He describes the bodily act of seeing as two sided, seeing outward and seeing inward. Vision is simultaneously external and self-referential. It is the intersection of one being and its surroundings, what Merleau-Ponty calls “*ces renversements*”<sup>41</sup>. The reversals are an interplay between the body and the world that are inextricably joined.

Seeing does not mean simply ‘to see’. Merleau-Ponty writes that the world of the painter is not a purely visual world. It is a world that gives life to the non-tactile things within and even considered ‘invisible’ and puts forth a voluminosity of the world<sup>42</sup>. Seeing the world and perceiving the world are two actions intertwined. The *idios kosmos* (the private world) is a reflection of the *koinos kosmos* (the common world) as a kind of mirroring. The mirror is the trick, the deceptive illusion, as Merleau-Ponty writes: “ [...] the mirror creates the spectacle. Myself in another and another in myself”<sup>43</sup>. The mirror image, a reflected duplication, is almost identical to the original but is actually a reversal in the direction perpendicular to the mirror surface.

Merleau-Ponty makes use of the term Chiasm to explain what he calls reversibility, that is an exchange between the visible and the invisible. Merleau-Ponty uses the chiasmic structure to define this relationship in much the same way as Le Corbusier. The relationship as a cojoining of the sensory (exterior) and the sensed (interior). The 'crossing' that unites ideally seeks a harmonious intertwining of contradictions by which a reversible relationship is formed.

Merleau-Ponty writes in "The Intertwining-The Chiasm" (1964): "[...] the flesh we are speaking of is not matter. It is a coiling over of the visible upon the seeing body, of the tangible upon the touching body, which is attested to in particular when the body sees itself, touches itself seeing and touches the things, such that, simultaneously, as tangible it descends among them, as touching it dominates them all and draws this relationship and even this double relationship from itself, by dehiscence or fission of its own mass"<sup>44</sup>.



**FIG. 4**  
 Le Corbusier, *Milieu A5*.  
 1947-1955. From *The Poem of The Right Angle*,  
 example number 168,  
 original lithograph on Arches  
 paper. Source: The Library  
 of Congress, Rare Books  
 and Special Collections,  
 Washington, D.C.

Similar in theory, Le Corbusier writes in “Architecture, Pure Creation of the Mind” (1923): “If the dugout canoe, the musical instrument, and the turbine, the results of experiment and calculation, seem to us like “organized” phenomena, which is to say as though imbued with certain life, that is because they are aligned with the axis. Hence a possible definition of harmony: a moment of accord with the axis that lies within man, and thus with the laws of the universe – a return to the general order. This would provide an explanation for our satisfaction on seeing certain objects, a satisfaction that commands at every moment an effective unanimity”<sup>45</sup>.

Le Corbusier and Merleau-Ponty search to identify an interchange of things. Things visible that touch us in a way that is invisible, sensory, and emotive. These two places, visible and invisible, describe the chiasmus, a concept about which Merleau-Ponty writes: “ [...] once we have entered into this strange domain, one does not see how there could be any question of leaving it”<sup>46</sup>. The chiasm embraces two sides, between touching and touched, or seeing and seen, within this reversibility the body finds itself in the place of the fold, the chiasm<sup>47</sup>.

### ***Painting & The Body as Chiasm***

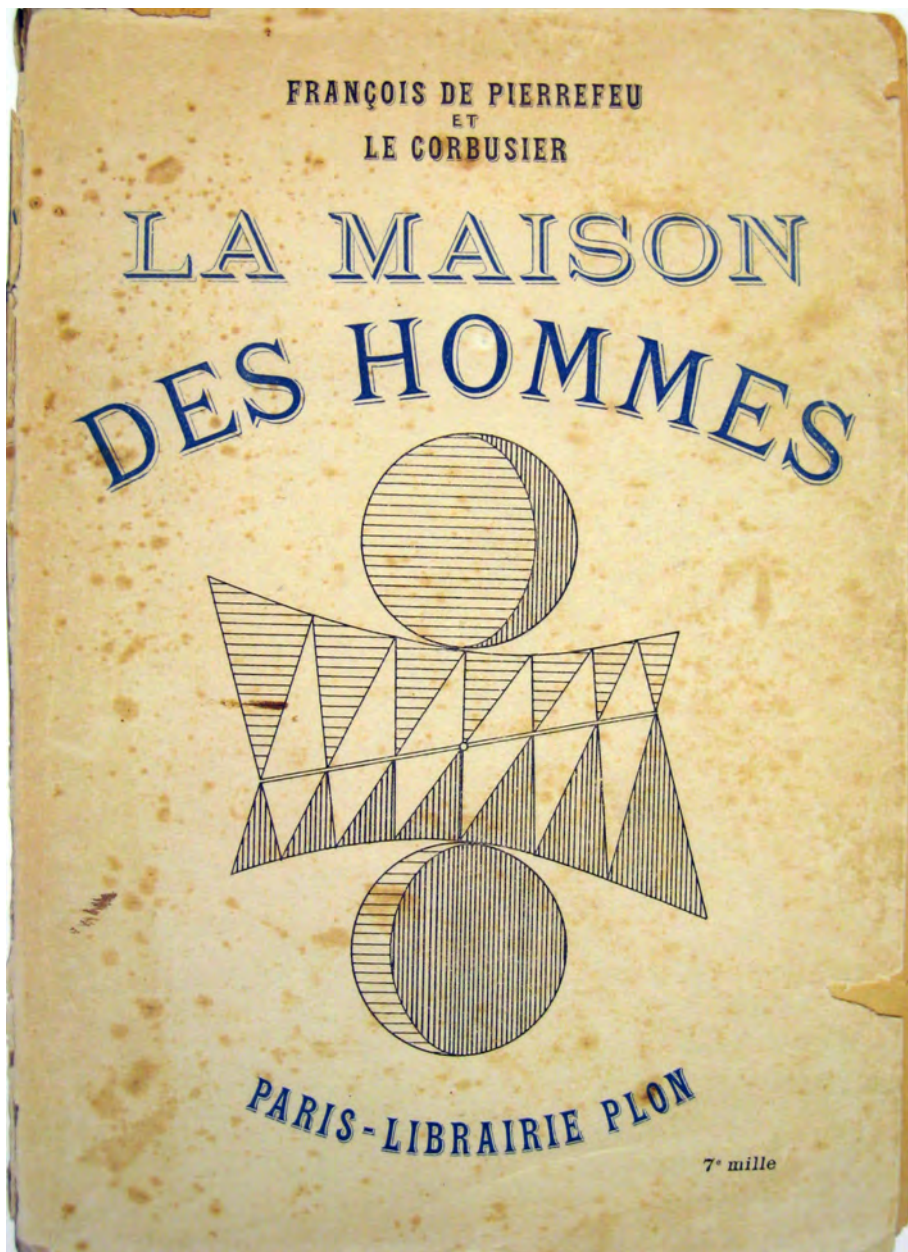
Twenty-five years after *Vers une architecture*, Le Corbusier published *New World of Space* (1948) as a synopsis of his *oeuvre* to include his paintings and architecture side by side. The premise and personal conclusion were that the two practices were inseparable. A work of art, he writes, is “a living double [...] a kind of reflection, a sincere mirror of an individual passion; that hour of profound conversation; that confession of a fellow man whose direct and eloquent words are spoken in direct and absolute communion; perhaps that Sermon on the Mount”<sup>48</sup>.

These words, published a quarter of a century after the initial publication of *Vers une architecture*, seem reminiscent of the conviction expressed in “Architecture, Pure Creation of the Mind”. Le Corbusier characterized architecture as a practice that surpassed construction and presents as art. “You work with stone, with wood, with concrete; you make them into houses and palaces; this is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy, I say: It is beautiful. This is architecture. Art is present”<sup>49</sup>. He equated architecture and art, and the architecture that is art, is a work that “touches” the heart, a significant point made. Le Corbusier’s “architecture” is an ideal that is generally embraced in the realms of painting and music. Architecture, that is so often reduced to utilitarian causes that pertain to construction, has a different meaning. “Architecture exists when there is poetic emotion”<sup>50</sup>. Architecture is equated to the work of the artist and the musician, it comes from within. Architecture, he writes, is animated by unity. Unity to be understood as a oneness, a concurrence, and a kind of harmony. Two, or more, joined as one. Le Corbusier described architecture that is formulated clearly and animated with unity to provide a basic character that is “pure creation of the mind”<sup>51</sup>.

An echo of Le Corbusier’s thoughts can be heard in Merleau-Ponty’s essay “Eye and Mind” (1960). In “Eye and Mind”, Merleau-Ponty finds demonstration of his theories in the French post-impressionist painter Paul Cézanne (1839–1906). He quoted Cézanne when he wrote: “What I am trying to translate to you is more mysterious; it is entwined in the very roots of being, in the impalpable source of sensations”<sup>52</sup>. Merleau-Ponty also found precedents for his own philosophical theories in Cézanne’s process. Cézanne, in his work, disregards the classical emphasis on outline, composition and perspective and instead chose to paint the ‘immediate impression of nature’<sup>53</sup>. The desire to paint instinctively was seen by Merleau-Ponty as the primordial act of expression, a demonstration of Cézanne’s interiority. Interiority that Merleau-Ponty describes as the undividedness (*l’indivision*) of the sensing and sensed<sup>54</sup>. Internally motivated, art, specifically painting, is an act fundamental to all cultures. Produced innocently and instinctively, it is a reflection of the self, a “living double” as Le Corbusier calls it. Painting in this sense is a kind of reflection<sup>55</sup>.

The architect and the philosopher sought to understand the relationship between the eye, the mind and the impression that becomes a mark on the world. The body and mind exist as inseparable entities. Vision as a function of the body is a reflection that involves inspection and judgement, and equally so, vision exercised from within the body can be seen as a sensory response with instinctive qualities.

Merleau-Ponty writes: "Vision reassumes it's fundamental power of showing forth more than itself"<sup>56</sup>. These two accounts of vision indicate that we are a composite of both body and soul, our sensory organs are contributors to understanding the world. An effect of this understanding is that space, or spatiality, is considered from the inside out. Light and space are not merely signs to be read and documented, light and space pass through and envelope us<sup>57</sup>. Cezanne's vision is expressed in painting. Merleau-Ponty writes: "...this philosophy still to be done is that which animates the painter – not when he expresses his opinions about the world but in that instant when his vision becomes gesture [...] in Cezanne's words, he thinks in painting"<sup>58</sup>.



**FIG. 5**  
 Le Corbusier, Cover image,  
*La Maison Des Hommes*,  
 1942. Pierrefeu, F. and Le  
 Corbusier, *La Maison Des  
 Hommes*, 1942, Fonds.  
 Jorge Torres.

Le Corbusier makes use of the physical body as a demonstration and described the face as the subject of the axis and considered it as work of art. Each face, he writes, maintains a character of its own. However, “we say a face is beautiful when the precision of the modeling and the disposition of the features reveal proportions that we sense as harmonious [...] the trace of an indefinable absolute preexisting at the core of our being”<sup>59</sup>. Le Corbusier describes the axis as the external form of body and internal indefinable core of one’s being. The body is composed as both a physical and intellectual convergence; the interplay and unity of the two sides is an arrangement by which one senses the harmonious. The body, for Merleau-Ponty, is considered in the same manner as Le Corbusier, both sensible and sentient. Which is to say, ‘objective’ and ‘phenomenal’ or ‘visible’ and ‘invisible’. The body, as chiasm, is an intersection that joins two experiences, the objective and the subjective.

The chiasm is Le Corbusier’s inherent theme. It is the intersection of two sides staged around a central axis. Le Corbusier would later identify the axis as an organizational structure for the human creative work in *The Radiant City* (1933). “The human creative work stands midway between two poles of the objective and the subjective, a fusion of matter and spirit”<sup>60</sup>. Le Corbusier composed his ideology around the ‘axis’ as a phenomenological experience and, in doing so, Le Corbusier endeavored for intertwining and harmonious relations in his work. These relations, some clear and others less so, became a platform by which Le Corbusier would better understand architecture as a source of meaning and truth that is based in the human experience.

### ***The Inquiry***

One might consider that Le Corbusier and Maurice Merleau-Ponty had, within their respective works, seized upon the compelling nature of the ancient concept of chiasmus. If Cezanne “thinks in painting”, a concept observed and recognized by Merleau-Ponty, is it not possible that Le Corbusier, as architect, “thinks through painting”? Arguably, in this process of thinking through painting and drawing, and reflection on historical events both past and present, Le Corbusier developed a manifesto that clearly embraced the axis as a fundamental concept. There is a devotion displayed in his writings, paintings, drawings, and designs across his *oeuvre* that are so clearly representations of chiasmic imagery.

The architect and the philosopher, who both lived and worked contemporaneously in post-World War I Paris, embraced the chiasmic concept as evidenced in the corpus of their respective works.

Let us consider once more, *Les Constructeurs*. The chiasmic structures and symbols arranged in this sketch are numerous and primarily include the “X” at the center of the composition. The drawing is intended to describe the domain of the architect and the domain of the engineer and the relation between the two. Interestingly, the image is a series of chiasmic relationships as complementary arrangements of dark and light, earth and sky, hands with fingers interlocking, touching, and touched to suggest a necessary balance for a harmonious result.

*Les Constructeurs* is dated 1960 and was drawn toward the end of Le Corbusier’s life. He tells us in *Science et Vie* that the core of the drawing is taken from a previous drawing he created eighteen years before, a drawing that he literally inverted and turned on its side to create *Les Constructeurs*<sup>61</sup>. Le Corbusier’s inquiry with respect to the chiasm was an open ended quest, and one that gave structure to his ideology in his endless search for a harmonious *milieu*.

So where does this somewhat cursory parallel survey of the chiasm, within Merleau-Ponty’s and Le Corbusier’s respective disciplines, lead us? The time and place, Paris in the first half of the twentieth century, is their shared experience. The chiasmic inversion and its place in the larger metaphysical question (what is the nature of our being?) is interpreted by way of philosophy, Maurice Merleau-Ponty, and by way of design and construction of the built world, Le Corbusier. The consideration of Le Corbusier’s written, designed, painted, and built *oeuvre* through the lens of his contemporary, the philosopher Maurice Merleau-Ponty, helps illuminate a deeper understanding of the architect’s theory and process.

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Notes

1 Ted Toadvine, "The Chiasm," in *Routledge Companion to Phenomenology*, ed. Sebastian Luft & Soren Overgaard (London: Routledge, 2011), 336.

2 Ibid.

3 Boris Wiseman & Anthony Paul, *Chiasmus + Culture*, (New York: Berghahn, 2014) 93. 'Encroachment' to describe ones relation with others. Merleau-Ponty uses the French 'empiétement', to mean a transgression or encroachment. Donald Landes in *The Merleau-Ponty Dictionary* describes encroachment between vision and touch as a primary theme of Chiasm in *The Visible and The Invisible*, (p. 123) "Intertwining" is derived from the Husserl and the German 'ineinander,' is characterized as a chiasm or a relation of enveloping and the enveloped. 'Reversibility' that describes the sensing and the sensed and described as two hands touching, *Phenomenology of Perception* p. 92 [106]. The chiasm from *The Visible and The Invisible*, "The Intertwining - the Chiasm," Merleau-Ponty conceives of the body as a chiasm, that is a crossing over between the subjective experience and the objective existence.

4 Le Corbusier, "Architecture, Pure Creation of the Mind" in *Toward an Architecture* (Los Angeles: Getty Institute, 2007), 233.

5 Le Corbusier, "Le Corbusier et les constructeurs," *Science et Vie*, August 1960.

6 Wiseman & Paul, *Chiasmus & Culture*, 21. Chiasmus is identified as a rhetorical device in the second century by Hermodorus of Tarsus (AD 161 – 180), the Greek rhetorician, surnamed 'the polisher.'

7 Sciolist, "Online Etymology Dictionary." Etymonline.com. <https://www.etymonline.com/word/axis>

8 Le Corbusier, "Architecture, The Illusion of the Plan" in *Toward an Architecture*, (Los Angeles: Getty Institute, 2007), 214.

9 Ibid.

10 Sciolist, "Online Etymology Dictionary". Etymonline.com. <https://www.etymonline.com/word/axis>

11 Ibid.

12 Le Corbusier, "Architecture Or Revolution" in *Toward an Architecture*, (Los Angeles: Getty Institute, 2007), 307.

13 J. A. Cuddon, *Dictionary of Literary Terms & Literary Theory* (New York: Penguin Books, 2014) 216.

14 This relationship of two sides intertwined can be related to the Vitruvian concept of "Practice and Theory."

15 The nineteen lithographs contained within *The Poem of The Right Angle* are designed to be arranged in seven rows, left to right and ordered, 5,3,5,1,3,1,1 top to bottom to form an iconostasis. The *milieu* at the top of the iconostasis is made up of five images on the top row; Figures 1, 3, and 5 of the *milieu* are shown.

16 Le Corbusier, "Le Corbusier et les constructeurs," 3.

17 Le Corbusier, "Le Corbusier et les constructeurs," 3.

18 Ibid.

19 Toadvine, "The Chiasm," 337.

20 Ibid, 336 - 337.

21 Wiseman & Paul, *Chiasmus + Culture*, 21.

22 Cuddon, *Dictionary of Literary Terms & Literary Theory*, 119.

23 Maurice Merleau-Ponty, "The Intertwining-The Chiasm" in *The Visible And The Invisible*, (Chicago: Northwestern, 1968) 131.

24 Ibid.

25 Ibid, 143.

26 Le Corbusier, "Architecture, Pure Creation of the Mind," 233.

27 Sciolist, "Online Etymology Dictionary." Etymonline.com. <https://www.etymonline.com/word/axis>

27 Charles-Édouard Jeanneret & Amedée Ozenfant, *After Cubism*, Goodman, J. translator, in *L'Esprit Nouveau Purism in Paris, 1918-1925*, (Los Angeles: L.A. County Museum of Art, 2001) Carol S. Eiel, 160.

28 Carol S. Eiel, *L'Esprit Nouveau Purism in Paris, 1918-1925*, (Los Angeles: L.A. County Museum of Art, 2001), 12-13. *L'Esprit Nouveau* was a periodical founded by Amedée Ozenfant and Charles-Édouard Jeanneret, and first appeared in October of 1920. The periodical was the platform for the Purist ideology. Artists, writers, and designers of war-torn Paris who aimed to at once reestablish tradition in parallel with the development of a new 'modern' France.

29 Ibid, 137. The "Critique on Cubism" defines Cubism as a movement that adheres to an old tradition, and lacks revolutionary ideals.

30 Jeanneret & Ozenfant, *After Cubism*, 160-167.

31 Le Corbusier, "Introduction To The Second Edition" in *Toward an Architecture*, (Los Angeles: Getty Institute, 2007), 84.

32 Le Corbusier, "Architecture, Pure Creation of the Mind," 233.

- 33 Ibid, 238.
- 34 Ibid, 239.
- 35 Le Corbusier, "Architecture, The Illusion of the Plan," 221.
- 36 Ibid.
- 37 Le Corbusier, "Architecture, The Illusion of the Plan," 221.
- 38 Ibid.
- 39 Sciolist, "Online Etymology Dictionary". Etymonline.com. <https://www.etymonline.com/word/axis>
- 40 Merleau-Ponty, "Eye and Mind," 162.
- 41 Ibid, 166.
- 42 Ibid.
- 43 Merleau-Ponty, "Eye and Mind," 136.
- 44 Le Corbusier, "Architecture, Pure Creation of The Mind," 238-239.
- 45 Merleau-Ponty, "The Intertwining - The Chiasm," 152.
- 46 Donald Landes, *The Merleau-Ponty Dictionary*, (New York: Bloomsbury, 2013), 240-241.
- 47 Le Corbusier, *New World of Space*, (Reynal & I.C.A. Boston, 1948), 115.
- 48 Le Corbusier, "Architecture, Pure Creation of the Mind," 233.
- 49 Ibid.
- 50 Ibid.
- 51 Merleau-Ponty, "Eye and Mind," 159.
- 52 Merleau-Ponty described reciprocity as a coexistence with other human beings, but also with the self; without reciprocity the alter ego would not exist.
- 53 Ted Toadvine "The Art of Doubting Merleau-Ponty and Cezanne," (Philosophy Today, 1997), 546.
- 54 Merleau-Ponty, "Eye and Mind," 163.
- 55 Ibid, 161.
- 56 Ibid, 178.
- 57 Merleau-Ponty, "Eye and Mind," 163.
- 58 Ibid.
- 59 Le Corbusier, "Architecture, Pure Creation of the Mind," 233.
- 60 Le Corbusier, *The Radiant City*, (New York: Orion, 1960). 1. The introductory lines of the book, accompany a painting by Le Corbusier. A painting composed in tandem with development of the book in 1930.
- 61 Le Corbusier, "Le Corbusier et les constructeurs," 3.

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