Toward Le Corbusier's Thinking in Vers une Architecture

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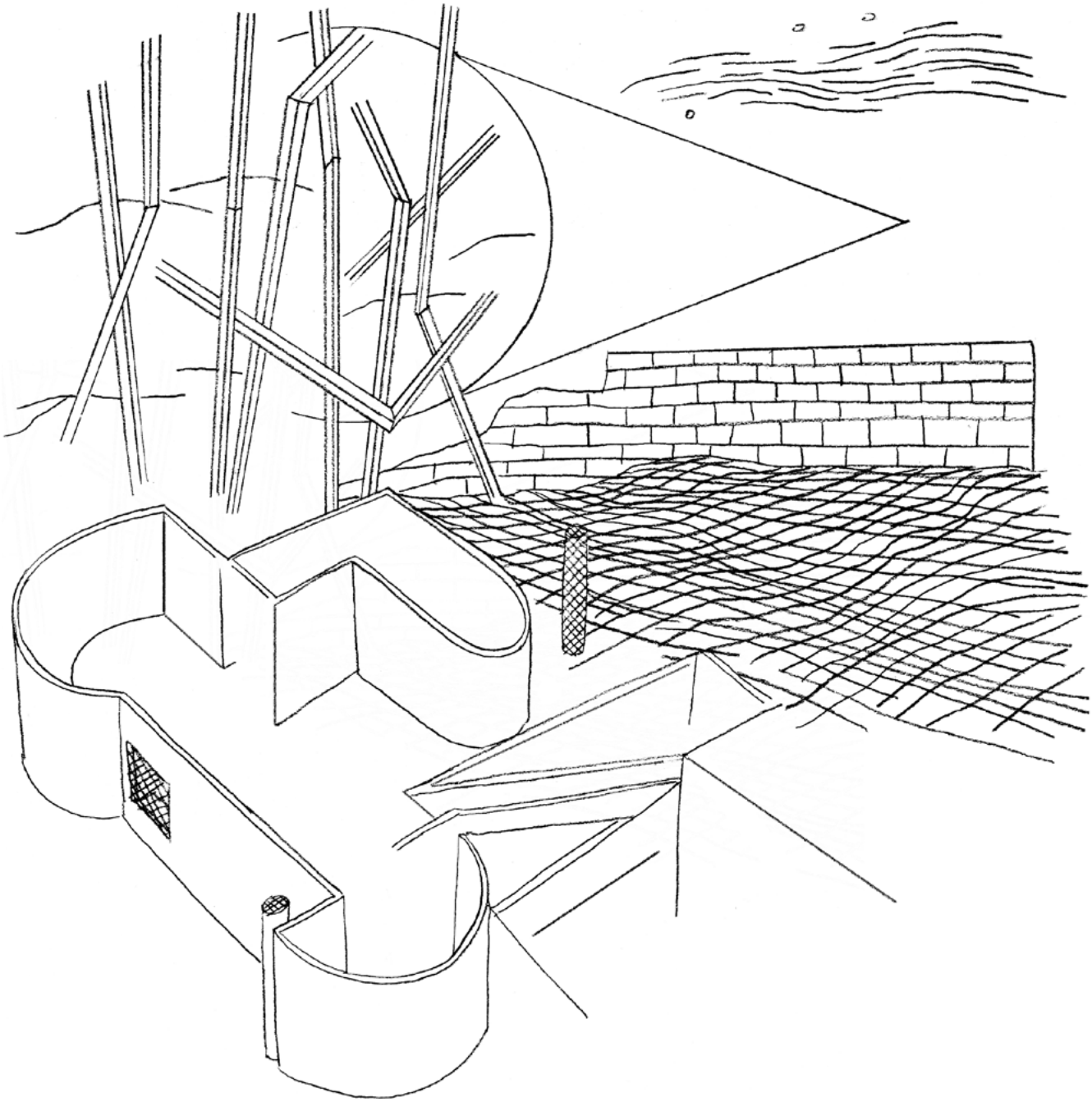
doi 10.31577/archandurb.2025.59.3-4.2



The paper attempts to analyse the thought that lies behind the book *Toward an Architecture*. What are the typical methods of its reflection, where are its sources of inspiration, specifically which models and thinkers; how does it treat these conscious or unconscious borrowings, and how does it compose them into an original whole – as clearly the book is informed by a certain characteristic, if syncretic, way of thinking. As such, the study attempts to contribute to an understanding of the thinking that guided the European avant-garde at the time and influenced much of Western architectural thought in the following century.

One of the most interesting questions to be asked when reading Le Corbusier's most famous book[1] is what kind of thinking, what train of thought, informed the book – or put differently, what can be discerned of the author's thinking from its written text. Partially complicating this task is, as we know, the book's own history: it did not emerge as a single conceived and written work, but instead represents a collection of texts published previously in the journal *L'Esprit nouveau*. This circumstance, however, does not mean that it is impossible to trace a specific mode of thought from its various origins or discern a recognizable intellectual approach. To render the situation a bit easier, I am deliberately avoiding one aspect perhaps now over-emphasized: most of the texts are the work of two authors, even if largely indistinguishable: not only Le Corbusier but equally his friend and colleague, painter Amédée Ozenfant. Since the book at the time of publication, as well as throughout the 20th century up until today has traditionally been ascribed to, if not entirely appropriated by, Le Corbusier – with Ozenfant's at least silent or resigned – I will speak exclusively of its thinking, ideas, texts as Le Corbusier's. Indeed, the Iliad and the Odyssey may also be not by Homer, yet tradition has – for over two and a half millennia – held them both to be Homer's, remaining essentially impossible to change. And the same is true for the chapters of *Vers une architecture*.

Some aspects of the author's thinking in the book[2] are clear upon first reading: a self-confident mode of thought, unafraid to present strong ideas and arguments, or equally to demand their acceptance. An inclusive, even syncretic thinking, it embraces, includes, joins. Yet it is also a thought that fails to include plurality, resolutely remaining in a schemata of either/or. It is clear too that this approach can be termed modern, in the sense that everything is understood as unfolding in time, as being seen by historical consciousness. Indeed, its underlying explanatory context is not that of where, what or why, but instead when. It is sufficient to note the famous quotation "A great era has just begun"[3] and its implication that industry has kept pace with the times while architecture has yet to do so: in other words, the entire discipline has fallen behind the historical development representing the primary explanatory factor.

Some indications how to proceed further may be provided through remarks by other authors. Oldřich Nový, a Czech historian and himself a participant of the modernist avantgarde, writes that Le Corbusier was an enthusiastic admirer of Jean-Jacques Rousseau[4] and elsewhere adds that Le Corbusier "…started a fight for the better life, health and joy of the people, with the intransigence and passion of his favourite authors Jean-Jacques Rousseau and John Ruskin."[5] Or similarly, he "admired the rationalism of the French encyclopaedists and of Descartes."[6] Likewise, the influence of John Ruskin and his moralising tendency is mentioned by Rostislav Švácha[7] in his book on the subject and repeatedly by Kenneth Frampton in his own monograph.[8]

Frampton's comments may prove helpful in additional ways. He mentions, for instance, the "…half-forgotten but latent Manichean view of the world which may well have been the origin of his 'dialectical' habit of mind"[9] and to this dualism Frampton adds: "…that ever-present play with opposites – with the contrast between solid and void, between light and dark, between Apollo and Medusa – that permeates his architecture and is evident as a habit of mind in most of his theoretical texts."[10] Continuing the analysis further, Frampton tries to interpret Le

Corbusier's thinking as dialectical, claiming that dialectical thinking, in his view, even informs the book under discussion. In his words: "While *Vers une architecture* fails to sustain a tight, consequential argument, its importance as an overall primer in Purist aesthetic theory resides in the fact that here for the first time the fundamental split between engineering and architecture is set forth in dialectical terms."[11] It is not difficult to find, based on this logic, additional dialectical relationships: engineer vs. architect, building vs. architecture or construction vs. emotion but also people vs. elite, progress vs. decline or the vital interconnection he draws between the themes of "the spirit of the time" ("spirit of construction") and the timeless truths of architecture (forever valid and stored in ageless works). Indisputably, these pairs are to be found in the book; considering moreover that the dialectic, otherwise a term rather hard to define, changing from Socrates to the post-Hegelian dialecticians of the 20th century, implies the enhancement of a term (or "thesis") by its own negativity (antithesis), it may be assumed that engineering (building) stands in a dialectic relation with architecture: each one is, in their mutual difference, even opposition, permanently changed and influenced by the other. To take this interpretation as a point of departure, it would be necessary to examine Frampton's motivation when presenting it. I decided for a different path.

Le Corbusier himself did not mention specific sources of his thinking. All the names appearing in the book, mostly of individuals from architecture – Perret, Abbé Laugier, Blondel, Ch. Percier, Philibert do Lorme, Brunelleschi or Bramante – as well as the figures from which he wanted to distance himself, or those with whom he cooperated or admired, appear only as passing mentions in the flow of the text. More frequently referenced, perhaps, are only Michelangelo and Pheidias, authors of oeuvres that Le Corbusier deeply admired and used as examples. Since Le Corbusier is a widely studied author who has been researched in great detail, many articles have dealt with individual aspects of his intellectual life and work.[12] While it would be intriguing to trace the influence of John Ruskin on his work and thinking,[13] in the text that follows I trace instead two previously mentioned names more commonly associated with philosophy: Jean-Jacques Rousseau and René Descartes.

A Trace of Rousseau

One of the clues mentions the name of the Enlightenment philosopher J. J. Rousseau and Le Corbusier's alleged admiration for this contradictory, alternative and unconventional, even revolutionary-minded figure, whose writings stirred and astonished readers throughout the cultural sphere of Europe. This reputation alone could undoubtedly have attracted and inspired the thirty-year-old author of the texts in *L'Esprit Nouveau*. However, if one looks at the words of the thirty-six-year-old Le Corbusier as published in his book, apart from isolated hints, only few individual themes are to be found, nor is the controversial Enlightenment figure named even once. A single reference cites the wording, if not the attribution, of Rousseau's famous social contract [*le contrat social*][14] establishing human society throughout history: "The social contract that evolves through the ages determines standard classes, functions, and needs yielding products for standard uses."[15] Yet as an isolated reference, the phrase does not seem to have much influence over Le Corbusier's thinking in the book.

Greater success, though, might be achieved if we turn to two other topics. The first is education, a subject extensively treated by Rousseau, for example, in his famous book *Emil*, or *On Education* (1762). As Czech philosopher Milan Sobotka writes: "Rousseau's theme is in fact socialization, the transformation of man that came about because he began to live socially."[16] According to Rousseau, man's development in history, his socialization, is both negative and positive, bringing positives and causing losses, as in the case of the "noble savage" who lives in natural simplicity and freedom, uncorrupted by civilization or the course of history. We find a similar view of education in *Toward an Architecture*. The accumulation of creations and inventions, the perfection of manufactured products and modern life in general brings positives; yet the architectural schools – namely the École des beaux-arts, for Le Corbusier a symbol of all that is wrong – destroy young people who, he argues, are lost to architecture after graduating. Specifically, in his invarably overwhelming and caustic critique: "The architects of the present day, lost in the sterile 'pochés' of their plans, rinceaux, pilasters, and lead roofs, have not learned to conceive primary volumes. They were never taught this at the Ecole des Beaux-Arts."[17] and even more openly: "Architects issuing from the Schools, those hothouses where they fabricate blue hydrangeas and green chrysanthemums, where they cultivate unclean orchids, enter the city with the minds of milkmen who would sell their milk mixed with vitriol, with poison."[18] Good education, according to him, consists largely in keeping young people safe from bad influences, an idea originating with J. J. Rousseau. Or similarly: "The lesson of Rome is for the wise, for those who know and can appreciate, for those who can resist, who can verify. Rome is the perdition of those who don't know much. To put architecture students in Rome is to wound them for life. The Prix de Rome and the Villa Medici are the cancer of French architecture."[19] The Villa Medici, on the Pincio hill in Rome, is owned by the French state and has been the home of the French Academy in Rome since 1803: the destination where students from France who come to the Eternal City, for example when they have won the Grand Prix of Rome, are directed to study Italian historical architecture in situ. According to Le Corbusier, these privileges place them at the immediate danger of the degenerating seduction of civilization. Although this theme permeates the entire book, it does not seem to be more than one specific theme, and a significant intellectual current throughout the author's written legacy.

More interesting in this context is the second motif, which can be clearly linked to Rousseau. In his famous *Discourse on the Origin and Basis of Inequality Among Men* (1755), Rousseau creates a certain apologia for the unspoiled nature of a humanity untouched by civilization.[20] And this essential innocence is clearly echoed in Le Corbusier's claim to modern life, housing or health requiring (again) only three essential pleasures: light (sun), greenery, place – "The towers … are far apart, in healthy air, among greenery. The whole city is covered with greenery."[21] There seems to be some suggestion here of a return to a time before the era of giant cities, noisy and dusty corridor streets, or dense configurations of apartment blocks. Any leap forward will be qualitative, re-establishing what we have lost through development, greenery, open space... Such thinking accompanies, or even co-shapes, Le Corbusier's thinking about architecture and housing permanently.

One can also perhaps associate Rousseau with a more generalized revolutionary mood, an enthusiasm for change, which echoes throughout Le Corbusier's book; for example, as follows: "Conclusion: What is in question is a problem of the era. More than that: the problem of the era. Social equilibrium is a question of building. We conclude with this defensible dilemma: Architecture or Revolution."[22] In another quotation, which also testifies to a revolutionary mood, to a defiance of the status quo, which is perceived as wrong, there is the theme of a return to greater simplicity – again something that can rightly be associated with Rousseau and forming a continual presence in the writings of Le Corbusier, at least on a declarative level. Le Corbusier writes: "Disturbed by the reactions that act on him from every quarter, the man of today senses, on the one hand, a world that is elaborating itself regularly, logically, clearly, that produces with purity things that are useful and usable; and on the other hand, he finds himself still disconcerted, still inside the old hostile framework. This framework is his home; his city, his street, his house, his apartment rise up against him and, unusable, prevent his tranquil pursuit of the same spiritual path that he took in his work, prevent his tranquil pursuit of the organic development of his existence, which is to start a family and, like all the animals of the earth and like all men of all times, to live an organized family life. Thus is society witness to the destruction of the family, and it senses with terror that this will be its ruin."[23] What he offers – more simplicity, sun, light, green, air, etc. – is undoubtedly close to a Rousseauian return to simplicity. But there is another motif here: in a sense, it turns against civilization, out of which it nevertheless grows, an impulse again traceable precisely to Rousseau. Just a few years after the publication of the book under review, Le Corbusier proposed the Plan Voisin de Paris, where its author, a convinced Parisian admittedly shaped by the city and an admirer of urban culture, wants to mercilessly demolish large parts of the French capital to make way for its new, "simpler" future. It is as if Le Corbusier felt what Rousseau felt, namely a certain disillusionment with culture. Similar ideas were a constant feature of avant-garde and other movements of the period.

A Trace of Descartes

Unlike Rousseau, René Descartes is mentioned by name twice[24] in the first edition of the book. However, for example, Le Corbusier's famous cruciform "horizontal skyscrapers" are yet to receive the designation of "Cartesian" in the book, a term to appear only. Nevertheless, the Cartesian spirit is permanently perceptible in the book. As already stated, Le Corbusier does not talk about the origins of his ideas, nor does he provide any direct quotations – with a few exceptions, mostly of journalistic statements used as negative definitions. Hence one cannot expect unmixed thoughts with clear origins and discernible intellectual lineages of an academic type: Le Corbusier is syncretic thinker not a strict academician.

There can be no doubt, however, about the proximity to Descartes or to an identifiably Cartesian way of thinking. Regardless of whether Le Corbusier ever read Descartes directly or indirectly, or whether he merely absorbed everything "from the air of the time", unquestionably not only a certain Cartesian mentality, not to mention specific ideas of the philosopher himself, were still alive in Paris at the beginning of the 20th century, so that it was possible to take it all in from "*sous le ciel de Paris*" [under the sky of Paris]. One of the most important ideas of Descartes's system is the quest for certainty, for security in our sense of knowledge and understanding, a certainty allowing us to build as on a foundation and develop it purposefully (the idea of accumulative knowledge). It was, in fact, a new foundation of philosophy, and since such Descartes' attempt can be considered successful, he can also be considered the founder of modern philosophical thought.[25] The key passage from the primary text is this: "For these notions have made me see that it is possible to attain knowledge which is very useful in life, and that unlike the speculative philosophy that is taught in the schools, it can be turned into a practice by which, knowing the power and action of fire, water, air, stars, the heavens, and all the other bodies that are around us as distinctly as we know the different trades of our craftsmen, we could put them to all the uses for which they are suited and thus make ourselves as it were the masters and possessors of nature [*nous rendre comme maitres et possesseurs de la nature*]."[26] The path toward this certainty and new thinking is the approach termed "methodical scepticism", Descartes's famous path of doubt, exemplarily demonstrated in the *Meditations on First Philosophy* and more concisely in the *Discourse on Method*. If Le Corbusier's early book wanted to rebuild architecture on certain foundations only (e.g., "The first obligation of architecture, in an era of renewal, is to bring about a revision of values, a revision of the constitutive elements of the house",[27] or "So there is reason to pose

the problem of the house, the street, and the city and to compare the architect and the engineer"[28]), the similarity might well be coincidental. However, the book is full of obvious thought parallels and many of the practices are the same.

Methodological scepticism, considered as Descartes' famous path to certainty, has several basic rules. First, it is impossible to build a correct answer on an incorrect foundation. Thus, it is not just the right answer that is important; equally if not more important (for the sake of verifiability and the possibility of follow-up, see below) is the path to the answer. So when Le Corbusier writes "A cathedral interests us as an ingenious solution to a difficult problem, but one whose givens were badly formulated because they do not proceed from the great primary forms."[29] it is clear that he wants to determine the problem rationally, that he believes in the possibility of rational determination and a subsequent solution, yet equally that the cathedral is not such a solution because he believed that they have chosen the wrong starting points – other shapes than primary ones. All the same, such a procedure does not apply in everyday life. If I need directions to a train station in Prague and ask a person who, say, looks at a map of Berlin yet derives from it advice that nonetheless guides me to the desired Prague station, I am satisfied, having achieved the desired result. However, as the procedure is irrational, the result is nothing beyond a happy accident. This is not the way Descartes or Le Corbusier want to proceed: they want the right questions and the right procedure that leads, in a controlled and certain way, to the right result. Le Corbusier wants to state the problem of the house, "let us pose the problem",[30] in this way: "*A house*: a shelter against heat, cold, rain, thieves, the inquisitive. A receptacle for light and sun. A certain number of compartments intended for cooking, for work, for private life. *A room*: an area for moving about freely, a bed for reclining, a chair for relaxing and working, a table for working, storage units for keeping everything in the 'right place'."[31] If the foundations are solid (Descartes: "...and start again right from the foundations..."[32]), one can move on.[33] From these few examples alone, Le Corbusier's clear methodological connection to Descartes' approach is evident.

The methodical nature of Descartes's method, the striving for precision, and the noted emphasis on correct procedure are all important elements in his thought: not only Descartes himself, but also all those who come after him, built a certain structure of knowledge and understanding on certain foundations. It is the idea of the accumulation of knowledge, with each researcher, each scientist, each generation adding a piece according to certain rules and certain procedures, to form an aggregate that allows unimaginably great achievements for all humankind. The guarantee of this, however, is that the foundations are firm and sure, and all procedures are verifiable, checkable, etc. In Le Corbusier's case, this is true both at the level of the particular and the whole. He writes of tools: "Tools advance by successive improvements; they are the sum of the work of generations. Tools are direct and immediate expressions of progress...."[34] Yet similarly, accumulation, progress, and forward development are also true on a larger scale: "The lesson of the airplane is not so much in the forms created, and one must first of all learn not to see in an airplane a bird or a dragonfly, but a machine for flying, the lesson of the airplane is in the logic that governed the statement of the problem and that led to the success of realization. When a problem is posed to our era, it inevitably finds the solution."[35] By following a methodical procedure – and, of course, being filled with faith in it – we will arrive, with the help of the right questions and the right course of action, at more and more perfect airplanes. According to Le Corbusier, this is also true for the whole of his epoch: "The advent of a new age intervenes only when earlier work has quietly prepared the way."[36] And indeed, the anonymity of the accumulation of work, of results, discoveries and of everything else is itself an important part of the Cartesian concept.

This methodological approach of accumulation and gradual system-building is not merely to be discerned through individual ideas or statements but forms the basis of entire chapters in the work under discussion. One such case is the section of the chapter "Eyes That Do Not See...", part III, "Automobiles",[37] because it first sets a standard ("an assured foundation") and then builds on it, i.e., accumulates knowledge; the chapter specifically is about achieving perfection, i.e., constant improvement.

Part of Descartes's method is also constant checking, constant verification and review, and the exclusion of uncontrollable components and factors – mostly those elements that cannot be quantified, in itself presenting one of the best-known problems of the Cartesian model. For Le Corbusier, this quantitative turn is already evident in the book's most famous quotation, where he lists *precision* among the characteristics of architecture: "Architecture is the masterful, correct, and magnificent play of volumes brought together in light."[38] More interesting, however, is another place where Le Corbusier singles out artificial materials for their verifiability and fuller control: "The first effects of the industrial evolution in 'building' manifest themselves in this primordial stage: the replacement of natural materials by artificial materials, of heterogenous and unreliable materials by materials that are homogenous and laboratory tested and produced with standardized elements. Standardized materials should replace natural materials, which are infinitely variable."[39] The desire to gain full power over something and control it to one's will is certainly desired still by most people in the world of architecture, yet the ecological considerations and consequences of such an approach render us less sanguine about its effects, not to mention the outcome of a gradual but increasing elimination of the "living process". For both Descartes and Le Corbusier, this stance is coupled with a firm belief in their knowledge of what they want and their ability to name it and set forth to reach it. "Let us situate the present observations on the terrain of current

needs: we need cities that are laid out in a useful way and whose volumes are beautiful (urban plans). We need streets where the cleanliness, the suitability to housing needs, the application of the mass-production spirit to construction, the grandeur of intention, the serenity of the whole ravish the mind and make for the charm of things felicitously born."[40] This sentence reveals a speaker who believes that he knows what he wants, that he believes in reason, indeed a statement that could well have been presented by Descartes himself. What is active there, however, is reason and only reason, not the whole man.

And one more area of similarity also deserves mention. Descartes' method and his whole endeavour aimed at universality, the absolute validity of his conclusions, insights and achievements – they should and will apply to everyone, everywhere and always. A plurality of views could last at most for secondary – non-quantifiable – matters: an object could be either blue-green or green-blue, but the essential qualities are invariably either-or. Precisely determined in accordance with being, they are reportable and therefore, at least in Descartes' imagination, ideally, fully convincing; therefore everyone – by virtue of insight – will also accept them. Such thinking has no understanding of plurality at its core. It is an approach that believes in unity, in universality, in a single governing logic. Obviously, this has never been true, and it is even less true today than it was before. However, it is also clear that even with this legacy we are not yet finished, after all the mental upheavals of the last hundred years.

Not surprisingly, this thematic area is also strongly represented in Le Corbusier's first book. "Everyone is in agreement about this: children, savages, and metaphysicians."[41] Le Corbusier's proclamation of consensus, of conviction, or rather his belief in it, is now likely to convince neither the child nor the savage, let alone the metaphysician. More fundamental than persuasiveness, which can be circumvented by pressure or power ("...they will conform anyway under pressure of necessity".[42]), though, is his emphasis on unity, on uniformity. Here too there is a striking similarity. A very famous quote of Descartes from the *Discourse on Method* states: "This is the case with buildings which a single architect has planned and completed, that are usually more beautiful and better designed than those that several architects have tried to patch together, using old walls that had been constructed for other purposes. This is also the case with those ancient cities, that in the beginning were no more than villages and have become, through the passage of time, great conurbations; when compared to orderly towns that an engineer designs without constraints on an empty plain, they are usually so badly laid out that, even though their buildings viewed separately often display as much if not more artistic merit as those of orderly towns, yet if one takes into consideration the way they are disposed, a tall one here, a low one there, and the way they cause the streets to wind and change level, they look more like the product of chance than of the will of men applying their reason."[43]

Notably, this citation almost resembles a theoretical model for Le Corbusier's later urban proposals, including the Plan Voisin de Paris. And in turn, Le Corbusier writes: "A single architect would lay out an entire street [in the first edition: "whole city"]: unity, grandeur, dignity, economy."[44] It is not currently my concern to examine and study the implications that this self-same architect – the one to win this sole gigantic and lucrative commission – is Le Corbusier himself. What is important here is the unity of all that is created, which shapes and permeates everything. And then, of course, there is also the downside of such a view: only consciously determined issues are allowed to come into consideration, that there is no place for chance, contingency, etc: once again, a mental habit still active in mainstream architectural thinking even today.[45]

Such a view is often associated with mathematical thinking, Descartes and Le Corbusier are not excluded. In the book under discussion, this mathematical bent is shown, for example, by these two quotations, "…[to] regulate everything according to the same unifying number"[46] and "The main block of the façade ... is governed by the same angle (A) that determines ... down to the smallest detail."[47] More than mere uniformity or rationality, everything is pervaded by one single logic and everything (also: everyone) is expected to conform to it. This points to another consequence – one, euphemistically speaking, not appreciated by us today – of the Cartesian way of looking at the world, of its disenchantment[48] (in Marcel Gauchet's term): the world is newly composed of the so-called *res extensa*, "things spread out", extensive things of the physical universe. Le Corbusier: "And all the nonsense about the unique object, about art furniture, rings false and shows a regrettable incomprehension of the needs of the present hour: a chair is by no means a work of art, a chair has no soul; it is a tool for sitting."[49] Similarly, Le Corbusier's other statements about the house as a machine for living, the plane a machine for flying, etc., tellingly resemble Descartes' view that the human body, the whole mechanical structure of its limbs,[50] is "a machine" of limbs.

All the similarities with the thinking of René Descartes can be found in Le Corbusier's book both at the level of individual ideas and – and this is particularly important – at the level of thought processes, the revelation of the patterns of the author's thought. At the same time, however, it is clear that these are not new findings;[51] what is new, perhaps, is the scope and systematicity with which they are presented here. Already in 1931, Vilém Dvořák wrote about the profound influence of Descartes on modern architecture, its emphasis on purpose, construction and material. "All these tendencies have their roots in the rationalism of Descartes."[52]

Nothing that has been said is meant to imply that Le Corbusier was a Cartesian thinker. There are as many, if not more, differences between these two authors as similarities. Descartes seeks certainty of knowledge in human consciousness, or in other words to establish a philosophy of consciousness. Le Corbusier does nothing of the sort:

therefore no Cartesian, but consciously or unconsciously using certain methods that can be clearly attributed to Descartes' way of thinking. And likewise, *Toward an Architecture* cannot be classified as a "meditation" in the sense used by Descartes or later, for example, by Husserl. It does not offer an authorial voice of a meditating subject turned inward; it does not guide the readers through a prepared process designed to convince them of the truth presented. Since the meditation discussed in their books is about obsessive self-reflection, about self-objectification, Le Corbusier's book could be regarded as many things but not as a meditation. Last but not least, the approach of the two authors differs in their notion of time; while Descartes strives to establish something timeless, free from the constraints of time, Le Corbusier, as I wrote at the beginning, uses historical changes, even drawing on them, essentially casting his thought in terms of history. What is Cartesian in *Toward an Architecture* became, due to his influence, passed on to 20th-century architecture as part of its innate genetic code.

The Concept of the Human

Still, thinking is not merely limited to a framework of specific contents and procedures. One can go further and ask how Le Corbusier thinks about humanity in the book, how he understands the human being: in short, his anthropology. Here, Le Corbusier is already farther from Descartes' view, although of course he cannot escape one basic intellectual trap: the determination of the human subject, much as the whole of twentieth-century philosophy has failed to escape up to the present day, despite the best efforts of philosophers from Heidegger onward. The human is understood as a subject, with all that this determination necessarily entails: the division between subject and object, the dualism of the thinking thing and the things spread out – *res coginans* and *res extensa*, etc.).[53] For Descartes himself, this interpretation begins at the beginning of the second meditation, when he reaches the first, glorious certainty: I think, therefore I am, "But what then am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, is willing, is unwilling, and also imagines and has sensory perceptions."[54] The body, that machine of the limbs and other matters commonly associated with the human as physical being, remains excluded from this fundamental component, as already indicated by the title of this second meditation: *The nature of the human mind, and how it is better known than the body*.[55] And understandably, Le Corbusier never went that far.

And admittedly, even such findings about the architectural thinking of modernists, including Le Corbusier, are hardly new; the above quotation from Dvořák goes on to say, "Descartes, however, not only became the founder of modern rationalism, but is also considered the indirect originator of modern natural-scientific materialism. Like all organic bodies the human body is a machine. There is only a difference of degree between artificial automata and natural bodies. The common view that the soul animates the body is erroneous. In nature, everything proceeds with mechanical necessity..."[56]

All of this could perhaps have been Le Corbusier's path if he wanted to move towards so-called scientific functionalism. He, on the other hand, tried to incorporate a non-rational component into his thinking, which will be discussed shortly. However, it is certain that the basic consideration is close to the mechanical, machine-like Cartesian view in some respects. In the chapter "Eyes That Do Not See", he writes: "All men have the same organism, the same functions. All men have the same needs."[57] From what is, essentially, a highly reductive understanding of man as a basic position, he can then infer a limited range of human needs: "Every man knows today that he must have sun, heat, clean air, and clean floors..."[58] And the constitution of the human dwelling is itself treated identically. "If the problem of housing, of the apartment, were studied like a chassis, we would see our houses rapidly transformed and improved. If houses were built industrially, mass produced like chassis, we would soon see forms emerge that, while unexpected, were sound, tenable, and an aesthetic would be formulated with surprising precision."[59] The human being is presented here as a user with a limited repertoire of needs that can be accurately captured, described; in a word, quantified and capable of purely technical satisfaction.

It seems to me that this approach still represents a goal-oriented level of thinking, where the architect wants to achieve the transformation of architecture and as a justification or rationale, looks for arguments to support his efforts. Any explicit statements about the human being – very sparse in the book – seem less the expression of a full theoretical position concerning human being and instead serve merely as part of the arguments. Nevertheless, the Cartesian duality applies to a certain degree to man as well, even if the distinction between the body-machine of the limbs and the thinking thing or spirit or mind is not emphasized: here, Le Corbusier presents the division between the human being at work, active in the world, in the public sphere on one hand, and at the other hand, the same human at home, in the family, in the private sphere. And these two spheres are separate. "Man senses today that he must have the intellectual diversion, bodily relaxation, and physical exercise necessary to recover from the muscular or mental tensions of work, of 'hard labour'."[60]

This thematisation of work in the first place, followed by rest, relaxation and private life at home, recalls the position of another architect devoted considerable attention to the world and the human place within it: Adolf Loos. However, I will not follow this trail of thought. Hence the human subject for Le Corbusier is the working one: "Men who are intelligent, coolheaded, and calm: they are what's needed to build the house, to plan the city".[61] The sentiment lies very close to Descartes: "Every modern man has a mechanical side: a feeling for the mechanical spurred by everyday activity. This feeling for the mechanical is one of respect, of gratitude, of esteem",[62] but who relaxes

by meditating on art, namely paintings. He returns to this repeatedly throughout the book, "Art no longer tells stories, it prompts meditation: after labour, it is good to meditate."[63] Or "Paintings are made for meditation. Raffaels, Ingres or Picassos are made for meditation."[64] Meditation on art is thus presented here as a kind of maintenance of the machine for work, i.e., the human being, almost as if to suggest that the domestic, private, resting area is there for the sake of the public, working, creative one. At least on the level of argument, Le Corbusier's position is different; he wants to reconcile and connect the two spheres: "We don't bridge the gap between our daily activities at the factory, at the office, at the bank, healthy, useful, and productive, and our familial activity that's handicapped at every contour."[65] The answer that promises to build those bridges is, of course, Le Corbusier's new, healthy and appropriate, residential architecture.

However, as I have already indicated, this is not all. Throughout the book, explicitly for example in the tripartite chapter "Architecture", Le Corbusier explicitly invokes the existence of something that transcends the practical, engineering level. Beyond the plane of basic satisfaction, it is possible to discern an aesthetic and artistic function or need: "But suddenly you touch my heart, you do me good, I am happy..."[66] Suddenly there is a somewhat different Le Corbusier, an author absorbed in the "pure creation of mind [*l'ésprit*]" – the determination that it is mind that creates is still close to Descartes, who thus determines the being of man as subject, as I noted above –yet already intellectually quite independent of Descartes. We are now faced by an author who sees and tries to thematize the timeless component of architecture, architecture as a sovereign art, who believes firmly in it and presents it to his readers, as convincingly as in other paragraphs, about the necessity of hygienic dwellings or economy in construction. The aim and purpose of architecture, in opposition to (mere) building, is as follows: "Construction: that's for making things hold together, Architecture: that's for stirring emotion."[67] Or, even more elaborately, "Architecture has another sense and other ends than emphasizing construction and answering needs (needs understood in the sense, implicit here, of utility, of comfort, of practical design). Architecture is the art par excellence … perception of harmony through stirring formal relationships. These are the ends of architecture."[68] Though thematized as a spirit, humanity is creative and, according to Le Corbusier, clearly should and must create architecture that resonates with the world and thus helps man resonate with the world. More than a creature simply in need of hot water and a practical kitchen, the human being is essentially a being able to perceive and experience order, the order of the world, and architecture can help in this. Le Corbusier, for example, says: "The architect, through the ordonnance of forms, realizes an order that is a pure creation of his mind; through forms, he affects our senses intensely, provoking plastic emotions, through the relationships that he creates, he stirs in us deep resonances, he gives us the measure of an order that we sense to be in accord with that of the world, he determines the diverse movements of our minds and our hearts, it is then that we experience beauty."[69] Although never stated openly, such language leads us to an almost Platonic or Neoplatonic view of the human being who ascribes himself to the spiritual. Le Corbusier here postulates "…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."[70] Or: "This sounding board that vibrates within us is our criterion of harmony. This must be the axis along which man is organized, in perfect accord 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. This axis leads us to suppose a unifying management in the universe, to assume a single will at the origin."[71] Every single statement of this quotation could well have been signed by Descartes, and yet it already expresses a different thought. Man is a creature in whom there is something attuned to the order of nature "and probably" of the universe, and architecture, as I have said, helps toward this end.

Le Corbusier thus defended man, to a certain extent against himself, as a complex creature living a spiritual life. This line forms a subdued but constantly present undercurrent, occasionally even rising to the surface. Yet it runs through the whole book, and works to shape it at the most crucial points in the argument. It is not, then, just a series of disconnected ideas put on a string from the first to the last chapter; it is an important and formative part of his thinking that can be read from the written text.

Conclusion

One could go even further in exploring the thinking that shaped Le Corbusier's *Toward an Architecture*. Possible trajectories for exploration include how he related to the past, to the present, how the two concepts relate to each other, and to the future. It would be interesting to investigate as well his relation to mathematics, since clearly for every instance of harmony, order, an axis in harmony with the universe, mathematics provides all the relationships and the overall unity. On the other hand, it would be worth exploring the role of intuition, which plays a role even in René Descartes.[72] It would also be possible to follow traces of other authors who somehow made their way into Le Corbusier's inclusive thinking;[73] e.g., E. Viollet le Duc, half a century previously.[74]

Another further step might be to explore, as mentioned above, Le Corbusier's instances of exceeding the utilitarian, engineering component of his basic dual pair. Probably only one place in the book fully exemplifies this possibility, in words already partially quoted: "This axis leads us to suppose a unifying management in the universe, to assume a single will at the origin."[75] Indeed, God is mentioned only twice in the book, only as off-hand remarks that only illustrate other matters, yet, at least certain inferences could be drawn from the above quote and reading between the lines. Both "latent

Manicheanism" implied by Frampton and Descartes's rational dualism require, after all, a conception of God, who in the Descartes' case is the ultimate guarantor of the system. A believer today will hardly be satisfied with a Manichean or Cartesian God, but even in Descartes' case it is not a fundamentally atheistic system. Nor in fact is Le Corbusier's world, despite the absence of any theological invocations in the book and regardless of how Le Corbusier himself treated the subject at the time outside the pages of the book, itself entirely atheistic.

On a basic level, Le Corbusier's thinking can be said, from his most important book, to be syncretic and ambitious, yet also demonstrating the ability to set goals and forge connections. Its procedures are taken from many sources, importantly from Descartes, using his rigor, precision, rationality, emphasis on persuasiveness, insistence or also unity, but it does not let itself be bound by any predecessor and wherever necessary – for example, in the definition of architecture and its role by humans – it diverges in a direction set either independently or at least derived another source. In principle, it is unquestionably impure thinking, unashamed of digressing or using disparate practices or methods to achieve what it requires or aspires to. However, it has courage, a certain generosity and is not narrow-minded, all of which adds to its appeal.

The book was an immediate success which, over the years, proved lasting, achieving enormous distribution, along with countless translations and editions, as repeatedly documented.[76] Because the thought behind this book was extremely influential and moreover followed by a significant proportion of 20th-century architects, it remains important to understand it even today. Understanding it will undoubtedly help to comprehend much in the architecture of the last hundred years. By engaging with the thinking hidden in this book, it will also clearly reveal that it is no longer sustainable as such and, in fact, unacceptable. It is also clear that in its entirety it is no longer ours anyway.

At the very end, however, I would like to emphasize one moment that has permeated this entire text and seems as valid and relevant today as it was in 1923. This point is Le Corbusier's attempt to connect – or in other words: to think – purposefulness, contemporaneity, science, technology and other components of the engineering pole with the artistic side of architecture (and art, and human creation in general), with that "non-utilitarian", with "what catches my heart", as he repeatedly says in the book, with the order of the world.[77] The combination of these two components may have been merely his personal intuition, yet nevertheless he tried to capture it in the book and thus reconcile the two. I think this reconciliation is still very much needed, and today perhaps even more urgently. The two poles certainly have their own advocates and representatives, their forums where they are spreading and being discussed, yet together they never appear to engage particularly well, even displaying a certain unwillingness to communicate between these two poles. In any case, their connection or the attempts to connect them are not part of the mainstream of the architectural world.[78] This effort on Le Corbusier's part, already visible in the book under review and continuing with him until his death, may be a good legacy and stimulus for our times.

This work was supported by the Cooperatio Program,
research area Arts and Culture Studies.

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1 It is necessary, at the outset, to make note of my personal position: I am referring to the book as a text originally in French, but read only in its Czech and English translations (bibliographical details supplied below), never in the French original. None of the French sources are open to me unless they appear in translations. The same is true for the interpretative framework: in my case, mostly based in philosophy and general humanities, limited primarily to Czech and English texts.

2 Jean-Louis Cohen offers a comprehensive analysis of the book, its creation, including technical characteristics, its reception at the time, both in France and internationally, as well as its long-term impact in the introduction to the new English edition of Le Corbusier's book. This new translation was published under the title *Toward an Architecture*, thus adhering to the French original *Vers une architecture* and omitting the word "new", as found in the first English translation as well as others, including the Czech one.
COHEN, Jean-Louis. 2007. Introduction. In: Le Corbusier. *Toward an Architecture*. Los Angeles: Getty Research Institute, pp. 1–77.

3 All citations in my text are taken from the second English translation based on the second French edition (1924). However, my first reading and studying of the book was exclusively based on the Czech edition, translated from the first French edition (1923); LE CORBUSIER. 2007. *Toward an Architecture*. Los Angeles: Getty Research Institute, p. 254; LE CORBUSIER. 2005. *Za novou architekturu*. Prague: Nakladatelství Petr Rezek, 2005.

4 NOVÝ, Otakar. 2021. *Česká architektonická avantgarda*. Prague: Prostor, p. 211.

5 NOVÝ, Otakar. 1966. Kto je Le Corbusier?. In: Le Corbusier. *Kapitolky o modernej architektúre*. Bratislava: Tatran, p. 19.

6 Nový, O., 1966, p. 24.

7 ŠVÁCHA, Rostislav. 1989. *Le Corbusier*. Prague: Odeon, p. 18.

8 FRAMPTON, Kenneth. 2001. *Le Corbusier*. London: Thames and Hudson, pp. 10, 15 and 206.

9 FRAMPTON, Kenneth. 2020. *Modern Architecture*. A Critical History. London: Thames and Hudson, p. 158.

10 Frampton, K., 2020, p. 158.

11 Frampton, K., 2001, p. 29.

12 Paul Turner's book is very interesting and revealing. He attempted to reconstruct a list of books that Le Corbusier owned until 1920 (including three works by Rousseau) and, above all, which of them he read (Rousseau is missing from the list, but that does not mean that he did not read him; there may simply be no record of it). TURNER, Paul Venable. 1977. *The Education of Le Corbusier*. New York/London: Garland Publishing, pp. 232–243. A detailed study of Le Corbusier early year can be found in Allen Brooks's survey of Le Corbusier's early years, up to the moment he moved to Paris. BROOKS, H. Allen. 1997. *Le Corbusier's Formative Years. Charles-Edouard Jeannerret at La Chaux-de-Fonds*. Chicago/London: University of Chicago Press.

13 SEKLER, Mary Patricia May. 1977. Le Corbusier, Ruskin, the Tree, and the Open Hand. In: Walden, R. (ed.). *The Open Hand. Essays on Le Corbusier.* Cambridge, MA/London: MIT Press, pp. 42–95.

14 ROUSSEAU, Jean-Jacques. 2022. *Rozprava o nerovnosti. O společenské smlouvě*. Prague: Karolinum.

15 Le Corbusier, 2007, p. 182.

16 SOBOTKA, Milan. 2015. *Jean-Jacques Rousseau: od „Rozpravy o původu nerovnosti" ke „Společenské smlouvě"*. Prague: Karolinum, p. 12.

17 Le Corbusier, 2007, p. 106.

18 Le Corbusier, 2007, p. 95.

19 Le Corbusier, 2007, p. 212.

20 Sobotka, M., 2015, p. 9.

21 Le Corbusier, 2007, p. 124.

22 Le Corbusier, 2007, p. 290.

23 Le Corbusier, 2007, p. 307.

24 At least in the Czech translation (Prague, 2005), which is based on the first French edition from 1923, his name appears twice. In both English editions, old and new ones, which are both based on the second French edition from 1924, Descartes' name appears only once. Similarly, the third French edition from 1928 has only one mention of Descartes' name.

25 A somewhat alternative interpretive view is offered by Aleš Novák, who in his book *Zázračná věda* [The Miraculous Science] presents the early thought of René Descartes set in the Baroque period with beliefs, dreams and other matters that do not fully fit into the traditional view of Cartesianism and its founder. However, in Le Corbusier's thought, I fear, it is the general late-modern image of Cartesian philosophy that plays a role rather than a nuanced, historically informed reading of the primary texts. NOVÁK, Aleš. 2012. *Zázračná věda*. Prague: Togga.

26 DESCARTES, René. 2006. *Discourse on the Method of Correctly Conducting Ones Reason and Seeking Truth in the Sciences.* New York: Oxford University Press, p. 51.

27 Le Corbusier, 2007, p. 254.

28 Le Corbusier, 2007, p. 96.

29 Le Corbusier, 2007, p. 105.

30 Le Corbusier, 2007, p. 165.

31 Le Corbusier, 2007, p. 165.

32 DESCARTES, René. 1996. *Meditations on First Philosophy.* Cambridge: Cambridge University Press, p. 12.

33 "...Once the foundations of a building are undermined, anything built on them collapses of its own accord; so I will go straight for the basic principles on which all my former beliefs rested." Descartes, R., 1996, p. 12.

34 Le Corbusier, 2007, p. 93.

35 Le Corbusier, 2007, p. 161.

36 Le Corbusier, 2007, p. 301.

37 Le Corbusier, 2007, p. 177.

38 Le Corbusier, 2007, p. 102.

39 Le Corbusier, 2007, p. 258.

40 Le Corbusier, 2007, p. 111.

41 Le Corbusier, 2007, p. 102.

42 Le Corbusier, 2007, p. 266.

43 Descartes, R., 2006, p. 12.

44 Le Corbusier, 2007, p. 46.

45 A comparison can be made between the engineering and artistic positions within architectural discourse, which continues to influence debate and education to this day. The engineering approach identifies with Le Corbusier's call for generalization, while the artistic approach is in opposition and emphasizes uniqueness. It may to some resonate with a distinction made by Dalibor Veselý between production and creativity in today (architectural) world, i.e., (in Veselý's term) in the age of divided representation. VESELÝ, Dalibor. 2004. *Architecture in the Age of Divided Representation*. Cambridge, MA/London: MIT Press.

46 Le Corbusier, 2007, p. 140.

47 Le Corbusier, 2007, p. 141.

48 Gauchet's idea of disenchantment of the world [*le désenchantement du monde*] – that the world is less and less perceived as full of spiritual quality – has been arranged in relation to two propositions: 1) churches persist and faith remains, but lived religion has largely run its course in our world, and the whole originality of the modern West has been to place the sacred element, which has always shaped human beings from without, at the centre of human relationships and activities. 2) If the end of religion is coming, it must not be judged by the weakening of faith, but by the way in which human society is being reshaped not only outside the framework of religion, but also along the lines and against

the lines of its original religious logic. GAUCHET, Marcel. 1999, *The Disenchantment of the World: A Political History of Religion*. Princeton/London: Princeton University Press.

49 Le Corbusier, 2007, p. 186.

50 Descartes, R., 2006, p. 17.

51 Only a brief mention is made of Descartes and his influence on Le Corbusier by Cohen. Cohen, J-L., 2007, pp. 1–77; The influence of Descartes' thought on Le Corbusier is discussed in detail by Christina Boyer. BOYER, M. Christine. 2011. *Le Corbusier, Homme de Lettres.* New York: Princeton Architectural Press.

52 DVOŘÁK, Vilém. 1931. *Teoretikové soudobé architektury.* Prague: Společnost architektů, p. 14.

53 "It is no coincidence that the cornerstone of Descartes' 'revival' of philosophy is, in contrast to antiquity and the Middle Ages, a new essential definition of man, a definition of man's being (i.e., a definition of what is decisive for man precisely as man) as a subject [*subiectum*] in the sense of the self (Ego), spirit, consciousness, a determination that in Descartes explicitly stands in opposition to the idea of the soul (PSYCHÉ, anima) and which conceptually dominates the modern era." BENYOVSZKY, Ladislav. 2007. *Úvod do filosofického myšlení*. Pilsen: Vydavatelství Aleš Čeněk, p. 333.

54 Descartes, R., 1996, p. 19.

55 The human mind is better known, because everything, including his own body, becomes known through the (human) mind, hence by thinking everything in the human mind is confirmed. DESCARTES, R., 1996, p. 16.

56 Dvořák, V., 1931, p. 15.

57 Le Corbusier, 2007, p. 182.

58 Le Corbusier, 2007, p. 298.

59 Le Corbusier, 2007, p. 179.

60 Le Corbusier, 2007, p. 298.

61 Le Corbusier, 2007, p. 176.

62 Le Corbusier, 2007, p. 176.

63 Le Corbusier, 2007, p. 98.

64 Le Corbusier, 2007, p. 170.

65 Le Corbusier, 2007, p. 297.

66 Le Corbusier, 2007, p. 195.

67 Le Corbusier, 2007, p. 97.

68 Le Corbusier, 2007, p. 163.

69 Le Corbusier, 2007, p. 92.

70 Le Corbusier, 2007, p. 239.

71 Le Corbusier, 2007, p. 233.

72 Novák, A., 2012.

73 Jean-Louis Cohen, for example, analysed Le Corbusier's reading of Nietzsche, especially *Thus Spoke Zarathustra* and *The Gay Science*. COHEN, Jean-Louis. 1999. Le Corbusier's Neitzschean Metaphors. In: Kostka, A. and Irving W. (eds.). *Nietzsche and "An Architecture of Our Minds"*. Los Angeles: Getty Research Institute, pp. 311–332.

74 On rationality and construction logic, influence of engineering, desire to reform architecture, rejection of historicism, desire for a new language of architecture etc. Dvořák, V., 1931, pp. 32–42.

75 Le Corbusier, 2007, p. 233.

76 Cohen, J-L., 2007, pp. 1–77.

77 Le Corbusier was, as mentioned, certainly not a philosopher exploring the essence of being, building, or architecture. Rather, his entire philosophical effort was turned toward constructing framework for new architecture to promote and publicize it. It may be even argued that one reason why Le Corbusier felt the need to add the "non-utilitarian" and "what catches my heart" characteristics of architecture could have also been the legitimization of the profession of architect. Still, none of these considerations forms a denigration of my argument here.

78 Perhaps Louis Kahn is an example.