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The Architectonics of Technique

From relatons to relational structures

SUMMARY OF THE DOCTORAL THESIS

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Summary

This present thesis presents a theoretical construction that aims to interrogate and explain the technical act using as central methods hermeneutics, axiomatics, analytics, phenomenology and speculation fused in the crucible of the philosophy of technology. This is done under the name of architectonics of technique for the following reasons: firstly, architectonics of technique refers to the constitution, genesis and structural principles of the technical act and to their phenomenalization in acts related to creativity and productivity; secondly, this architectonics is crossed by the development of the theory of relational structures that orders and determines a perspective of what gives stability and reality to the technical act. However, all these things are founded in a unique vision that starts from the hypothesis of *relatons*, that is, from what constitutes a relational structure, which in a partial effect constitutes the technical act and ends with the argumentation of the thesis according to which technique is the *sine qua non* condition of the expansion of knowledge. Between these limits lies the analytics and interpretation of the technical act. Thus, without a prior decantation of the technical act according to the development of the theory of relational structures as an explanatory engine, the final argumentation of the thesis would have been inconsistent and incomplete. On the other hand, the research also aims to provide a general theoretical framework from which and through which the technical act can be understood and explained in a unitary manner. This appears as a consequence of the diversity of theories about technique and creativity, whose theoretical constructions, as will be presented at the end of the research, touch only partial and insufficiently determined aspects of the phenomenal structures related to what we call technique and creativity.

The first chapter is dedicated to the analytics of the technical act and the presentation of its relational structure starting from the presentation of the central hypothesis regarding *relatons* as prime elements with encoded values. These values are generated by the complex relationships that the *relatons* establish between themselves and necessarily have a

numerical value. They have a numerical value in relation to us, those who understand. Therefore, once the premises and the central hypothesis are presented, we will continue with the structural registers that make technical thinking possible, from a macrostructural point of view, such as: the sensory field, the one that processes, in the first phase, the external complexity; the blurred gaze as our current way of being, in terms of the way we relate to ourselves and implicitly to the world, from the perspective of the limits and understanding given through the sensory field; the sieve as a function and relational structure of the blurred gaze in terms of the fluctuating limits of the sensory field in relation to the fluctuation of reality as an emergence of events; pre-technical thinking or natural (spontaneous) thinking as the background on which technical thinking is calibrated in precision and in the determination ratios given by the characteristics of technical thinking and referential binding. Referential binding is presented as the logic of the landmarks and relationships that determine the dynamics of imagination. Thus, this dynamics of referential binding constitutes the economy of ends and means as what fuels a technical act and gives it a beginning, a path and an end. This is presented as an economy precisely because of the quantification according to ends and means. Further, the characteristics of technical thinking are presented, those that differentiate technical thinking from natural thinking and which are described by the following components: imagination as plastic geometry to the extent that the structure of imagination is determined by spatial landmarks (apprehensions of complexity in imagination through the computational function in the unitary oscillation form-content) and by quantifications between landmarks and their relationships, focus and concentration, binding and categories of technical thinking, design, anticipation and calculation defined as a computational function.

An important role in the theory of relational structures is played by the complexity coefficient presented below. This coefficient represents the degree of apprehension of complexity by the sensory field and by what is generally circumscribed as a blurred view and plays a fundamental role in explaining the intentions and material that enter into the gear of a technical act; apprehension as processing and elaboration of the complex reality of events as relatively stable relational structures.

All these structural components are circumscribed by fundamental characters that condition the technical act and its relational structure, such as: the precise-imprecise, tense-untensioned and constraint characters. These characters are defined by the dynamics of the functionalities and particularities of the structural components of the technical act. In other

words, the characters describe and condition the processes and results of the technical act through the limits of these components.

The second chapter is dedicated to creativity and productivity as ways of achieving the technical act. In which creativity is the fundamental way both for the constitution and potentiation of the technical act, and for the replication and manipulation of productivity. In other words, productivity is differentiated as the replication and manipulation of creative acts. Thus, the technical act is presented as a way of creativity, based on both the characteristics of technical thinking and the characteristics of creative thinking. Thus, the technical act becomes a technical-creative act by potentiating and depotentiating the characteristics of technical thinking and creative thinking. The characteristics of creative thinking will be presented as what constitutes the dynamic and relational structure of a generally technical-creative occurrence. In the analysis of creativity and productivity, components are presented that describe a technical-creative act from an ontological point of view, such as: the contextual space and how it is shaped and configured by networks of relations of relational structures; the world as an information field through which information becomes a reference and mechanism in terms of the orientation and configuration of a technical act according to the demands of precision and the imperatives of accuracy; the entropy of creativity and productivity as a structural effect of the potentiation and depotentiation of the networks of relationships configured by technical-creative acts; complexity viewed as information, the affectivity of the sensory field as a sphere of precision oscillation; the authenticity and inauthenticity of creativity and productivity in relation to the action of entropy and thus to the degrees of potentiation and depotentiation of technical-creative acts; the tonalities of affectivity as a probabilistic and conditioned environment for the occurrence of the technical-creative act; also, the preeminence of the interrelationship between sensory fields as potentiation and depotentiation of creativity and productivity.

The third chapter uses the results of the previous chapters in order to present the technical act from the perspective of information theory and knowledge theory; areas, par excellence, of enhancing and achieving the precision of the technical-creative act. The nature, limits and instrumentalization of information from the perspective of the electronic and digital environment are presented; how information is captured, encoded and instrumentalized. An important point is the presentation of the paradox of certain

information defined from the perspective of relational structures; in which arguments are made regarding the fact that certain information, therefore true, still represents a limit of the truth it encodes, and this limit is in relation to other overdeterminations that certain information as such does not explicitly and noticeably imply; being in relational conditioning relationships with other classes of information. The digital environment is further presented and how it is operated more quickly by the virtual environment as a consequence and rule of efficiency in terms of creativity and productivity; this occurs through the use of algorithms. Thus, through the relationship between creative algorithms and digital algorithms and through their analysis, it is revealed that the ontological how of the technical act is one of an algorithmic nature. Thus, a structural answer is obtained related to the blurred sphere of vision regarding one of the fundamental questions of the present research. By moving from the digital environment to artificial intelligence and by instrumentalizing them in order to accelerate creativity and productivity, the macrostructural meaning prefigured by the development of these technologies is outlined; this meaning is that of (quasi)instantaneity in terms of satisfying the desiderata mediated by the potentiation of technical-creative acts through dominant technologies. Therefore, here the ethical issue of these technological developments will be raised from the perspective of the macrostructural meaning determined by the present research. On the other hand, dominant characters are presented regarding the development and instrumentalization of these technologies in relation to the affectivity of sensory fields, such as the following characters: invasive, of metamorphosis and of augmentation. It is further shown that although the limits of information and the limits of the sensory field and blurred vision implicitly show the limits of the technical act, they lead to delimitations of the technical act progressively through proximal potentiations and depotentiations in relation to the already existing knowledge and to the new configurations of relations that the technical acts establish. It turns out that algorithmic thinking applied under the influence of the demands of precision and the imperative of accuracy, as the ontological structure of the technical act, configures new relations and thus new spaces of opening towards the expansion of knowledge. Thus, it is further presented that through the increasingly precise, complementary and conditional progression between technique and knowledge, the probability of the precise determination of the ontological constituents, that is, of the *relatons*.

The fourth chapter is dedicated to critical considerations in relation to several theories and hypotheses, which uses the perspective obtained through the arguments and hypotheses

of the edifice of the architectonics of technique in order to show that these theories, although they did not explicitly propose to build a unitary theory of technology/creativity, are nevertheless in a situation of impossibility of this achievement. Which, in essence, characterizes the polarization and diversity of theories and hypotheses regarding the technical-creative act. This will be shown by briefly presenting the essential ideas of the theories of technique, accompanied by critical considerations regarding each one: we will show how in Question Concerning Technology Martin Heidegger builds his arguments starting from an acceptance of truth as a state of unconcealment that he sees as destiny, without taking into account an overdetermination of truth that raises the question of why things are the way they are with regard to technique and the fact that there is no essence of technique (as Heidegger claims), but rather a phenomenon of the character of constraint in general, given by the limits of the sensory field and the blurred gaze. The following theories will be presented further: that of Bruno Latour related to the actor-network theory in relation to the perspective of technique; that of Yuk Hui related to the concept of cosmotechnics; the theoretical construction made by M. A. Boden related to conceptual space and creativity and also the 4C Model of creativity will be presented. Their approach will be broadly the same and I will show how these theories only touch on partial aspects of these structures they target.

Finally, I will argue why the precise determination of *relatons* will require a new science that uses the tools of other sciences and, moreover, uses the technical knowledge most calibrated for this purpose. This argument is based on the interpretation of the limits and nature of information from the perspective of the theory of relational structures and the components determined, throughout the work, which constitute, structurally, the technical-creative act. These arguments also lead to the foundation of the main thesis of this research.

The results produced and revealed throughout the work converge in determining the technical-creative act, in its ontological structure, as being of an algorithmic nature and in arguing that technique is the *sine qua non* condition of the realization and expansion of knowledge, and the perspective from which technique is understood and applied, determines the understanding of the natural. These things are shown through the perspective of the theory of relational structures. A theory that is built by each theoretical component, together with its results, within the present work, and which crystallizes the original contribution regarding the architectonic vision of technique, from the hypothesis of *relatons* to the phenomenological effects of relational structures.

In conclusion, I will briefly outline the major original results that frame the findings of this research and define the theoretical edifice of the architectonics of technique: 1) the development of the theory of relational structures as a new theory for understanding the technical-creative act, has crystallized a new direction toward establishing an explanatory framework for the precise determination of the technical act; 2) a complementary result of this theoretical development is the emergence of a new way of viewing both objects and human beings in relation to the understanding of technical phenomena; 3) the definition of the hypothesis of *relatons* has, as a primary step, eliminated the conceptual distinction between technique and nature; 4) this, in turn, has transformed this absence of distinction into a "difference" characterized by varying degrees of complexity across the layers of relational structures; 5) the qualities of "precise-imprecise" and "tense-detense" have delineated the boundaries and the transcending of those boundaries of the sensory field, thereby defining the characteristics of technical thinking; 6) consequently, by defining the sensory field through the lens of primary properties and the complex relationships that establish relational structures, it has become possible, within this theoretical framework, to account for "blurred vision" and the economy of ends and means; 7) the elimination of the assumption that "thing-in-itself" exists, revealing, instead, that what was once taken for a "thing-in-itself" is actually an approximation of details found on the surface of relational structures; 8) the definition of imagination as a "plastic geometry" based on the argument that it, too, operates according to the logical relationships established by relational structures with the optical level of the sensory field; 9) the necessary determination of truth as the relative stability of relational structures, and its overdetermination in relation to other definitions of truth, namely, truth as unconcealment and as correspondence; 10) the computational function as a unilateral relation within technical thinking; 11) the role of the complexity coefficient in determining the precision of technical thinking; 12) it has emerged that technical thinking is realized through the modalities of creativity and productivity; 13) consequently, the entropy of creativity and productivity has been defined through the potentiation and de-potentiation of creative and productive acts; 14) furthermore, through the conceptual determination of entropy and its degree, the issue of the authenticity or lack thereof regarding creativity and productivity has been established; 15) the determination of certain information as a primary unit in the expansion of the knowledge of complexity; 16) the paradox of certain information as a determination relative to a structural layer of complexity; 17) it has become evident that a technical or creative act operates within an algorithmic logic and is defined as an ontological structural "how"; 18) the

instrumentalization of artificial intelligence reveals an acceleration in the execution of technical-creative acts; 19) according to the theoretical edifice of the architectonics of technique, it follows that technique leads to the expansion of knowledge; 20) and thus, it follows that technique is not merely a mode of determination, but also a mode of constituting knowledge.

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