The Historical Meaning of Present System Thinking[1]

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Two logically opposed interpretations of the meaning of current (soft and critical) systems thinking are drawn: thinking about the *holistic power structure that constitutes the ground for the possibility of a situation* and thinking how to *accommodate conflicting parties into a given order*. The epochal coexistence of these two apparently logically opposed modes of thinking are interpreted under an historical-ontological perspective. It is shown how the failure of the project of the Enlightenment has led to the constitution of a postmodern order dominated by instrumental thinking and absolute relativism, which sometimes disguises itself under the mask a few key notions of the project of the Enlightenment that rapidly become nothing but "plastic words" in-forming the mass-media publicity game.

INTRODUCTION
The Trap

Part I of Sir Geoffrey Vickers' "Freedom in a Rocking Boat" is named "The Trap." It starts with a description of a lobster pot, which I will quote in the following. I consider it to be a simple and powerful way to metaphorically presenting what I regard as the due meaning for systems thinking in the present epoch. Such a meaning is, nevertheless, the most threatened by the epochal forces currently imposed on systems thinking.

> "Lobster pots are designed to catch lobsters. A man entering a man-sized lobster pot would become suspicious of the narrowing tunnel, he would shrink from the drop at the end; and if he fell in, he would recognize the entrance as a possible exit and climb out again --even if he were the shape of a lobster.
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> A trap is a trap only for creatures which cannot solve the problems that it sets. Man-traps are dangerous only in relation to the limitations on what men can see and value and do. The nature of the trap is a function of the nature of the trapped. To describe either is to imply the other.
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> I start with the trap, because it is more consciously familiar; we the trapped tend to take our own state of mind for granted --which is partly why we are trapped. **With the shape of the trap in our minds, we shall be better able to see the relevance of our limitations and to question those assumptions about**

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ourselves which are most inept to the activity and the experience of being human now." (Vickers, 1970, p. 15, The emphasis is mine).

According to Vickers, "a man entering a man-seized lobster pot" would recognize the *shape of the trap* and would climb out again. Suppose that he could not climb out due to, say, lack of physical ability. Even so, that man would not be in a "trap" (in Vickers's sense), he would just be in some sort of prison. A trap is a trap only because the trapped cannot see the *shape of the trap*. To see the *shape of the trap* means that it is not a trap anymore; and, hence, it implies an instant liberation of the trap.

Systems Thinking: Seeing the Shape of the Trap

In order to *see* the *shape of the trap* two necessary conditions must be met. First, the trap must be seen as from "outside" *as a whole*. I say "as from outside" because it does not actually require to be standing outside, but only to imagine as if seeing it from outside as *a whole*. Second, what is to be seen is not simply that physical object (in the case of a physical trap) with a set of accidental features like colour, material of which it is made, etc. What is to be seen is its *structure as a trap* (its "trappy" structure). And its *trappy structure* is the *power structure* which makes it to be a trap. If these two conditions can be satisfied we can "see the shape of the trap"; and this is nothing but seeing its *holistic structure of trap*.

The *shape of the trap* represents a holistic view of a situation X under study. Systems thinking, by which I mean *holistic* thinking, is impelled by the will to providing a holistic account of a situation X. Vickers' metaphor suggests that in order to see the whole "shape of the trap", we must see our limitations and *hidden* assumptions. In less words, the sort of holistic thinking required to see the shape of the trap must be driven by a *critical* intent.

Systems Thinking about Systems Thinking: Two Paths of Inquiry

But, what guarantees that what we currently call "systems thinking" be the sort of holistic thinking intended to see the shape of our trap? Could not current "systems thinking" be a trap? Can systems thinking avoid the task of a holistic view of systems thinking (i.e. do some systems thinking about systems thinking)?

Systems thinking about systems thinking (in the critical context provided by Vickers' metaphor) requires, in my opinion, two paths of inquiry which, at certain point, must cross each other; namely, a "logical" inquiry and an "historical" inquiry.

By a "logical" inquiry on systems thinking I mean an inquiry into the ontological and epistemological meaning of "seeing a situation as a whole". This is thus an inquiry into the "logical" conditions for the possibility of systems thinking. This task has been undertaken by Interpretive Systemology (Fuenmayor, 1991a, 1991b, 1991c). It constitutes the first phase of a deep inquiry into "systems thinking."

By an "historical" inquiry on systems thinking I mean what I would like to outline in this paper. This historical inquiry I regard as a second phase of a deep inquiry into systems thinking. Both phases, "logical" and "historical" complement each other.

I will illustrate the outline of the "historical" inquiry into current systems thinking by means of a brief examination of the historical meaning of Checkland's "soft systems thinking." It will serve the purpose of a sort of triggering device for discussing the historical meaning of current systems thinking.

"TAKING STOCK HISTORICALLY" AND BEYOND

"Taking stock historically" was the first subtitle of Professor Peter Checkland's presidential address to the International Society for General Systems Research in June 1987. The title of the address is suggestive: "Images of Systems and the Systems Image" (1988). By "taking stock historically" Checkland means to make a chronological narrative of different attempts at systems thinking and check what we have "stocked" in what seems to be a common project comprising those different attempts. This teleological written chronicle leading to a "stock" intends to give historical meaning to "soft systems thinking."

I would like to make another attempt to understand the historical meaning of soft systems thinking, but under a different notion of *historical inquiry* from the one guiding Checkland's "historical stock." You will later see the difference.

The first thing to notice in Checkland's above mentioned paper and in most of his writings is his attempt to open a breach in the solid and homogeneous instrumental rationality (and underlying instrumental interest) of would-be "systems thinking" at present age. "Soft" Systems thinking shows itself as a revolution against the reductionism involved in "hard" (instrumental) systems thinking. In terms of Vickers' metaphor of the trap, the instrumental drive to focus only on designing means to given ends, without questioning those ends, is a clear illustration of not seeing the shape of the trap (as a whole). In this sense, "hard systems thinking" can be seen as a non-systems thinking which obviously violates the main critical condition of an "authentic"[3] systems thinking illustrated by the metaphor of the trap.[4]

"From Optimizing to Learning," Learning What?

Checkland's revolution can be represented by his phrase *"From Optimizing to Learning"* (Checkland, 1985). In view of that shift *from optimizing to learning*, the new way of "systems thinking", called "soft" systems thinking, unlike the "hard"

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[3] As far as I know, Checkland does not use explicitly the notion of "authenticity" in this regard.

[4] Here two questions come to mind: 'What is the ground for this authenticity?' and 'How does "soft" systems thinking avoids the possibility of not falling in the trap at another level?' Please bear in mind these two questions along your reading of this paper.

(instrumentalist) tradition in systems thinking, "regards systems models as models relevant to *arguing* about the world, not models of the world; this leads to 'learning' *replacing* 'optimizing' or 'satisficing'." (Checkland, 1985, p. 765, my emphasis). But why is "learning" to *replace* "optimizing and satisficing"? What is the meaning of learning? Learning ...what?

"From Optimizing to Learning" about the Shape of the Trap

"From optimizing to learning" means a shift *from* a mere will to control and efficiency *to learning about "the relevance of our limitations and to question those assumptions about ourselves which are most inept to the activity and the experience of being human now"* (Vickers, 1970, p.15). I am using Vickers's words to explain Checkland's meaning of *"learning"* because Checkland himself states that he is adopting Vickers' "intellectual framework" as the conceptual platform of his "Soft Systems Methodology" (SSM). SSM is thus seen by his author as a "way of applying" Vickers' intellectual framework (1985). If we accept that this is the meaning of "learning" embedded in "from optimizing to learning" and we remember our former discussion concerning the relationship between Vickers' account on the trap and systems thinking, then Checkland is saying that *systems thinking* (as above interpreted) must in-form an authentic process of *learning* about *our limitations and hidden assumptions*. With the aid of Vickers' framework, we have arrived to one possible interpretation of the meaning "learning" and "systems thinking" in Checkland's work; namely, *systems thinking is the way of conducting a process of learning about our limitations and hidden assumptions. Systems thinking thus thinks "the shape of our current traps."* In the following I will explore this possible interpretation. Later, I will contrast it with another possible interpretation.

"Soft Systems Thinking" and Modern Critique

According to an old tradition in philosophy, this business of attempting to see *holistically* "the shape of the trap", so that we can see our limits and hidden assumptions concerning a situation X, is called a *critique* of X. This is what Immanuel Kant meant by *critique* in his three "Critiques" (of "Pure Reason", of "Practical Reason" and of "Judgment."). Indeed, according to Kant, *transcendental critique* of something is the examination of the possibilities and limits of experiencing that something (1781/87, p. B25-B26). Under this definition, it seems that Checkland's notion of (holistic or systemic) *learning* (about our limitations and hidden assumptions) coincides with Kant's notion of *critique*. This can be seen even more clearly if we observe the holistic character of Kant's critical thinking (Reason). Indeed, the whole work of Kant pivots around the systemic nature of Reason. "*Reason* --writes Kant-- *is impelled by a tendency of its nature to [...] the completion of its course in a self-subsistent systematic whole*" (Kant, 1781/87, B825). This "tendency" is nothing more than the "will to systems" of reason. The

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highest level of (the system of) human reason, namely, holistic reason, is thus directly driven by the will to systems.

It seems, so far, that Vickers's "intellectual framework" and, in consequence, Checkland's methodology (and the sort of systems thinking in which it is embedded) belong to the Kantian tradition of *critique*.

Critical Systems Thinking?

There is, however, something that disturbs that hypothesis (soft systems thinking belonging to the Kantian tradition of *critique*): When Checkland "takes stock historically" about the systems tradition, he writes that the creation of the notion of *systems thinking* "is recent, occurring only in the late 40's, and its prime creator is Bertalanffy" (1988). Checkland seems to forget that systems thinking was the hallmark of the type of Modern thinking represented by the Enlightenment and German Idealism. As Heidegger puts it,

> The *history* of this formation of system [thinking] is at the same time the true and innermost *history of the origin of modern* science. This history is, however, history, not just the simple unfolding of a program. Countermovements and relapses, deviations, and detours belong to this development of the dominance of reason in the whole of beings." (Heidegger, 1985).

To be sure, the whole philosophical project of German Idealism can be defined --as the French philosopher Luc Ferry does (Ferry, 1991, p. 79)-- as a "systems project". So, is Checkland forgetting history or is there really a mismatch between Enlightenment critical systems thinking and Checkland's soft systems thinking (based on the shift from "optimizing" to "learning")? It seems as if this question takes us to probe deeper into both Enlightenment critical systems thinking and Checkland's soft systems thinking.

Towards Systems Thinking Historically about Systems Thinking

In terms of Vickers' metaphor, this "probing deeper" would mean to try to find out the *shape of the trap* of both *historical* ways of thinking; and that means to dig into their corresponding limits and hidden assumptions. *The "shape of the trap" would, in this case, be the **historical situation** which cannot easily be seen as a whole, from beyond, because we are trapped in it.* The very notion of "trap" indicates its hidden character. We cannot thus expect to see the shape of the trap of any epochal "systems thinking" just making a historical chronicle. It is necessary to dig into the *epochal foundations*, which due to their very essence of *foundation (fundamentum),* must be hidden.[5] Here a comment is due about the notion of "epoch" and of "historical inquiry."

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[5] At stake here is an attempt to see the "shape of the trap" of "soft" systems thinking. Soft systems thinking, if it is to be cogent with its principle of "learning", should not avoid the task of a holistic view of systems

Historiography Versus Historical Ontology

The historiographic conception of history --that of the written chronicle embedded in Checkland's "taking stock historically"-- conceives history as a chain of happenings that takes place in a fixed stage. On the contrary, what I am calling "ontological history" (inspired in Heidegger's work after his "turn") supposes that the stage is rather a whole "space," with its rules for the constitution of the "objects" contained in it; a "space" that changes along history. It is a "space" (in the algebraic sense of the word) from which the shape of the "fact" depends. Those "changing spaces" are *epochs*. An *epoch* is a temporal ground from which *what-appears* depends.[6] Under this ontological-historical conception, a change of epoch does not simply mean a change in a series of happenings; it means a change on the ground ("space") from which the general structure of *happening* depends. In other words, if "to happen" is "to take place," then an *epoch* is the ontological "place" of any "taking place." *Taking-place* thus occurs in different *ways* according to the *place (epoch)*. Those *epochal ways of taking-place* are ways in which what-is-present becomes present; they are thus *ways of presencing*.[7]

What are then the *epochal* conditions in which both Enlightenment critical systems thinking and current soft systems thinking inhere? Before attempting to provide a possible reply to these questions it is necessary to uncover the "ontological-historical" relationship between our notion of "*epoch*" and "systems thinking."

SYSTEMS THINKING AND METAPHYSICS: MAKING SENSE
The Practical Question and the Ground of Beings

Before modernity --and, in a fragmented way, along modernity-- the practical question, "What I ought to do?" (decision making on moral grounds) was a question addressed to the totality, to the *ground of beings* (*Theos*, among pre-Socratic ancient Greeks --see Heidegger, 1985), in search for a sign that tells man how to act so that his action harmonizes with that totality. This way of posing the practical question and the sort of thinking derived from it is systems thinking in its more original form within Western history (and, maybe, also in other non-western cultures).

However, this practical question is not a "moral" question in the sense we give to the term "moral" today. Today, by "moral" we mean a sort of "varnish" or "glaze" added once in a while to our judgment about human actions, which are primarily (before adding varnish) regarded as "facts" within a naturalistic and

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thinking (i.e. do some systems thinking about systems thinking) This attempt to see the shape of that trap will suggest that Checkland's "from optimizing to learning" (and other types of "soft" systems thinking) is not really very far from what is *essential* to "hard" systems thinking.

[6] To give a simplistic example: the shape of the "facts" in an Euclidean and in a Riemannian space are quite different (e.g. the shape of straight lines in both spaces are different).

[7] For a more detailed explanation see Fuenmayor, 1994.

dualistic purview (Fuenmayor, 1994). On the contrary, before modernity, making holistic sense and acting practically (meaningfully) were non-separable. There was not such thing as a realm of thinking separated from a realm of facts where human action belongs. Our current idea of *"knowledge applied to action,"* which lies at the essence of the notion of "methodology" as we understand it today within the systems community is a clear testimony of the total separation between the realms of thinking and of facts. Hence, the notion of "methodology" so central to "Soft Systems Methodology" (Checkland, 1981), to "Critical Heuristics" (Ulrich, 1983), to a "System of Systems Methodologies" (Jackson, 1991), to "Total Systems Intervention" (Flood and Jackson, 1991a), etc., would have been meaningless within that original *way of presencing* in which holistic sense and acting practically were non-separable. That non-separability in which holistic sense and action merge is precisely the principle of a systemic *ethos* before our current epoch.

Now, there is a major problem in posing the practical question to the *ground of beings*: The *ground of beings, theos,* is not a manifested being; it is concealment out of which the unconcealed is brought forth. The *ground of beings* is mysterious, or, rather, it is *mystery* itself. So, how can the practical question be posed to a non-being, to mystery itself?

According to Heidegger,

> The ground is that from which beings as such are what they are in their becoming, perishing, and persisting as something that can be known, handled, and worked upon .... [The ground] brings beings in each case to presencing. The ground shows itself as presence. The present of presence consists in the fact that it brings what is present each in its own way to presence. (Heidegger, 1969, p. 432).

Presencing and Metaphysics

Notice that, although the *ground of beings* is concealment, pure mystery, it has a way of showing itself (or, as we will see later, of completely hiding itself) as *presence*. The *ground* cannot be shown (be present) as *that-which-becomes-present*; it is shown as *presence*. This way of showing itself of the *ground*, *presence*, changes through history. An *epoch* is *the-present* of *presence*.[8] In different *epochs, presencing* of *that-which-becomes-present* occurs in different ways. Each of those ways is associated with a *type of presence*, a way of showing itself (or completely hiding) of the *ground*. When the *ground* shows itself somehow, there is something suprasensory (*presence*, the way the *ground* shows itself) apart from the sensory (apart from that-which-becomes-present). In this case, the sensory depends upon the suprasensory. When this is the case we can talk of a *metaphysical epoch.*

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[8]Notice the difference between *"presence"* (as a noun)*, "to presence," "that-which-becomes-present," "presencing"* and *"the-present."*

The History of Holistic Thinking

According to Heidegger, Occidental history, the history of metaphysics, is the succession of *epochs* that began with the separation between the sensory and the suprasensory, maintaining the supremacy of the suprasensory over the sensory. The history of metaphysics is ending (in the current *epoch*) with the "overturning of metaphysics", the deposing of the suprasensory, so that it becomes into "an unstable product of the sensory" (Heidegger, 1952, p. 54). After that "overturning" (the last stage of metaphysics), the separation between the sensory and the suprasensory will disappear and metaphysics will come to an end.

The history of metaphysics, Occidental history, from Heraclitus and Parmenides to Nietzsche, is, according to Heidegger, the *destining* of the ways of showing itself of the *ground of beings* (Being):

> In accordance to the given type of presence, the ground has the character of grounding as the ontic causation of the actual [ancient Greek thinking after Parmenides], the transcendental making possible of the objectivity of the object [from Descartes to Kant], the dialectical mediation of the movement of absolute spirit and of the historical process of production [the last Kant, Hegel and the German Idealism up to Marx], and the will to power positing values [Nietzsche]. (Heidegger, 1969, p. 432, my brackets).

"Grounding as the ontic causation of the actual," "the transcendental making possible of the objectivity of the object," "the dialectical mediation of the movement of absolute spirit and of the historical process of production," and "the will to power positing values" are types of *presence*, i.e. modes of showing itself of the ground. The last three represent what we are calling (following Ferry, 1991) the three "waves" of Modernity. According to Heidegger, through those changes,[9] which began in ancient Greece, metaphysical thinking has gone through a slow process of "debasement."

Now, metaphysical thinking, "thinks beings as a whole with respect to Being [ground of beings]." (p. 432). Hence, *metaphysical thinking is systems thinking, thinking in terms of the ground of beings so that sense,* **holistic sense,** *be brought forth.*

> What characterizes metaphysical thinking, which seeks out the ground of beings, is the fact that metaphysical thinking, starting from what is present, represents it in its presence and thus exhibits it as grounded by its ground. (Heidegger, 1969, p. 432)

This "*exhibiting* as grounded by its ground" is *exhibiting holistic sense.* Exhibiting holistic sense means to account for what-ever-is-the-case in terms of the

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[9] If one thinks of time in linear (Cartesian) terms, the end of an *epoch* does not mark the beginning of the next. Each epoch slips beneath the other so that although discourses keep similar shapes their underlying meanings begin to change.

given *type of presence* (the epochal mode of showing itself of the ground). Whatever-is-the-case might be a rabbit, a sunrise or my own action. The practical question is thus: "How ought I to act so that my action *makes sense*?" (where *making sense* means *exhibiting as grounded by its ground*). The practical question and making holistic sense are thus the same.

The overturning of metaphysics marks thus the end of systems thinking, at least, as it has been constituted along Occidental history. We can thus go further along our inquiring path and ask: What is then the historic-ontological meaning of current systems thinking? In order to understand better the meaning of this question we must pay heed to the last part of the history of metaphysics: from the constitution of the *subjectum,* as the new type of *presence* that characterizes modernity, to the debasement of any type of *presence* that characterizes our current epoch. For that purpose, let me come back to the question that drove us to the Heideggerian notion of "ground", namely, "How can then the practical question be addressed to the grounds of beings, to *mystery* itself?"

The Practical Question and the Type of Presence

Since the practical question cannot be directly asked to the ground of beings, it is posed to a *representative* of the epochal type of *presence* (epochal way of showing itself of the ground). This representative of the epochal type of *presence*, which plays the role of *intermediary* between the practical question and the ground of beings, must have an estrange ontological form: On the one hand, it has to keep the concealing character of the ground of beings so that it can be in touch with such a ground and, on the other, it must have a sort of unconcealed character (a symbol constituted by a system of perceivable signs) so that it can receive the practical question. The representative may, thus, be "nature" as a whole (not the set of natural things). In this case, one tries to find *signs* in nature in order to know how to behave. But it can also be the Church as the "house" of God in earth.

Now we can return to the question concerning the epochal conditions of Enlightenment systems thinking and of current soft systems thinking. Let us start with the first.[10]

THE EPOCHAL CONDITIONS OF MODERN SYSTEMS THINKING
The Will to Systems of The Enlightenment: An Emancipatory Will

The will to systems of the Enlightenment is propelled by a will to emancipation from hidden assumptions so that human decision making can be autonomous. Remember that, according to Kant, "Reason is impelled by a tendency of its nature to [...] the completion of its course in a self-subsistent systematic whole" (Kant, 1781/87, B825). That "endeavor" of Reason, writes Kant, has "its source exclusively in the practical interest of Reason". The practical interest of

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[10] For a more detailed explanation of this topic see Fuenmayor (1993 and 1994)

reason is for Kant the will to freedom. "By 'the practical`, I mean everything that is possible through freedom." (Kant, 1781/87, B828). **The will to freedom means the will to take decisions on *moral* grounds according to *universal* reason.** This, for Kant, means to ask the question "What I ought to do?" to our faculty for reasoning and not to internal desires or to external influences.

In an extraordinary short piece of writing called "*Was ist Aufklärung?*" (Kant, 1784, p. 85), Kant defines the Enlightenment, the heart of Modernity, in a very particular way. Enlightenment is an *ethos* (a fundamental living attitude or disposition towards what-ever-is-the-case). Furthermore, it is a negative *ethos*. Enlightenment is, according to Kant, "*man's release from his self incurred tutelage.*" In turn, "tutelage" is defined as "*man's inability to make use of his reason without direction from another.*" This "tutelage" is "self incurred" because "*its cause lies not in lack of reason but in lack of resolution and courage to use it without direction from another.*" This "resolution and courage" to use reason is the will to autonomy. Enlightenment is thus clearly defined in terms of a "will" to fight against something --against the tutelage of some other *order* that does not arise from man's own use of reason. The motto of the Enlightenment, says Kant, is "*Sapere aude!*" (dare to know!). And *sapere aude* means, according to Kant, nothing but "*Have the courage to use your own reason!*"

Those words certainly were expressing a will to emancipation. But why this urge to emancipation? Emancipation from what?

The Historical-Ontological Constitution of the Modern Will to Systems

In medieval times, truth was revelational truth. The divine order was revealed (always partially) to human beings through the Church. Church priests interpreted the sacred writings and other divine signs so that the rest of mortals could know how to live according to the divine order. This hermeneutic role of the Church was a source of *visible* power that dictated how to think, how to feel and, hence, how to behave, all within a coherent whole.

Renaissance thinkers like Descartes felt the epochal call for liberation *from* domination of the Church over men's behaviour. It was a call for *autonomy*, so that each human being could decide his own behaviour. Since the imperatives that regulated human action were based on revelational truth, the emancipatory will of Modernity required the creation of another source of truth from which human behaviour could be ruled. This might, at least partially, explain why Modern thinkers felt the call for a "liberation *from* obligation to Christian revelational truth and Church doctrine."

At stake in this fight against tutelage is the need to change the representative (the Church) of the medieval *type of presence* (the Christian God), so that human action can be autonomous. This would lead to a change of the *type of presence*. The emancipatory process in which Kant was involved concerns the transformation of an

epochal ontological order into another. The whole work of the main philosophers of modernity, from Descartes to Hegel, can be conceived as contributing to this deep revolutionary process. Such process required the design of new *type of presence*, i.e. a new way by means of which the *ground of beings* could be manifested, so that the practical question could be posed directly to it, without intermediary. Only in that way, would it be possible to preserve the holistic character of the practical question *and* strive towards human autonomy.

The revolutionary project was started by Descartes with the fundamental and first axiom of modern thinking: *cogito ergo sum*. Such an axiom, endowed with self-certainty, would constitute the basis for a new source of truth which could substitute "revelational truth." It declares Reason as a new *type of presence*. Indeed, Reason, which could be directly consulted by rational beings, would be, without intermediary, the new *type of presence* of the new *epoch*.[11] It is important to notice that, until Kant and still with Kant, Reason is not a property of the human mind. Reason is a *type of presence* before which human beings have limited (finite) access.

The Cartesian *cogito ergo sum* is, in this way, the birth-cry of a new *epoch* (in the ontological-historical sense explained above), a new way of disposing, classifying and giving meaning to what *presences*. New distinctions were made (new beings were created), new meanings were imposed to old names. It was, metaphorically speaking, the birth of a new "*constellation*" of the realm of beings that pivoted around two new centers of gravity: the "subject of knowledge" that became the new essence of man, and the "object of knowledge" that became the new essence of what-ever-is-the-case (which now is declared as opposed to the essence of man).[12] In this way, *that-which-becomes-present* begins to be presented as *object* and slowly ceases to be *created thing* (as in the Middle ages). The *type of presence* that allows the new way of *presencing* passes from *the Creator* to *Reason*; and Reason becomes the *domain of the subjectum*. The *subjectum* is thus the "transcendental making possible of the objectivity of the object." The work of Kant was to design the *system of Reason* so that this "transcendental making possible of the objectivity of the object" could be explained. That work had to be done according to the main rule of metaphysical thinking (systems thinking), i.e., "*to represent what is present in its presence and thus exhibit it as grounded by its ground*."

Now we are in a position to better understand the fundamental role of systems thinking in modernity.

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[11] A more detailed account on the conditions imposed to the new *type of presence* and how Reason could comply with those conditions can be seen in Fuenmayor, 1994.

[12] The new modern constellation is an onto-epistemology that could bear the generic name of "dualism." Modern philosophy, modern science and modern technology are originally built on the basis provided by the new constellation.

The Fundamental Role of Systems Thinking in Modernity

The first wave of Modernity represents a new epoch in the history of metaphysics. A new *type of presence* is constituted; but the basic general feature of metaphysical thinking, systems thinking, remains. It still "thinks beings as a whole with respect to Being [*ground of beings*]." In this way, the first wave of modernity preserves the sort of systems thinking that belongs to any form of metaphysical thinking. However, over this basis, the revolutionary process directed to change the former *type of presence* is impelled by a new *will to systems* beyond traditional systems thinking. In this way, *modern systems thinking* (the will to systems and the constructed systems) *represents both a preservation of the sort of metaphysical thinking that had to be kept so that the modern revolution could take place and the propellant of such a revolution.*

This is how systems thinking, contrary to what is common belief in our present systems community, was the hallmark of modern thinking. Now we can comeback to our original question about the meaning of "soft" systems thinking and its principle of *learning* in order to compare it with modern systems thinking.

THE EPOCHAL CONDITIONS OF POSTMODERN SYSTEMS THINKING
'Learning to See the Shape of the Trap' Versus 'Learning to Accommodate Conflicting Parties into a Given Order'

Our first examination of the meaning of the principle of *learning* animating soft systems thinking revealed that it could be conceived as a renaissance of the systems project of modernity (the only doubt that weakened such hypothesis was the oblivion of this modern origin in Checkland's "historical stock"). Now we know that the systems project of modernity was a deep *revolutionary* project intended to change an *epoch*, but preserving the basic systems thinking of metaphysics. Is current soft systems thinking also propelled by a deep revolutionary project? If so, which *order* is it attempting to change?

Although Checkland's discourse is not emphasizing revolutionary terms like "courage", "liberation", "emancipation", "autonomy", one could think that the shift *from optimizing to learning* is a call for emancipation. One thus would think that Checkland is trying to make a revolutionary break with some sort of rational order: instrumental rationality. However, there is something that hinders this hypothesis:

At the beginning of this article I quoted a piece extracted from "From Optimizing to Learning" in which Checkland writes about "'learning' replacing 'optimizing' or 'satisficing'" in soft systems thinking. Immediately after that, we can read: "...this tradition talks the language of 'issues' and '*accommodations*' rather than 'solutions'." (Checkland, 1985, p. 765, my emphasis). In the previous page, Checkland categorically states that "SSM thus seeks *accommodations* among conflicting interests." (p. 764). The shift *from optimizing to learning* is propelled by the interest in seeking *accommodations* (p. 766).

The notion of "accommodation" as used by Checkland means finding one's place within a given order. *Accommodation* requires a deal between conflicting parties representing conflicting interests so that, although the conflict does not disappear, each party can be *accommodated* within the present order. The conflicts, writes Checkland, "are subsumed in an accommodation which different parties are prepared to 'go along with'" (Checkland and Scholes, 1990, p. 30).

Accommodation: The Driving Interest Beneath Current Soft and Critical Systems Thinking

Accommodation is thus a conservatory call for accommodating everybody into a **given order** so that the stability of such an order is maintained. Checkland's notion of *accommodation* is not altered in its essence if the circle of the affected is widen to all the inhabitants of the planet (which is very unlikely to happen) through the *use* of Ulrich's "Critical Heuristic" (1983). Neither it is altered if coercive contexts are considered *using* Jackson's "System of Systems Methodologies" (Jackson, 1991). In any case, the final purpose of these forms of current systems thinking is to *accommodate* a few or many (normally a few) within a given epochal order. This is, obviously, quite opposed to that deep revolutionary will animating the systems project of modernity, whose basis was the transformation of an *epochal order*. So, while the latter requires a deep *critique* of the present order, *accommodation* among conflicting interests does not require to see the *holistic "shape of the trap"*; it is enough to detect conflicts in order to *accommodate* conflicting parties.

I am saying that current "soft' and so called "critical" systems thinking of the type proposed by Checkland, Ulrich, Jackson, Flood and others is quiet far from being a sort of renaissance of the critical drive of the Enlightenment project. It is not attempting at all to understand the present epochal order (i.e. to see the "holistic shape of the trap"); it is rather perpetuating that order by accommodating conflicting interests within it.

At this point we might ask: What is that *epochal order* that the interest in *accommodation* of current systems thinking is so eagerly striving to maintain? What is the *type of presence* behind this *order*? How does *that-which-becomes-present presences* in that *epochal order*?

Enframing: The Epoch of Accommodation

One hundred years ago, Nietzsche caught sight of the exhaustion of the modern *constellation*, much before the signs were as clear as they are now. According to Heidegger, Nietzsche associated the end of the *constellation* of Modernity with the end of the supremacy of the suprasensory over the sensory. Such a supremacy, which is the essence of metaphysics since Plato's times, was at the root of the old order from which the project of Modernity wanted to emancipate.

However, it also remained at the root of that very project of emancipation. From the Platonic supremacy of the "*ideas*" over the sensible, through the supremacy of the world after death over this earthly and spurious world, in the Middle Ages, metaphysics takes a new shape in Modernity: the supremacy of the *subjectum* over the *objectum*.

To be sure, according to Heidegger, the separation and opposition between "the ought" (which still is far from being conceived as "value") and *being* "begins as soon as being is defined as *idea*" (with Platonic philosophy). But, it is not until the modern era,

> that the distinction between *being* and *the ought* really comes into its own. The process is completed in Kant. For Kant the essent is nature... To nature is opposed the categorical imperative, also determined by reason and as reason. In relating it to the mere essent as instinctive nature Kant calls it explicitly the ought [*sollen*]. Fichte proceeded to make the opposition between being and the ought the express foundation of his system. (Heidegger, 1953, pp. 197-198, my italics).

This last form of supremacy of the suprasensory over the sensory begins to fade away in the nineteenth century. "In the course of [this] century the priority passed to" the sensory. The distinctive constitution of the notion of "value" plays a significant role in this "overturning." The new predominance of the sensory,

> endangered *the ought* in its role as standard and criterion. *The ought* was compelled to bolster up its claim by seeking its ground in itself. The moral claim had to present its own justification. Obligation, the ought, could emanate only from something which in itself raised a moral claim, which had an intrinsic *value*, which was itself a *value*. The values as such now became the foundation of morality (the ought). But since the values are opposed to the being of essent in the sense of facts, they themselves cannot *be*. (Heidegger, 1953, p. 198)

What Nietzsche caught sight of, he summarized in a simple and largely misunderstood sentence: "God is dead." As Heidegger explains it, "God is dead" means much more than people do not believe in God any more. "God is dead" means the "overturning of metaphysics", the end of the supremacy of the suprasensory over the sensory. Through the overturning of metaphysics, "there remains for metaphysics nothing but a turning aside into its own inessentiality and disarray." (Heidegger, 1952, pp. 53-54). With the overturning of metaphysics, we are at the threshold of a new order different from any traditional order before Modernity and different from the *constellation* of Modernity. But, how is such an order constituted?

According to Heidegger (1962), the postmodern epoch[13] is characterized by "*enframing*", the technological way of "revealing." *Enframing* is a way of

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[13] Heidegger does not use the term "postmodern."

presencing in which the *type of presence* disappears (the "suprasensory becomes void"), i.e. the *ground of beings* does not have any way to show itself. As a consequence, the two realms of being that characterize metaphysics are reduced to one: *that-which-becomes-present*. But, since there is not such thing as a *ground of beings*, *that-which-becomes-present* does not appear as *becoming* present; it does not depend on anything; it just *stands in and by itself*. It appears as "*standing-reserve*." *Standing-reserve* is the way of *presencing* of the technological instrument: ready to process its stored energy. Everything --technological devices, birds, mountains, songs, knowledge, persons-- becomes present as *standing-reserve*, ready to be *used*. There is a strong will to *accommodate* everything within the frame of *enframing,* as *standing-reserve*. "The suprasensory is transformed into an unstable product of the sensory. And with such a debasement of its antithesis, the sensory denies its own essence." (Heidegger, 1952, pp. 53-54). This is how the moral, understood as "moral values" from the 19th Century, adopt the varnish quality referred earlier. "The deposing of the suprasensory culminates in a "neither-nor" in relation to the distinction between the sensory and the non-sensory. It culminates in meaninglessness." (Heidegger, 1952, pp. 53-54).

Enframing: The Most Powerful Trap

Enframing is a "trap" in the fullest sense of Vickers' metaphor. Enframing precludes systems thinking, for the will to making holistic sense becomes senseless. It is a very sophisticated trap because it disguises itself with discourses about freedom and about other key terms of modernity.

Indeed, we certainly keep talking with the words (that rapidly become no more than ruins), not only of a moral discourse and order, as MacIntyre suggests (1985), but of the whole *constellation* of the realm of beings that Modernity reshaped from other traditional orders. For example, within systems discourse we can hear an obsolete "critical" intent of modern type (presented in the first part of this paper in terms of Vickers' account of the trap). However, we lost sight of the order of such constellation from which those words stem.

> The suprasensory world, the Ideas, God, the moral law, the authority of reason, progress, the happiness of the greatest number, culture, civilisation, suffer the loss of their constructive force and become void. (Heidegger, 1952, p. 65).

Our present discourses, uttered within a new postmodern constellation, use phrases and words whose original meanings belong to interpretive contexts that are now buried. Clue words like liberalism, democracy, justice, freedom, rationality mean today something quite different from what they meant during the Enlightenment. Furthermore, other words, fundamental to the former notions and to the whole realm of beings, have also changed their meaning considerably. Indeed, what we mean by very basic notions like "man", "world", "thing", "another person"

is quite different from the corresponding eighteenth-century meanings. Modern man becomes, as Foucault suggests, the murderer of God. But, as the murderer of God and hence, of the very essence of the *subjectum*, modern man becomes his own murderer:

> As the archaeology of our thought easily shows, man is an invention of recent date. And one perhaps nearing its end. If those arrangements [the *constellation* of Modernity] were to disappear as they appeared, if some event of which we can at the moment do no more than sense the possibility --without knowing either what its form will be or what it promises-- were to cause them to crumble, ...then one can certainly wager that man would be erased, like a face drawn in sand at the edge of the sea. (Foucault, 1966, pp. 387, my square brackets).

But not only man, as conceived within modernity, slowly vanishes, also Philosophy disappears or becomes associated with the "occult sciences"; Modern Science succumbs to technology and, beneath all that, the will to systems and, hence, modern systems thinking, becomes meaningless.

Furthermore, if Heidegger (and many other contemporary philosophers) is right in his idea of the overturning of metaphysics, not only *modern* systems thinking becomes baseless, but any other form of systems thinking of which we can think historically is meaningless in the current epoch. Indeed, since, "metaphysics *thinks beings as a whole* with respect to Being [ontological ground], with respect of the belonging together of beings in Being," the overturning of metaphysics implies the oblivion of the metaphysical totality (*ground of beings*) and its ways of showing itself (types of *presence*). The notion of a practical question addressed to the totality (*ground of beings*) proper of systems thinking becomes thus meaningless.[14]

Nevertheless we are here today still talking about systems thinking, we even associate the notions of *learning and critique* to such a way of thinking. What is then the (historical) meaning of our present systems thinking? How can the notions of holistic critical learning suggested by Vickers' metaphor of the "trap" match with that of "accommodation"? Is it the last echo in a land of deaf of the will to liberation? Is it a strategy to further confuse the dying discourse of Modernity and its liberating project? Or, is it rather the beginning of a new, a totally new, as far as our historical memory reaches, way of systems thinking?

In order to make our way through these questions we need to work on what Foucault has called an "ontology of the present" or a "critical ontology of ourselves" (Foucault, 1991). An "ontology of the present", as I see it, is an inquiry into the present (postmodern) *constellation* of the realm of beings.

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[14] If the epoch we are living were another metaphysical epoch defined by a *type of presence*, we could think that the interest in *accommodation* of soft systems thinking represents a renaissance, not of modern systems thinking, but of pre-modern systems thinking. *Accommodation* could thus be understood as a call to harmonize with the totality. But that, as already argued, seems very far from being the case.

CONCLUDING REMARKS

You have read an outline of an inquiry into the historical-ontological meaning of the common ground of "Soft Systems Thinking" (Checkland, 1981) and "Critical Systems thinking" (Flood and Jackson, 1991b). Two possible and logically opposed interpretations of the meaning of systems thinking have been drawn: *thinking about the holistic shape of the trap* and *thinking how to accommodate conflicting parties into a given order*. These two logical possibilities of understanding the meaning of current systems thinking have been seen under an historical-ontological perspective that gives a hint about how they coexist in the current epoch.[15]

As far as I can now see, at present, there are two horizons for our epochal systems thinking: 1) To be totally absorbed --at least for a while-- within what Dávila (1994) and Suárez (1994) call the "managerial technologies" (Total Quality Management, Re-engineering, the Fifth Discipline), so fashionable today, which represent sophisticated strategies to ensure *accommodation* (of those which are liable to do so) within *enframing*, or, 2) to think carefully, under an ontological-historical purview, about the shape of our trap.[16] (The former requires, among other things, to gain understanding about that apparent coexistence of critique and accommodation to which a referred in the former paragraph).

It seems to me that, due to our current historical ontological conditions, the first horizon has almost all the chances. However, one cannot avoid the question: What is the historical ontological meaning of this silent conversation that you and I have had through your reading and through my writing of this paper?

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[15] In a future paper I hope to give a more clear interpretation about this coexistence.

[16] The latter would be what Foucault has called an "ontology of the present" or a "critical ontology of ourselves" (Foucault, 1991).

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