The Will to Systems: From Making Sense to Enframing

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INTRODUCTION

"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" (1988a). 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." A cursory inspection of the last 25 years of systems thinking in UK is enough to accept that critical systems thinking is historically indebted to Checkland's soft systems thinking. Hence, the problem about the historical meaning of soft systems thinking is at the root of any other type of systems thinking derived from it; even though such a derivation be by means of logical opposition.

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.

"FROM OPTIMIZING TO LEARNING"

The first thing to notice is Checkland's 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.

Checkland's revolution can be represented by his phrase "From Optimizing to Learning" (Checkland, 1985). "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

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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).

In view of that shift *from optimizing to learning*, the new way of "systems thinking", called "soft" systems thinking, unlike the "hard" (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"? We need to understand better the meaning of "learning." For that purpose, let us take a look at the paragraph containing the former quote from Vickers.

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.

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

The "shape of the trap" represents a holistic view of a situation X under study. Systems thinking, by which I mean *holistic*¹ thinking, is impelled by the will to providing a holistic account of a situation X. Vickers' metaphor suggests that if we do not try to see the whole "shape of the trap", we cannot see our limitations and *hidden* assumptions. This means that, at least in Vickers quote, *systems thinking* must in-form an authentic process of *learning* about our limitations and hidden assumptions.

Now, 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

¹Checkland has also proposes the use of "holistic" in order to avoid confusion with instrumental approaches (1988b)

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 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*. There is, however, something that disturbs this hypothesis: 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" (1988a). Checkland seems to forget that systems thinking was the hallmark of the type of Modern thinking represented by the Enlightenment and German Idealism. 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 shift to a systems thinking based on his notion of "learning"? It seems as if this question takes us to probe deeper into both Enlightenment critical systems thinking and Checkland's soft 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. Here a comment is due about the notion of "epoch" and of "historical inquiry."

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. To give a simplistic example: the shape of the "facts" in an Euclidean and in a Riemannian space are

² 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 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.

quite different (e.g. the shape of straight lines in both spaces are different). Those "changing spaces" are *epochs*. An *epoch* is a temporal ground from which *whatappears* depends.

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 "ontologic-historical" relationship between our notion of "*epoch*" and "systems thinking."

SYSTEMS THINKING AND METAPHYSICS: MAKING SENSE

Before modernity and still during the first "wave" of modernity (from Descartes to Kant), 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 presocratic 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 dualistic purview (Fuenmayor, 1994). On the contrary, before modernity and still during the first part of 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. The idea of knowledge applied to action, which lies at the essence of the notion of "methodology" as we understand it today (e.g. SSM, Critical Heuristics, a System of systems methodologies, etc.), would have been meaningless. That non-separability in which holistic sense and action merge is precisely the principle of a systemic ethos before our current epoch.

However, 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 from 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).

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*.³ 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*.

According to Heidegger, Occidental history, the history of metaphysics, from Heraclitus and Parmenides to Nietzsche, 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. History is the destining (Heidegger, 1962) of the ways of showing itself of the ground of beings (Being). In this way, "in accordance to the given type of presence, the ground has" different characters: grounding as "the ontic causation of the actual" (ancient Greek thinking after Parmenides), grounding as "the transcendental making possible of the objectivity of the object" (from Descartes to Kant), grounding as "the dialectical mediation of the movement of absolute spirit and of the historical process of production" (the last Kant, Hegel and the German Idealism to Marx), and grounding as "the will to power positing values" (Nietzsche). (Heidegger, 1969, p. 432). These different "characters" of the ground as grounding are types of presence, i.e. modes of showing itself of the ground. Those types of presence define metaphysical epochs.⁴ The last three represent what we are calling (following Ferry, 1991) the three "waves" of Modernity.

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. For that purpose, "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). Notice that posing the practical question and making holistic sense are the same.

Since the practical question cannot be asked directly to the *ground of beings*, it is posed to a *representative* of the epochal *type of presence* (epochal way of

next. Each epoch slips beneath the other so that, although discourses keep similar shapes, their underlying meanings begin to change.

³Notice the difference between "presence" (as a noun), "to presence," "that-which-becomes-present," "presencing" and "the-present."

⁴ If one thinks of time in linear (Cartesian) terms, the end of an epoch does not mark the beginning of the

showing itself of the *ground*). 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.⁵

THE EPOCHAL CONDITIONS OF MODERN SYSTEMS THINKING

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 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, as "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." The "resolution and courage" to use reason is the will to autonomy. Enlightenment is thus clearly defined in terms of a "will" to fight against the tutelage of some other order that does not arise from man's own use of reason. At stake here 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-

⁵ For a more detailed explanation of this topic see Fuenmayor (1993 and 1994)

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*. 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). 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.

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*

⁶ 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.

⁷ 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.

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

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 following 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* 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" (Flood and 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 ontological 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.

Then, 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

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.

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 epoch⁸ is characterized by "enframing", the technological way of "revealing." Enframing is a way of 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 depending on anything; it just stands in 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

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⁸ Heidegger does not use the term "postmodern."

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 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. 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).

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 (Foucault, 1966). 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.⁹

⁹ 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.

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"?

As far, as I can see there are only two possibilities for our epochal systems thinking: 1) To be totally absorbed 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 ontologic-historical purview, about the shape of our trap. ¹⁰

The first possibility has almost all the chances. The second has almost no chance. Can we choose?

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¹⁰ 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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