THE NET AND THE WORLD OF TIME TRAVEL

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Abstract

Purpose – *the study will be an investigation and articulation of the question "how does the Internet of Things (IoT) work"?*

Design/methodology/approach – *a phenomenological investigation of complementarity with Contemporary Systems Thinking uncovering the temporal reflex of the Internet. The Internet is to be understood to be a part of our life world of technology as well as a network of signs.*

Findings – *the Internet's temporal reflex is more than the various combinations of past-present-future.*

Practical implications – *understanding the temporal reflex of the Internet is more than mere interconnectivity and a series of nodes but a self-processing system creating various possibilities which can be unintended consequences. The unintended now can be anticipated and avoid significant disruptions.*

Originality/Value – *the values of the research demonstrates an anticipatory dimension of the IoT in which we may foresee a type of fore-knowledge of what can or will be next. Such fore-knowledge allows risk mitigation at all levels of sociality; organizational cultural and societal.*

Keywords: temporality, time reflex, Internet of Things, technology, recursion

Research type: research paper.

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Introduction

The framework of electronically connecting just about to any person and anything to one another, thereby improving interaction to and within diverse industries and households is called the Internet of Things (IoT). The trend makes us think differently about time and space as we experience them, for instance, on the shop floor of manufacturing enterprise like General Motors or Proctor and Gamble.

Same of the factor that are and or will be transformed relating to time and space.

(a) Near and far will "feed" the same. Nothing will be "remote."

(b) There will be no top nor bottom viewpoint of happening inside the facility.

(c) Who is to let into the network and who and where to leave our will be tough decisions. Suppliers to the company can help, will customers access be helpful. The meaning of trust will arise.

(d) Managing closeness. Human interaction with connected "things" will be a part of the data stream in workflow. No one can hide, personal space and privacy will have to be defined to keep the climate from becoming invasive. Also, people connected with their working in collaboration on cloud-based platforms will have to assert their identity and personality in these interactions.

(e) Data will flow quickly across the network which will wash away many beginnings and endings which determine product life cycle. Instead a cycle of redesign, re-engineering, updating and revisioning will keep many products "like new" for as long as end user wishes. A swirl of relentless innovation and evolution is extremely possible.

The transformation among other companies will be data-driven exponentially more than usual. Within the chaos, IoT organization theory can aid us in a bit to disentangle and or manage the ambiguity of the new time-space warp.

Innovation and time or the beginnnning of time traveling

In any innovation, the present includes a future horizon of expectations of relevant possibilities providing an orientation for experience and research activity. The relevant possibilities, belonging to the present project are part of the project in the mode of future horizon. The past horizon does not vanish into oblivion since it is required and retained for the comprehension of the future horizon. The present is thus a temporal field consisting of active past and future horizons constituting a field of orientations of action and experience. Hence each activity occurs within a temporal field where the comings future and retained past are co-present and are manifested in the activity with a given project. What has been accomplished by others and what is being done with the project, continues to be present for the understanding of what is being done and is about to be done. Moreover, what is about to be done is a condition for the understanding of what is and was done. For innovation such temporal awareness is relevant to the extent that the students and teachers will learn from the innovations of the past. How innovations were accomplished, what transformations in thinking and

application were relevant to surpass the achievements of the predecessors, and what possibilities were signified by such achievements. In this sense, time of learning and experience is a field. If human actions are based on temporal field then humans are not only temporal but also historical beings. This means that through actions humans make their history and since history arises through human action, then the very being of human is the history which she makes.

This means, furthermore, that although we may analyze "natural facts," their properties and temporal orientations, we shall discover that facts function and assume orientation within a context of significations, and this is more so with respect to the "facts" invented by humans through education. In principle, such "facts" are results of innovations from which one can learn how subsequent innovations can be achieved.

Not all events play a role in human activity; they are selected and interpreted in accordance with the significance they have in the context of a particular project and its horizons. Conversely, the horizons are also present selectively: significant possibilities are selected and insignificant rejected. In bio technologies Americans have been innovating in genetic engineering of food products, but learning such innovations by European young people requires the placing of this technology in European life world where genetically engineered vegetables are contested and thus the horizon of possibilities of innovation in this area will have to be postponed, and the arguments presented on the basis of values which would have to change if genetic engineering will be a domain selected for education. Thus the values of the past play a role in the future selectivity of what innovations are possible. Although our process of selectivity may leap over events, their historical continuity consists of their significance within the temporal field. Even if the events are past and causally no longer efficient, their significance is still present. This does not mean that the significance of events follows a linear succession; rather the significance of the past event belongs to the present temporal field and its horizons of possibilities. It either expands or contracts the horizons by permitting the selectivity of more or less remote events as relevant within the present temporal field of learning. It is also clear that the present field is multi-layered and thus replete with options such that certain options are taken up while others remain present in a tacit mode to be activated if the horizon discloses their relevance and value.

The expansion of past horizon does not imply that the entire significance of history may be captured. There may be events whose significance and truth will manifest itself only in the future. Truth itself is historical and reveals itself in historical time. The teacher of science is also a historian who know how to read events not as facts but significatively; the teacher may see the relevance of some past events reflected on the future horizon. In brief, the significance of an event transcends its present toward the past and future and the mere factual description of the event. The same holds true of past and future events. Moreover, the future horizon may reveal hitherto unnoticed significance of past or present events and add to the constitution of continuity and unity of social events and their historical development.

Life world and limits of selectivity

An in-depth investigation of the temporal field of activity is by itself inadequate without an extensive study of life world structures as limitations to selectivity of significant and relevant events and possibilities. In the context delimited above, Luhmann has contributed extensively toward the understanding of the relationship between the temporal field and social structures. His suggestions are crucial for any progress in this area. Luhmann accepts the differentiation between temporal field and the theoretical-linear time and adds a qualification with respect to the selectivity of events. The past, present and future events assume significance and orientation not only within the temporal field of learning but also within the horizons, views, concepts and the prescribed selectivity by a life world. Consequently, the structure of the temporal field of learning is limited by life world and its selected-selectable possibilities. Moreover, the open horizons constitute to the region of possibilities outside the ken of the social structure: in terms of the social structure they are impossible. Yet precisely such "impossible-possibilities" define the limit of a life world and its horizons and pre-delineates the orientation for fundamental innovations. An awareness of the limits of a life world and its possibilities is required for any fundamental innovative activity. Yet the awareness of such a limit assumes a presence of a possibility by which to judge the limit and toward which to orient the fundamental learning of innovations. Precisely at this point the dialogical process in education becomes the sharpest. Debating such limits, discovering what meaning factors are at play and how they can be challenged and transformed.

It follows then, that within a life world context not all the possibilities are equal; some are more remote than others and thus not all are equally significant. It could be said that the socially impossible is the socially unrealizable; socially it is an impossible possibility and reveals the limits of a life world. Of course the interrelationships between the possible and impossible are quite complex. What may be possible politically may be only remotely possible or even impossible economically; what is possible economically may not be possible technologically. Thus certain events may be excluded for the time being and become past for the social system. (Religions had become a private matter and no longer mixed into political-public affairs.) Yet they may be reinstated as significant for the social future provided a shift in life world signification of events and temporal horizons has occurred. (Thus, more recently the same religions have assumed political meaning and shifted the interpretation of events thus transforming what is significant for today and the future). Of course, such a shift requires an understanding of "time-reflex" as a means of relating the social system to its possibilities and these in turn to the temporal field of action. The required complexities of time reflex cannot be here developed and will be reserved for the next section.

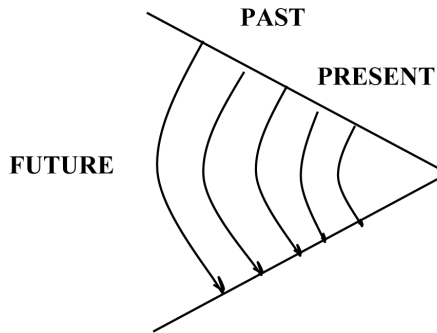## Time reflex

Figure. **Temporal Experience**

Table. **Foresight & Temporal Landscapes**

	Past	Present	Future
Past	Past Past	Past Present	Past Future
Present	Present Past	Present Present	Present Future
Future	Future Past	Future Present	Future Future

Although there are two major aspects constituting time reflex, their structures are similar. Hence we shall deal with one and refer to the other when necessary. The limits of the socially possible constitute a temporal horizon for the particular society which reflects the process of current events. Such events are temporal and their orientation, selectivity and significance are reflected from the future and past horizons. This is the first time-reflex. Since events are temporal, then the time reflex is also temporal with constantly shifting possibilities at the limit of the socially possible. The limits of the socially possible are manifest only with respect to the socially impossible possibilities. These constitute the open horizon of the temporal field of learning which is the basis for the historical development and orientation of social process. This is the second time reflex. It reflects the limits of the socially possible. Since the social selectivity process of events requires temporal horizons of the socially possible, then the temporal field constitutes a prerequisite for the understanding of the social processes, their limits and historical transformations, showing, at this point the innovative achievements. Were we limited to the current social conditions and socially predelineated possibilities, as sociologists' concept we are, then no fundamental scientific transformation could occur. This is not to deny the limitations constantly imposed by a life world and its possibilities; nevertheless such limitations are not absolute. We remain open within the temporal field of education which manifests the limits of the social structure and the possibilities of its transformation. Hence the temporal field is fundamental both for social transformation and for the relationship between social structure and its temporal development and orientation. This relationship can now be described as "time-reflex."

Any innovative learning functions within a life world and time and consequently assumes the temporal field. In fact, as already noted, such learning is totally correlated to the temporal field and its horizons. Hence let us take as an example of an activity of inquiring into society and its temporal process. The investigation is correlated to the selected events and possibilities of a given social structure; yet the investigation requires a limit from which a life world may be seen. We know that a life world as a system reproduces its own memory of the history of selectivity, of experience of the environment. A life world in its complexity of meanings, limits which experiences will count as relevant and valid and also the factors of the environment which will be relevant for learning and innovation. Yet beyond this it reconstructs a world-history of unaccomplished selectivity required to grasp the limit of its selectivity and introduce fundamental innovations that would change not only technologies, but also signify all other factors in a life world. Europe is facing a quandary of legal issues with respect to the speed of technological innovations. The laws that are available cannot handle the meaning and value of all the novelties implying a horizon of possibilities of novel laws, either as restrictions of technical innovations, or their delegation to specific areas of a European life world. Thus the "impossible possibilities" in a life world must be considered with respect to what they imply integrally across all other meaning levels of a life world. This complexity is part of the curriculum for innovation, and the benefits for society are vast, since the innovators will learn not only the ways to advance their field, but also what the advancement means for all other domains: economic, legal, value, moral, health, changing education, and political decisions. In brief, the temporal field horizon has an indefinite depth of temporal possibilities which reflect the temporal horizons of life world possibilities, their limits, and innovative transgressions. Hence time reflex, while relating a life world structure to the temporal field of learning, provides a fundamental context for the activity of innovative learning.

During the learning activity the present shifts from one event to another that include shifts not only in the horizons of the present but also in those of the present of the past and the present of the future. Shifts in the present of the present include shifts in its horizons and correlatively call for the shifts in the horizons of the presents of past and future. Yet such a call is possible on the basis of the time reflex. The present temporal field, due to its time reflex, extends and overlaps with past and future temporal fields. What were still future possibilities and even impossibilities for the present of the past, may be realized in the present and even establish our future horizon of not yet realized possibilities and limiting impossibilities. This appears in various ways. For example in a legal domain of a life world, a constitution, written in the past, may be articulated at present for its possible reinterpretation as to what it might have meant in the past and what such reinterpretation might mean for future cases involving previously unimagined innovations.

Time reflex and world

The concept of world is critical to the enterprise of founding a communication-based theory of the social and cultural. We quote at length from Luhmann (1995) to set the stage for subsequent reflections: The relationship between meaning and world can be described as the concept of decentering. As meaning the world is accessible everywhere: in every situation, in any detail, at each point of the scale from concrete to abstract.

At the same time, the world is more than a mere sum comprehending all possibilities, all meaning references. It is not just the sum, but the unity of these possibilities above all, this means, that the world horizon for every difference guarantees its own unity as difference. It sublates the difference in all perspectives from individual systems, in that for every system the world is the unity of its own difference between system and environment. Efforts to view technology, politics, and culture set in motion a quest to reconsider the cultural/political categories of history, individuation, *praxis*, and power in concrete phenomena. Such reconsiderations of these categories have been cast in a pure communication structure of dialogic undermining cherished glosses of communication *praxis*, dialectical historicism, culture, and text as interpretive explanations of concrete political life. However, the concept of world needs to be explored as a universal presumption. Therefore, world as the concrete *fundament* of life appears through presentation and *de-presentation* and concrete possibilities.

The *way of world* cannot be encountered in the context of human-world relationship. Only in a non-thinking moment can we think of human-world relationships as an encounter between two things. The dominant in the model is inner-worldly relationships. Each inner-worldly thing has an identity of self and other-relatedness where the sense of identity demands the sense of difference : Identity and difference belong together. It is one of the basic ontological aspects in the Western tradition ending in Hegel's dialectic of identity and difference. And the human, seen as inner-worldly, is destined by "self" and "other" relationships. The question is whether such a destiny, a de-termination, makes sense without a much deeper and accessible way pervading the human. World is *not* the most extreme *limit* and *boundary* of inner-worldly things; it is not a framework or a container. Humans do not take residence in the world as worms in an apple or money in a bank. All the trusted modalities of "being-in" of things are not applicable – not even metaphorically. World is not an object or a region, a time of all times, regardless of our evocations of finitude and infinity. Neither is world the sum of all humanly known objects and subjects. The sum of such knowledge is no less remote from the world as the knowledge of an individual. We, while in the world, encounter things and others, yet nowhere do we encounter the world as a thing, an object, or another. *Rather, world is an openness to things and of things.* After all, the various regions of things, the living, the dying, the tactile and the caressable, have not been exhausted – and perhaps are not exhaustible – and only our meager knowledge is limited.

World understanding must encompass the notions of being, context, consciousness, and the self-understanding of the human. Thus, we must consider how it I that the

inner-worldly ways transmute into objects for consciousness. Husserl points to the main sail of cosmological thought: the differences between the *world-lending* of and the inner worldly objectivity-subjectivity (and their relationship) of events. Events appear either in themselves or for us. But is this all that there is: *the appearing things, the things and their appearance to us? What of timing, spacing, lighting changing, and so forth? Intentionality falls short.* Timing seems closer to world. This maybe the joining of human openness for world and world's self-constitution—the joining where timing and world-time are not yet distinct. If this is the case, then *reflection is a temporalization of a temporalization with pre-given distances and nearnesses of time and space, of significative dimensions assumed both in prereflective moves and reflection upon such moves. Reflection is therefore basically a world reflex, allowing a movement of temporalization within time, and time as such must here be understood a-temporally (alpha privitive).*

It is possible to glimpse now, although in a sketchy manner, world-time, or at least to suggest a way more akin to world-time. Let us think along the world-expansive present and the way that it may lend motion and the presence of all things and events. We must think of the world-expansive dimensions and how they lend the motion of emergence into presence and demise into absence. This worldly motion of lending emergence and demise should not be identified with the world-expansive everyday world transition. The everyday world and the world-time must be distinguished in terms of cosmological difference. It must also be noted that, insofar as things and events have an expanse from not-yet, present, and no-longer, then the inner-temporal phenomena must also be thought temporally. It has been an old habit to think that the things and events must be given – or better, *show themselves* – only now. Past is no more, and future is not yet. But, if things and events are not *essential* but *temporal,* then we cannot think an event without the everyday horizons and the transition from one to the other. Thus, the appearance of something or an event is basically an appearing and also a disappearing. (An appearance here must be understood as a temporal formation of something or an event whereby phenomena are lent their configurations along the transition of the world-expansive, everyday dimensions of not-yet, present, and no-longer.)

There is not only a tension, but also a forming/deformation. This means that one cannot validly proclaim that the thing or event has a form, or had a form which it lost, since the loss is a losing and at the same time a formation along the traces of deformation. The deformation is a formation tracing the deformation in itself; this is one aspect of *depth-time,* since the formation is not after the deformation but is the depth of the no-longer tracing itself in the deformation. The formation and deformation and the deformation-formation have a transparent depth. The depth is possible if we understand the notion events, but as a self-formation of temporal configurations; temporal depth is the very transparent visibility of things.

If we were to think along the three temporal dimensions, we could have a way where there is a formation-deformation-formation identical with those temporal dimensions whereby the present formation is an inscription of temporal configuration and is at the same time a deformation transparent through the formation as its temporal depth "toward the past" and a formation transparent with its "temporal future." In brief,

every phenomenon is not merely an appearance of a thing or an event as a property, but more fundamentally a transparency of the dimensional depth of time, not "one after the other." Hence the world expansive transition lends things and events their face, but the face is also a worldly face and not merely a thing-appearance – beyond things in the world. The inner-worldly appearance is the "transition" across the time dimensions. The problem of world-time lies in the way that it "lets phenomena be" that is the *phenomenality* of the appearance. What lends appearances their phenomenality is the dimensional shift, the formation-deformation-formation as dimensional time-depth inscribing the appearance of things which is not identical with the *now* characteristics of things. Yet, the phenomena here are not appearances unto the subject; at best, the subject is identical with the shift of the temporal dimensions. Nevertheless, we can have an initial glimpse, even if it is still in terms of the everyday world dimensions, into the world-time as not successive but as all-pervasive. It must be noted that here the ontological status of the traditional notion of appearance is lost. Appearance was either a Topological study – line, plane, mapping – missing depth as a critical dimension. In this case it is neither; phenomenon, although attributable to a thing or an event, is ultimately a dimension lending things their "while" and apparition.

The worldly appearance is time-lent. It is temporal and spatial: spacelent. All everyday spaces, such as place-space, thing's expansive space, everyday distances, distantiations and kinships, are only in a world-space which is neither a big space nor a place of all places, nor can it have a stretch since all stretches, distantiations, and places are pervaded by world-space. The world-space is a spacing of the everyday world of things in distances, places, and expansive spaces, and hence their casting of shadows across each other, which gives coloration, resounding and touch to all temporal phenomena. Space, in spacing, lends things their size, weight, expanse, and location, but in such a way that spacing vibrates across all things and events without being identical with them.

Thus, both world-dimensional time, as lending phenomena their phenomenality, and space as spacing the everyday things and events in their locations, affinities, and remoteness, have a "movement" which is not one of the inner-worldly movements, and which cannot be understood in the categories of traditional philosophies. It is a cosmological motion. If we are to think this motion as a transition from the future to the present and from the present to the past, we would be using the notion of transition and time in an inner-worldly, everyday way – a way of succession and a successive movement. How then are we to think this worldly movement? We must think the world-dimensional present, past, and future back to the timing of world where the transition occurs – not from the future to the present and the past, but the way of world-timing where such differentiations falter without being lost. *We must think of transition intransitively.*

The non-ontological presence of past and future is not simply an absence of things or even nothing, but rather has a temporal sense, a sense that is quite difficult to capture. It cannot be thought in terms of absence, since absence is pre-positional. With Aristotle and Augustine, there emerges a further question: How is it that, in explicating time, they employ a spatial model, specifically when Augustine established

a total disjunction between space and time? Space is external; time is in the soul. When Augustine points out that "a while" can either be long or short and since only entities can be long or short, then he operates with a model of spatial stretches, such as a path. Whatever is extended in space may not change its extension although it has changed time. The "road stretch" is still there, although yesterday is no longer. Hence, we must reconsider whether time is a stretch. We must ask whether there is a present time and whether it can be long or short. We, of course, speak of the time stretch in terms of the present century, present year, and may call them a long stretch of time. But how is the past hundred years the present? Obviously, it is not given contemporaneously as a stretch in space, *i.e.,* as a stretch of the road. We speak of the present century as "ours." Only the present year is present, but obviously, even this year is not "present" since most of it is gone and some of it is yet to be finished. If we push this kind of notion of the present, we shall end up with the Zenonian and Aristotelian division of time into an infinite point. But such an indivisible point is never encountered. All attempts to consider time as present slips away into past and future. *Therefore, we cannot think of the present as an extension.*

When we attempt to think the world-movement, then we have to trace back from the transition of world expansive dimensions of not-yet, present, and no longer to the world-space-time movement. To add a different turn, to *think* the world means to *show* how the world-movement manifests itself in, and makes possible the appearance of, the dimensional future, present, and past, namely so that the emergence of the future, present, and past are possible – a possibility constituting the appearance of phenomena. It could be said that all everyday "whiles" are contained within the world-expansive dimensions, although this metaphor must be de-spatialized. However, we cannot say that the world-expansive dimensions are "in" the world, nor can we say that the world-expansive time is an infinite "while," since the infinite stretch smacks of a line from "now" in both directions. From my "now," I stretch the "whiles," or even array them endlessly in both directions. Neither can world-time-space nor movement be infinite since we would revert back to an inner-worldly everyday. In the timing of the world across the world-expansive dimensions, the world-time is neither a "while" nor a duration since all "whiles" and durations are in the world; hence, the world-time would not endure. How does the world "time" cross all world-expansive dimensions? How does the world-space "space" all inner-worldly events and things? How does the world institute the movement of spatio-temporal dimensions? How are we to think the world-depth? For phenomenology, the experienced elements such as chromatic qualities or audial durations are no longer the qualities of things or qualifications of the subject-soul. They belong to experience which can be said to be worldly in the sense that they are more akin to the traditionally neglected world than to subjects and objects. The same can be said of time and space. Time and space are certainly not "in" the subject, neither are objects described phenomenologically "in" time and space.

The fleshly present things of my surrounding world constitute the region of my perceptual field. In diverse ways, I am tuned to the surroundings in terms of use, misuse, valuation, interrogation, wonder, and habit. In all this, I am related to the surroundings perceptually; thus, the perceptual field and I are co-present. Yet, in the

perceptual field, I find that things – my surroundings – are not closed from moment to moment. I find an aura, a horizon; my perceptual island is neither objective nor subjective, nor is the aura that spreads "beyond" the island. Yet, the aura is given differently than the present perceptual field. It is given as re-presented, as absent in the presence. But we must note that the re-presentation must be interpreted in the worldly sense. This means that we cannot speak here of re-presentation as an act of consciousness but as a *temporal event of time-in-time.* This means that we are not concerned with the protensional act or the retentional capacity but *from a time arc, a time curve upon itself. Although we may be re-presenting things of the past, what makes the re-presentation possible is the past's presence and the future's presence exactly in the perceptual field, which has an aura not spreading toward the past and future only, but coming from the past and the future toward the perceptual present.* In the phenomenal field, the field of perception and its aural significations, we are related in presentational3 and re-presentational modalities. We relate presentationally to the things in our surroundings and re-presentationally to the aural significations in terms of remembered and expected surroundings. Thus, we have an immediate stance to our surroundings as presented and represented. Both belong to our world. In terms of the notion of presentation, and re-presentation, we must ask: What is the relationship of presentation and re-presentation to world-time? (Pilotta & Mickunas, 1990)

Before we can answer such a question in any manner, we must gain a closer understanding of the notions of presentation and re-presentation within the transcendental region. The essential aspect of "presenting acts" consists in their being oriented to the "intentional objectivity." The thing shows itself in its corporeity. Their presence is related to the living present and is to be understood as "presenting." In contrast, the "re-presenting acts" do not show the object as bodily present but as re-presented. The relationship of the re-presentational act to the presentational act is understood by transcendental phenomenology as a "modification" of the act and the object of the act. When I re-present a perceived something, the perceiving is co-re-presented without thematization. A representing act, relating to a presenting perceptual act, has the character of "simultaneous occurrence" (*Gleichsamvollzug*). In the re-presentational act, there is constituted the re-presented perceptual object and the co-re-presented perceptual act. Yet, as an act it too has its own temporality. The essential moment of a re-presentational act – regardless of what sort of re-presentation – must be seen in the "inner-penetration." The inner-penetration of a dual lived presence: the presence of re-presenting and the imagined presence of the imagined perceiving; the presently re-presented something and the imagined presence of the imagined perceived something. See Pilotta (1979).

The basic kinds of representing acts are determined in terms of temporal horizon:

- Representation in the time horizon of the past is recollection.
- Representation in the time horizon of the future is pre-recollection or expectation.
- Representation in the time-horizon of the present is presentrecollection.

The manner in which the co-re-presentation, *i.e.,* a-presentation, corresponds to a time-horizon is to be explicated shortly. While the presenting perception is

oriented to the bodily-perceptually present, the recollection relates to the no-longer present and expectation to the not-yet present, the present recollection relates to the present not given in perceptual corporeity. Recollection points to the "having been at the present," as in presentational perception, which "has been" for the person. It intrudes into my conscious past; it actualizes the in-actual memory constituted from retentional consciousness phases. In recollection, we must differentiate between an actualizing representation from not-yet-actualized memory awareness and the recalling of something forgotten. The forgotten is such that it itself was once in-actual memory knowledge. Before we turn to a phenomenological analysis of the temporal constitution of the perceptual objects and their temporality, in order to lead them toward cosmological reinterpretation, let us briefly depict perception and the perception field by employing some of the important insights of Husserl (1964). In perception, we are related to something that is corporeally present and is already displaying itself. The perceptual field is correlated to perceptual sense. The sense which lends an obvious perceptual fullness is the facing-sense with vision as one of its aspects. There is a distinction between distant-sense and near-sense. Distant-sense consists of facing-sense with vision and hearing as its aspects; the near-sense consists of tactility, taste, and smell. The notion of distant-sense means that the experienced must be spatially separated from the perceiver. Near-sense means that the experienced must be without spatial mediation. Each perceptual sense has a specific sense-field, and an analysis of perception must describe the various sense-fields. We shall not, at the present, describe the various sense-fields.

Hence, by perception we shall mean "a limited notion of perception in terms of face-perception and its temporality." We shall nevertheless note that Husserl's analyses of time are grounded in the hearing-field, since for him audiality, such as tone or melody, constitutes temporal events par-excellence. The perceptual field of face-sense not only includes the immediately present things, the near things and events, but also the distant things and events. The institution of nearness is grounded in the un-thematized null-point of the body; but the body, as an inner-penetration of full perceptual fields is a constant kinesthetic formation-deformation of various fields and nearnesses-distances. Hence, body has a most significant play in the constitution of the perceptual fields. Although, when we are speaking of perceptual fields at this stage of our considerations we are not speaking about subjective processes, nevertheless one of the references in the field is the null-point, which we may call "body." It must be noted that the null-point need not assume a privileged position; any point may be called "here" and the point need not be spatial; it could be dimensional, *e.g.* when we say "right here in this town . . ." or "here on earth . . ." Any point may be taken as an orientation point in the perceptual field. In attempting to avoid something, we are riveted on that something as a point from which our body orients itself, *i.e.,* inscribes various configurations of avoidance, such as going around it, going out of the way to avoid it, crawling, tiptoeing, and so forth. The perceptual field can be "attached" to anything as its "center," although such an attachment is eventually unnecessary and, in fact impossible if the substantive attitude and spatial points are secondary

phenomena, *i.e.,* if we cannot discover any point which is not itself dimensional and things which themselves are not figurative.

But in order to understand the perceptual field we return to the body as it functioned in early phenomenology. We find here two descriptive orientations: on the one hand, the way we experience our bodily movements in the perceptual processes, and on the other, the dependence of the perceptual field and the way that things show themselves on the positionality of the body. The first orientation is called *kinesthetic*, and the other has to do with the shadings (*Abschattungen*) of the spatio-temporal things. The objects toward which our perceptual ray is oriented show themselves in their corporeal presence. The significance of this Husserlian notion suggesting the original givenness – the original presence of entities – shows that the corporeity of the given is related to the perceiving body. Within the process of bodily perception, there is the "corporeal present." We can have the corporeal presence of things only and insofar as we are corporeal. This situation can be shown in terms of both of the descriptive orientations suggested above. Husserl (1973) calls the material things *Aistheta* insofar as they are related to the body and its *Aisthesis*. He calls the body "the means of all perception" which "is present necessarily in all perception" (207). The perceptual processes of experience, such as the seeing or touching of things, involve body not only perceptually but also with respect to the "accompanying series of kinesthetic. The kinesthetic "impressions" may be localized in the bodily member, such as hand, eye, and so forth. *The kinesthetic series constitute the manner – the field – in which our body is "by the things."* The perceptual thing is present in accordance with our bodily position, the position of the eye, the movement of the head, the movement of tactility across the hand. At the same time, the body assumes a null-point, as a point of orientations within the perceptual field. From this, there emerge the orientations of the surrounding world toward the body. They are on the right or left, behind or to the side, low or in front, high or parallel to me. Thus, the orientation of things to the body and its fields of perception is ruled by perspectives and partial views, *i.e.,* shadings. One sees the thing's surface, runs across it with a hand, and thus constitutes various perspectives; one does not, at present, see the other side, the bottom or the three back legs; yet, one means the entire table. The unperceived aspects are, to speak with Husserl, given a-presentatively. One can bring them to presence by varying one's position; yet, one is always present to one or the other side, while the non-present sides are a-present. In each perceptual accomplishment, there is continually a partial section of something. All the aspects not given presentatively constitute the horizon of the a-presentatively given. If one goes around the things, one continuously penetrates the horizon of the a-presentation and the just-perceived aspects of the same thing sink into a-presentation.

The world-time does not possess n attribute of being an all-encompassing something to which we relate from a particular "point." Now, if we bracket the protentional-retentional and notice that there is distancing and nearing, we have not yet said that it is distancing and nearing, into a particular temporal orientation, such as past or future. It has been assumed for too long that if it is distancing, then it must be sinking into the past, and if it is nearing, it must be coming from the future. But

something could be distancing into the future, such as a goal which yesterday was near and which today is much more remote. The same thing is true with the past. Some unholy deed "in the past" is finally catching up to someone – it is nearing. Prior to temporal localization, there is the depth. Thus, the present does not emerge from a primal impression; rather, all impressions emerge, approach, and distance without any assumed temporal orientation. Thus, if there is a "time-understanding," it is not derivable from the *anthropos*. Terminologies, such as "experienced time," "lived time," "projected time," and such, add nothing to the way "we are" temporal. *The present is a way that all events are,* including *"us"* by instituting all the gestures we subscribe to the depth of the present and a field of presences. In this respect, when we speak of the no-longer and the not-yet, we are not necessarily speaking about past and future but about the present depth; were we to say that something is coming to me from a future, we would be merely saying that it is traveling on a line from Paris to me, traversing space, and it has not yet traversed sufficient space to reach me. Yet, that traveling is present and is not coming from the future; as I sit awaiting, the traveling is already occurring and the traveler will simply emerge from the horizon which is neither the future nor the past. The present is not an impressional moment but a depth that can be best articulated, at least for now, in the Husserlian terms of determinable indeterminacy, rather than in the Heideggerian notions of nearness and distance, which smack too much of spatiality.

The above notion of indeterminate-determinable depth contains not only depth articulations but also horizon articulations with determinable indeterminacy. Of note here is the loss of a temporal event from future to the present to the past. Take sound, which always played a role in the Husserlian analysis of a temporal event, and we shall hear that the temporal continuation of sound is not given, nor is it given as a rhythm, although sound can be articulated as a rhythm. It is more akin to a dimension with depth and indeterminate indeterminable limits within which both continuation and rhythm constitute specific articulations. The same can be said of visual area. Although we still use the term *horizon*, it also carries a notion of a spatial expanse, so to speak, where the sky meets the earth. This implies a sphere which is more spatial fullness and Parmenidean being than temporal horizon. But if this is spatial, then what is the temporal horizon? A horizon toward which these spatial horizons move? But that would simply suggest a sphere in a sphere. This would lead us nowhere. The time-depth mentioned above still contains the notion of depth which may hint at spatiality, yet let us live with it for a while and connect with our earlier descriptions. Coming from the depth is not coming from the future, and hence when something shows up on the future horizon, it had its presence in the depth. If I say that Hilary is coming from New York, but she is not yet here, she does not sit there perched on a future horizon; she is present in the expansive world presence and the "future horizon" is merely a modulation of the present. What is suggested is that the horizons are articulations of the present depth by anything, perception or consciousness being only one modality among others, such as a sway of a sapling in the wind, which corresponds with the protentional-retentional consciousness. It must also be noted that, with each sway, the "previous" are not in the "past," but rather constitute the continuously self-configuring

depth. The horizons also move in depth with the continuous sway by constituting the indeterminate determinable limits of the sway, of protention retention, of memory and expectation. Hence, Hilary's coming from New York is a movement of the present with horizons, such as farther and nearer, and so forth. Of note is that the horizons may be "parallel" with the depth, yet they, too, have horizons of determinate indeterminacy, each of those having its own depth.

How are we then to announce this depth? Let us listen to the irrupting presence echoed by sound welling into a dimension without any successive localities or continuations, since continuation is traceable within it only as one of its modalities. The analysis of the linear continuation of sound or time shaded by sound lacks a dimensional depth given cosmologically. Let us look at the irrupting time shaded by a flicker of light: it inscribes constantly waning protrusions which are immediately pervaded by others, dominated by intersections, thus building a constantly spreading depth which is not complete but is intersected, pervaded, and re-dimensioned by other irruptions; it is not light that pervades light, but time dimensions which pervade time dimensions, which are temporalizations of time. We are apt to think that the light pervades and dominates or manages space and time in some dimensional way, but this is somewhat short since it assumes that darkness is space to be shaped by light; but the contrast is just as valid; darkness protrudes and pervades the light, and this simply means a play of temporal dimensions which cannot be oriented. Rather, it is a play of building of depths, not from me toward the depth, but from a depth that wells with light and darkness, sound and silence, as colorations and echoes of time. The "edge" of this upwelling of a particular time dimension constitutes a horizon which may be called a-consciousness-horizon; it is to be noted that this horizon is no longer future or past but a dimension of depth which is pervading another dimension that includes me; I am in darkness, and the dawning light, inscribing a depth of sky, begins to well and intrude into the darkness wherein I had my residence. These metaphors are mere colorations of a more fundamental sway.

The present is a dimension with depths, horizons, pervading configurations, and defigurations, but it is also world-wide; all spatio-temporal intrusions, upsurgences, and diffusions are present. *It must be noted that what once were called "things" are now, perhaps, slower spatio-temporal configurations than are flashes of light or audial explosions. Nevertheless, every "expression" of the thing is a spatio-temporal configuration in motion, spreading a depth and a horizon. Hence, we can no longer speak of the place of a thing as its outer limit or of its space in terms of other spatial things – since every aspect of the thing is intentional with incessant configurations and defigurations. The question that emerges is whether the sum of the self-configuring depth with its intertwining auras and intrusions is identical with the all-pervasive present.*

If we were to understand the sound as flowing, we would be thinking in terms of horizons of time within which the flow takes place. Moreover, we would understand this temporal event as an inner-timely – and not timely or worldly – event. Even if we were to assume that the sound is continuous, as if on a line, we would be also present to a silence which is not identical with the continuation of the sound but present "before and after and during" the sound, and in such a way that it is not only the sound that

breaks the silence but also that the silence resounds in various ways in the sound. The sound thus ceases to be a continuous flow of future into the present and into the past, but already implicates a silent dimension of the present which is not continuous but irrupting in the very sound.

Whatever we now would call the conscious-flow of audiality would be a complex trace of the world-depth: the protentional-retentional is now identical with the continuous layering into depth of the sway of the tree in the wind. Consciousness thus begins to vanish in favor of identity with the world traces. The vanishing of the subject is a gain of the world, but no longer in the sense that the subject somehow mirrors or reflects the world and thus becomes anonymous, whereby the anonymity could be discovered by reflection; reflection would not find a subject, but rather the world traces with the added attraction of reflection which may simply be a delayed continuation of the traces. Let us take the protentional-retentional (past-future) consciousness in its ultimate a-temporal sense and note that it names a constant, changeless shift, and in such a way that the shift does not pass but builds an expansion with continuous deepening, and this expansion and deepening are not articulations of a pre-given temporality or a field, but are identical with an emergence of the field. That is why the a-temporal protention-retention are nowhere to be found, and the instituted protending acts and retending acts are at best secondary; it is nowhere and at no time because it is the very presence of emergent and self-articulating temporality manifested, or given a presentational value, by what we call *consciousness*. In terms of the present, it could be said that "by the time" the sound emerges for consciousness— comes within the consciousness horizon – it has been welling up in its silence, and consciousness constitutes its continuous articulation. It could be said that consciousness is one modality in which sound becomes audible. Here again, we encounter a clue comprised of consciousness, which points to the horizons, but in such a way that these consciousness horizons are a way that the upwelling sound sifts through, pervades, and encompasses the consciousness and indeed constitutes it; with its depth, it institutes a limit called consciousness-horizons, and by emerging with depth-articulations, it constantly transfigures the horizons and thus constitutes consciousness articulation, called "temporalization," which fundamentally is the sound's articulation of time. Consciousness, as constant retending-protending, sinking and drawing, is identical with the emergence of time echoed by sound, or shaded by color. This is what allows transcendental phenomenology to talk of the empty form of time; it is the silent upsurge that wells into horizons of sound; strip away the sound, and what remains is "pure time," except that its conscious horizons are an articulated limit; a trace across the depth and a constant waver from horizon to horizon is identical with the tracing of that depth. The present then has a world-wide depth which does not come toward consciousness, but which is always *through* consciousness, and when consciousness covers its self-temporalization, it also discovers itself in an "incessant streaming." This streaming is one articulation of the presence shaded either in the chromatic endurance or echoed in some tonicity; but it is to be noted that such a chromatic endurance and echoed tonicity may "temporalize" everything. The temporalizing of cosmological difference gives the "world depth" and allows us to abandon the unconscious as the

repository of desires, myths, and magic in/of world dimensions. And it is within some degree of possibility that we are de-essentialized through temporalization. Thus, we may be able to state with methodological and conceptual clarity that every "body," to the extent that it is conceived spatially, is nothing but a solidified, crystallized, and materialized time, which requires the formation and solidification of space to unfold. Space here may be construed as a field of tension of principles: the latency of space and the acuteness of the intensification of time.

Speculation

- Instead of three horizons of time, we suggest there are five:
  1) present;
  2) past;
  3) future – as the time of actuality,
  4) space;
  5) possibility.
- Time is a five-fold unity of the severing of past, future, space, possibility, and field intentionality (present).
- Possibility, as the fifth horizon, means world constitution, as the unity of the saving of time and the filling of time

The five temporalities allow for the following:

a. Networks select different nodes (person, organization) relating to structural coupling with system and environment. With respect to information it seems to be the image of a "new" world which is most intense to meet on the net, anytime, anywhere, anyone and with anonymity and without ever meeting others.

b. Consumers have engaged for a while now in "time shifting" in delaying, postponing, recording, medias in a non-sequential order, anytime, anywhere. The world of the net embodies a fascinating characteristic which is almost a free-floating communication that is only loosely coupled to "actors" who are trying of multiple identities. The time horizon of sound tech/media is quite malleable. This is starting to be demonstrated in the analysis of networks.

c. Network analysis started gaining force as the "Net" came available in about 1990. Currently, globalization and mobile telephony have perforated the interest and research into "Net"/network.

Time stretching and time-space compression have been descriptions of the globalization process and communications/information/entertainment/etc.. New ecosystem has arrived with the smart phone, decentering the centrality of the siloed industries, mentioned above. Visualize the industries above as a piece of fruit in a still life painting. The fruit is not lined up horizontally side by side but overlapping each other horizontally or they can be vertically overlapping each other in a mobile phasing in and out in every direction. Each piece of fruit is a node and edges are the relating to the other pieces of fruit which align as neighbors, with differing neighbors and clustering of neighbors.

Until recently, network analysis has been based on static network perspective in which links and nodes are assumed to exist at any "point" in time. Recently is has found that high complex network are not active continuously but occur in specific temporal patterns. In recent investigation the fact is in many real world systems the next interaction of a node is not independent of the node it has interacted with shortly before.

Also, it has not been recognized that complex systems, particularly social technical systems are a layering of networks in which the interaction within each network and across each of the layers pass through each other. The dynamism of layered systems demonstrates the non-linearity of temporal relationship and need to be measured in between the relational preference of nodes. Intra-network and extra-network are compressed neighbors.

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