BOOK OF ABSTRACTS

Hermeneutics & Science: Worlds, Realities and Life

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Disembodied Thinking and Its Critics
Ananya Barua

Jean-François Lyotard's scholarly article "Can Thought Go on Without a Body?," raises the question that every philosopher ought to ponder upon, one time or the other, because we philosophers talk much and we take pride in saying that our task is to raise questions and that we can only do that. How long can we do that? Lyotard wonders "…While we talk, the sun is getting older. It will explode in 4-5 billion years. It is just a little beyond the halfway point of its expected lifetime…."(Jean François Lyotard ,"Can Thought Go on Without a Body?" in Neil Badminton (ed) "Post humanism," Palgrave.1988., p. 129). If the sun explodes and the earth dies it will also be the death of the corporeal, sensory, emotional experiences of mankind along with death of humanness, the very basic experiences of mankind that are sophisticated ,yet earthy being dependent on earthly existence of some kind. If the exploding sun consumes both the sensitive and sentient earthlings along with the earth, will thinking continue in some other alternate manner that can survive the death of the body? If the human and embodied dimension of thinking is negligible and thinking is separable from its being rooted in a body, the job before scientists and technologists are to stimulate conditions of life and thought to make this possibility an actuality .While scientists are busy to provide an alternate hardware to so survived disembodied thinking. If thinking depends on human language, language in turn is that very sophisticated software that is also dependent on the condition of the hardware. While scientists are busy constructing technical objects that are also cognitive, Hubert L. Dreyfus wonders how such a bodiless thought process operating on binary logic will represent embodied human thinker who thinks intuitively.

Maurice Merleau-Ponty's phenomenological approach to embodied subjectivity discovers the intimate link between embodied subjectivity ad human thinking, the two can not be separated so artificially. Rather, cognition depends on experience that is informed by a body with various perceptual and motor capacities. Merleau Ponty sums up: "I cannot leave my 'real' body behind because I am always with my body. That is, *I am my body*". Re –naming the lived body as 'human flesh' Merleau Ponty puts emphasis on bodily intentionality . In terms of the 'flesh' we are able to have direct, immediate contact with others and the world.

Did Merleau Ponty offer a viable solution in this regard? Is disembodied thinking a proper replacement of embodied human thinker? This is what the article seeks to explore.

An Attempt at Understanding Heideggerian Dasein
Archana Barua

What is Heideggerian *Dasein* or, who is a Dasein ? In colloquial German the word *Dasein* can mean, 'everyday human existence'. Accordingly, *Dasein* is the German vernacular term for existence, as in *I am pleased with my existence* (*ich bin mit meinem Dasein zufrieden*).

According to Heidegger, however, the use of the word *Dasein* must not be mistaken for a subject that is something definable in terms of consciousness or a self. For Heidegger, Dasein is an entity with a special mode of being. A human being is this entity and it is human beings in general who enjoy this singular kind of being, which can be referred to as Existenz, or existence. It is a general motif for Heidegger that human existence is existential in contrast to existentiell. The latter connotes a third person perspective of objectivity (ontic) whereas the former is in terms of a first person perspective of lived experience (ontological). Dasein exists in a manner that the meaning of its existence is revealed to it, is self disclosive. Dasein ek-sists, ahead of itself, its actual existence also accommodates its possible modes of existing, including the essential possibility of death and nothingness.

Furthermore, Existenz is constituted by several unique phenomenological features. Perhaps the most crucial of these features is being-in, which designates the way in which a human entity is always in-a-world. The body does not attain a derivative identity and bodily nature of Dasein is a decisive concept in deciding the idea of Dasein although it was hardly discussed in the analytic of Dasein. More than the optical nature of body ontological nature of spatiality of being is focused. This space can not be reduced to extension only, it exists differently. [Dasein is] that entity which in its Being has this very Being as an issue (BT 68).

It would follow that one can identify various types of entities as Dasein in terms of the following characteristics:

1. Being –in-the-world, being-there, human way of being.

2. Being- with- others.

3. The meaning of human existence, non-personal form of human existence that is understood in terms of 'what it is to exist the way a human exists,' a being situated in time and space, rooted in a context. Not being a conscious subject, Dasein is more a mass term that is also applicable to a general entity as ' culture ',in terms of 'what it is to be a culture'.

4. Dasein is responsible for its existence. According to John Haugeland, institutions, agencies etc. can become Dasein like. General Motors is Dasein in this manner.

5. Language is as Dasein is, language is not just sum total of its words. Language, as well as Dasein, exists self interpretively.

6. Dasein is either authentic or inauthentic.

It appears that beginning with the philosophy of man, Martin Heidegger actually makes effort at digging out the ontic concept of man to disclose the concealed ontological structure of being, which he calls ex-sistenceor "presence". This justifies his special use of the term *Dasein*. While meta-physical-technological knowledge, characterized by scientific research and a technological attitude of domination and their consequence, calculative-thinking, prevails the ontical realm of man , the knowledge of Being is given to the essential thinker of Being, the one who dwells in the nearness of Being, in the realm of Ereignis.

Some have argued for an origin of Dasein in Chinese philosophy and Japanese philosophy: according to Tomonobu Imamichi, Heidegger's concept of Dasein was inspired — although Heidegger remains silent on this — by Okakura Kakuzo's concept of *das-in-der-Welt-sein* (being-in-the-worldness, worldliness) expressed in *The Book of Tea* to describe Zhuangzis philosophy, which Imamichi's teacher had offered to Heidegger in 1919, after having followed lessons with him the year before. One may also wonder what is the specifically Greek connection in Heidegger's thought? Can there be an equal emphasis on the Asiatic and also the

Japanese aspect of a 'being in the world' who is equally a 'being with others' and a being who aspires to be authentic and true being even amidst inathenticity? What could be a typical Asiatic way of understanding life and its value that may, at times remain critical of a sheer Heideggerian emphasis on the temporality of man? Is it also a western way of understanding being in the world? Is there equal emphasis on spatiality and the social and cultural nature of Dasein in Heidegger's philosophy of Being?

WATSUJI comments: "Temporality that does not concur with spatiality is not yet true temporality. The reason Heidegger remained [confined to temporality] was because his Dasein was, to the last, no more than an individual. He understood human existence to be no more than the existence of a human being. From the standpoint of the dual structure of human existence as both individual and social, [the individual] is no more than an abstraction of a single aspect. When human existence is understood in its concrete duality, temporality and spatiality are in arise in conjunction (CW 8, 1-2)."

In this general, background this article makes an attempt at exploring the philosophical background of Heideggerian Dasein.

Heidegger's History of Being – Between Hermeneutics and Technodeterminism
Andreas Beinsteiner

In Heidegger's fundamental ontology of "Being and Time", human existence (Dasein) serves as the basis for ontology. Our being-in-the-world (in-der-Welt-sein) determines our understanding of Being. Later, Heidegger's "turn" (Kehre) rendered the search for anthropological invariants obsolete: The core element of the "turn" was the insight into the radical historicity of what it means to be human. All anthropologies and ontologies turned out to be metaphysical generalizations of a certain moment in the history of Being.

Heidegger's notion of the history of Being has often – in particular, in the Gadamer tradition of hermeneutics – been understood in the sense of a history of ideas/interpretations. A certain understanding of what the world is, what humans are, and in general, what it means to be, was shaping European cultural history. In German academic discourse, it was Friedrich Kittler who came up with a complementary reading: In his approach not interpretations, but media infrastructures (Aufschreibesysteme) act as the driving force of history – they serve as a technological apriori for what Heidegger called unconcealment (Unverborgenheit).

With the "turn", Kittler argues, Heidegger became aware that it is technology that determines what it means to be human. E.g. the early Heidegger explained radio broadcast by an tendency of Dasein to erase distance. The late Heidegger, in contrast, attributes this tendency to technology and not to Dasein.

The same point can be made with respect to another human quality: In "Being and Time", curiosity (Neugier, literally the lust for something new) is described as a tendency to perceive just in order to perceive, not in order to understand. It is plausible to connect this trend towards sensual stimulation to what Kittler calls technological media (in contrast to symbolic media): media that directly provide our senses with the real (e.g. gramophone, film). The phenomenon of

curiosity, arising from the complex interplay of an evolutionary predisposition and a media environment turning the real into an omnipresent standing-reserve (Bestand), provides a starting point for reconciling the hermeneutic and the technodeterministic approach in reading Heidegger.

Since Heidegger opposes it to interpretation, curiosity might be considered as a component of what he calls abandonment of Being (Seinsverlassenheit) – the forgetting about interpretations. In this respect, even the characterization of human beings by an understanding/interpretation of Being (Seinsverständnis) turns out to be historical: Hermeneutics might be understood as an epiphenomenon of a specific historical media environment that is dominated by symbolic media.

Hyperlinked Knowledge
Peter Bujňák

The possibilities of information providing and sharing have never been easier - thanks to the internet. The common picture of internet as gigantic library providing almost every information requested by its visitor is followed by expectations of easier acquiring of knowledge. In my paper I would like to focus on such an optimism about the providing of information on the internet. By presenting the ideas of Hubert L. Dreyfus I would like to analyse the levelling of the vertical hierarchy of information by hyperlinking it.

Based on Heidegger's and Merleau-Ponty's concepts of reality and acting, Dreyfus considers the necessity of context in the process of acquiring relevant information. This context is based on actual needs, interests, purposes and desires of the searcher and produces hierarchical structure of relevance, that should lead to meaningful information. According to Dreyfus, hyperlinked information do not follow this structure. By providing the possibility of direct linking of different levels of importance and interests, hyperlinks allow to connect irrelevant or meaningless facts with the lack of context. The retrieving of relevant information from easily available on-line data can become much more problematic, than previously expected.

I do not intend to present the impossibility of using internet to gain any kind information. By using the ideas of the necessity of the context and problems of its transcription on-line, I would like to challenge the primary optimism about the internet usage. The example of the internet, with its levelled information organisation, can be used to demonstrate the necessity of contextual background in our everyday knowledge and orientation in the world around us. Thus the internet can tell us more about its users, than about the technology itself.

Technology and Culture Transfer: Hermeneutics and Philosophy of History
Chandrima Christiansen

An inherent predicament associated with the depiction and understanding of social sciences pitted against the natural sciences is the acceptance of a universality of language. Natural sciences through their journey in history have been seen as the domain of the scientifically enlightened and

the mode of communication and exchange of thoughts and ideas are carried forward by the 'language of science' that is empirical and universal. The objectivity of scientific findings though open to experimental changes in observations, is by and large an accepted truth until the point of a major upheaval based on accepted experimental proof challenging the existing structures. This is in a nutshell the position of modern science that has divorced itself from the societal and religious diktats. However, social sciences have not yet found a universal language of expression cut loose from the intrinsic socio- religio- and political web of society, owing to its fundamental nature dealing with 'human' sciences. Technology being the most visible outcome of applied science brings with it a blend of universality of scientific principles and the subjectivity of its practicality of conception. The birth and development of technology does not take place in isolation. Human needs conceptualise technologies and technology further perpetuates and necessitates technology. Understandably, in order to analyse the culture transfer associated with technology transfer, one has to throw light on the existing engineering environment in the respective civilisations or in other words the cultural entities in play. Evidently, a historical narration posits the two entities against each other. When a philosophical study is undertaken to understand the nature and process of technology and cultural transfer across civilisations over an extended period of time stretching over centuries, historical accounts are extensively referred to. These accounts in terms of raw data throw little light on the significance of the observations. In addition, when multiple civilisations are objects of references, the intertwined dynamics are hardly clear from stand alone historical accounts. The comprehension arising out of interpretative tools such as those of hermeneutics brings about a meaningful understanding of the historicity that underlies these accounts.

In my presentation, I shall attempt to engage in a dialogue to evaluate the relevance of hermeneutics of historicity as an interpretative medium to lend understanding to the subjective and varied historical accounts globally in tune with the philosophy of history.

Systems Theory as Touchstone for Hermeneutics and Arts in Science
Hans H. Diebner and Werner Pabst

We address the question of whether a synergy of art and science is condemned to failure. For our discussion we argue that the practices of the arts are principally close to Heidegger's productive hermeneutics or the enactment (Vollzug) character of thinking. Heidegger's philosophical practice itself has a performative character, i.e., is close to the arts (see e.g. [1]). Having this said one can observe an increasing attention of the sciences toward the arts as potential candidates to design more humanistic sciences. The arguments thereby are similiar or partially even identical to earlier rationals for a connex to hermeneutics. In particular, this holds for systems theory. The vicinity of productive hermeneutics and many practices of the arts pervades our discussion.

A historical investigation into the origin of general systems theory reveals that the concept behind it had (or still has) an existentialistic and hermeneutic tinge. Although an exact age determination fails, general systems theory is about 100 years old in accordance with Ludwig von Bertalanffy's appraisal [2]. Old enough that it, therefore, supplies a distinguished basis for an assessment of the science-art and science-hermeneutics connex. The rise of systems theory was strongly promoted by several psychologists who adopted Dilthey's epistemological differentiation

into „explanation" and „understanding", whereby the latter is more or less the business of hermeneutics and, formulated as new paradigm, of systems theory [3]:

> „In the recent past there has been much rather inconclusive discussion concerning the possibility of two different processes of knowing: explanation and understanding. [...] The difference between the two concepts [...] is probably that explanation refers to relational thinking, understanding to system thinking."

Although we have to keep Hegel's usage of the notion of „system" in mind, it was Dilthey who used „system" with remarkable prevalence. Unsurprisingly, Dilthey functioned as principle witness for the formation of systems theory. The prevalent usage of „system" has been recognized by Heidegger who in 1923 said with a concerned voice [4]: „On all sides the urge toward the system makes itself felt." Some years later he stated in a rather drastic way [5]:

> „[...] [T]hinking and the order unfolded by it stands outside the question of whether a system belongs to it or not. 'System' is only possible attendant to the sway of mathematical (in the broader sense) thinking. A thinking that is located outside this area and the corresponding determination of truth as certainty is, therefore, essentially without system, un-systematical; but nevertheless not arbitrary and confused. Un-systematic implies 'confused' and unordered only if it is measured against the system."

To complete the evidence for Heidegger's caveats toward system theory (and cybernetics) [6]:

> „There is no need for prophecy to be able to recognize that the establishing sciences will soon be determined and controlled by the new basic science, which is named cybernetics. [...] Arts will become controlled-controlling instruments of information."

Across the decades the numerous well-intentioned world improvements with the aid of systems theory and cybernetics have been unmasked as dystopia. One cannot be surprised enough, whenever the dystopian and misguided omnipotent character has been revealed, the sheet anchors named Heidegger and hermeneutics have been casted anew. The book by Winograd and Flores, which contains a comprehensive chapter on Gadamer, Heidegger, Husserl and hermeneutics, may serve as a striking example [7]. Please recall that Flores was the leader of the incredible Chilenian cybernetic project „CyberSyn", intended to construct an optimal society.

Opponents often regarded the flirt between systems theory and hermeneutics as nothing but an outwearing of Heidegger. Is the intended fruitful embedding of hermeneutics into systems theory or a connection between the two a vain endeavour?

Following Heidegger, art as science or science as art or both at the same time, i.e. art=science: These are only different ways of confusing the proper with the improper. The historian of science Walter Saltzer writes in his essay on Goethe [8] after quoting the poem "Ginkgo Biloba" out of the West-Eastern Divan, i.e., Goethe's book of the reconciliation of cultures:

> The divided, but symmetrically unified Ginkgo leaf a splendid symbol for the artist and scientist Goethe. Art and science in one! Does that go together, after all? Or perhaps it doesn't in the end? Should the last line, therefore, not better read, 'that I am divided and only half'.

And with reference to the historical precedence Lucretius, he further writes:

> The ideal of the [Freudian] theory would then be the suicide due to inner conflict, demonstrated through the pretended vita of the nature-inspired poet and passionate advocate of the atomic world view at the same time, Titus Lucretius Carus. Of course,

Lucretius' suicide is a trendy invention only, and even the most intimate expert does not know anything about a suicidal end of Goethe.

Even if we refrain from such an emotional response the art-science connex often times is an affair of the heart and of ethical disposition. In order to avoid reification through science and technology, systems theory serves as a bridge to world experience. However, Heidegger says: "... [T]here exists no bridge, only the jump." In fact, one has to confess that the scientific part of the partnership has almost always pulled art and/or hermeneutics to the scientific side. Many data-mining algorithms, to mention a concrete example, have been derived to resemble the hermeneutic circle but turned out to be rather a prejudice confirming machinery instead of a support for understanding. User modeling is often no more than reification. Another example is the system-theoretical derivation of the antagonistic mechanism of the innovation-driving force of avant-garde art [9]. In other words, the operational straitjacket is applied to art and hermeneutics. The result is alarming: The difference of subject and object vanishes within the radicalisation of the idealistic „logosphere" (radical constructivism). An increasing conspire-like loss of reality is the result. Ethics more and more becomes subject of significance measures, very often dressed-up as „evidence-based decision making."

Without the pathos that has been attributed to Lucretius, we have a vital interest in tackling the question of whether the art-science or the hermeneutic-science relation necessarily ends up yet in reification. Unfortunately, the latter is what in our view currently dominates the convergence.

[1] Rüdiger H. Rimpler: Prozessualität und Performativität in Heideggers "Beiträgen zur Philosophie" Zur Zeitigung von Sinn im Gedanken an die Wesung. Ergon Verlag, Würzburg, 2008.

[2] Ludwig von Bertalanffy: Ludwig von Bertalanffy (Ed.): General System Theory. George Braziller, New York, 1969.

[3] Angyal, Andras: A Logic of Systems. In: F.E. Emery (Ed.): Systems Thinking. Penguin Books, Harmondsworth, Middlesex, England, 1969, pp. 17–29. Chapter 8 of Angyal, Foundations for a Science of Personality, Harvard Uni Press, 1941, pp. 243–261.

[4] Martin Heidegger: Gesamtausgabe II. Abteilung: Vorlesungen. Band 63. Ontologie (Hermeneutik der Faktizität). Vittorio Klostermann, Frankfurt am Main, 1995. Nach einer Freiburger Vorlesung aus dem Jahre 1923. Original German quotation: „Allenthalben macht sich der Drang zum System bemerkbar."

[5] Martin Heidegger: Gesamtausgabe Band 65: Beiträge zur Philosophie (Vom Ereignis). Klostermann, Frankfurt am Main, 2007, p. 65. Original German quotation: „Dieses Denken und seine von ihm entfaltete Ordnung steht außerhalb der Frage, ob zu ihm ein System gehöre oder nicht. 'System' ist nur möglich im Gefolge der Herrschaft des mathematischen (im weiten Sinne) Denkens. Ein Denken, das außerhalb dieses Bereiches und der entsprechenden Bestimmung der Wahrheit als Gewißheit steht, ist daher wesentlich ohne System, unsystematisch; aber deshalb nicht willkürlich und wirr. Unsystematisch besagt nur dann soviel wie „wirr" und ungeordnet, wenn es am System gemessen wird."

[6] Martin Heidegger: Gesamtausgabe Band 14: Zur Sache des Denkens. Klostermann, Frankfurt am Main, 2007.

Original German quotation: „Es bedarf keiner Prophetie, um zu erkennen, daß die sich einrichtenden Wissenschaften alsbald von der neuen Grundwissenschaft bestimmt und gesteuert werden, die Kybernetik heißt. [...] Die Künste werden zu gesteuertsteuernden Instrumenten der Information."

[7] Terry Winograd and Fernando Flores: Understanding Computers and Cognition A New Foundation for Design. AddisonWesley, Reading, Mass., 1999. Particularly confer chapter 3: Understanding and Being, pp. 2736.

[8] Walter G. Saltzer: Goethe Naturwissenschaft, Kunst und Welterleben komplementär. In: Alfred Schmidt and KlausJürgen Grün (Eds.): Durchgeistete Natur Ihre Präsenz in Goethes Dichtung, Wissenschaft und Philosophie. Peter Lang, Frankfurt am Main, 2000, pp. 261275.

Original German quotation: „Das geteilte, symmetrisch vereinte GinkgoBlatt ein treffliches Symbol für den Künstler und Naturwissenschaftler Goethe. Kunst und Naturwissenschaft in einem! Geht das überhaupt zusammen? Oder im Ende vielleicht doch nicht? Sollte die letzte Zeile des Gedichtes dann nicht eher lauten, 'dass ich geteilt und halb nur bin'." and „Der Idealfall der [Freudschen] Theorie wäre dann der Suizid aus innerer Zerissenheit, vorexerziert an der vermeintlichen Vita des naturbeseelten Poeten und zugleich glühenden Verfechters eines atomistischen Weltbildes, Titus Lucretius Carus. Natürlich ist der Suizid des Lucretius eine Erfindung aus Mode, und von einem suizidalen Ende bei Goethe weiß wohl auch der intimste Kenner nichts."

[9] Wolfgang Tschacher and Martin Tröndle: Die Funktionslogik des Kunstsystems Vorbild für betriebliche Organisation? In: Timo Meynhardt and Ewald J. Brunner (Eds.): Selbstorganisation managen. Beiträge zur Synergetik der Organisation. Waxmann, Münster, 2005, pp. 135152.

The Schizophrenic Brain: A Broken Hermeneutic Circle
Péter Érdi

A unifying picture to the hermeneutical approach to schizophrenia is given by combining the philosophical and the experimental/computational approaches. Computational models of associative learning and recall in the cortico-hippocampal system helps to understand the circuits of normal and pathological behavior.

Érdi P., Ujfalussy B., Diwadkar V.: The schizophrenic brain: A broken hermeneutic circle. In *Neural Network World* 19 (413-427) 2009

Hermeneutics and Ethics: Open and Closed world-concepts as Generators of Applied Ethics
Paul Georg Ertl

Positivistic interpretations of ethics could be characterised as later forms of modern rationalistic interpretations, which are describing the phenomenon of an individual being as a kind of project

focused upon presumption and its ensuing verifications or falsifications. This is also clearly framed in terms of modernistic epistemologies. Therefore I raise the question that, if the general dissatisfaction is situated within the broader doubts being raised against modernistic epistemologies there is a way out of this dilemma. In the postmodern context the single alternative is one which seeks to find the relevance of hermeneutics for the ethical circumstances with which every single individual and every society or state has to deal with. What is needed is on the one hand to understand hermeneutics as a sort of "Open-World-Hermeneutics" that opposes in some terms to the traditional view of this epistemological worldview. On the second hand one has to understand the ethical framework of morals, which means especially in this regard the term "Applied Ethics". And as a synthesis of both terms one has simply to relate the two and bring them into one system or even into one matrix within the single individual, society or state. But in reality the situation is much more complex than it is figured out in these few lines. In every single situation one has to deal with certain circumstances and conditions that are to be judged within minutes or even seconds or in a split second. The very certain case is mostly not clear and will eventually never become. But we have to try to get a deeper insight into the structure of these cases, so that we can form possible action-reaction cases. However, one needs to close his worldview for getting a possibility for decision. But afterwards he must open his intellect again, in the meaning of an open world view, to proof the viability of this decision in general.

Scientific Thinking and its Mental Infrastructure
Guenther Fleck

In the Western (academic) world scientific thinking is generally viewed as the most powerful means to tackle different problems and to find the most effective solutions for them. The ability to create good theories in order to describe and explain the phenomena is acknowledged as central to scientific thinking. Accordingly, a kind of objectivity and pure rationalism are attributed to it. But scientific thinking is neither a pure cognitive process nor does it take place in an empty space. In this chapter it is argued that scientific thinking just like any other normal every day type of thinking is to be understood as a cognitive-affective process embedded in a mental infrastructure. This thesis will be elaborated in detail.

Every scientist engaged in constructing a theory (or a model or an hypothesis) starts from some kind of pre-knowledge in order to formulate his or her first considerations concerning a scientific problem. These considerations have to be transformed into a consistent pattern so that they are amenable to further elaboration. Scientists have their own special theoretical orientation (e.g., a psychodynamic or behavioral one in psychology) which constitutes the explicit frame for their reasoning, and provides the major components which function as a guide for research. But there is something more behind the explicit theoretical orientation affecting theory building.

Researchers have adopted various ways of thinking (e.g., formalistic, mechanistic, organismic and contextualist thinking), have developed basic belief systems (mindscapes, root metaphors) about how things are (e.g., man as machine or man as a living organism), have made decisions in regard to a special epistemology (e.g., objectivist or constructivist), have demonstrated preferences for a special philosophy of science (e.g., positivism, critical rationalism or

hermeneutics) and its corresponding scientific methodology (quantitative and/or qualitative) and methods (e.g., observation, experiment, simulation, biography). These mental characteristics of researchers may be conceived and conceptualized as the mental infrastructure of theory building. The mental infrastructure is characteristic for the individual and reflects his or her cognitive, motivational, affective and personality characteristics.

The basic argument is that every kind of theory building needs an infrastructure of this kind which, on the one hand, enables theory building, and on the other hand, constrains theory building. Thus, the mental infrastructure of theory building represents the basic ingredients of all researchers' theorizing. In this chapter an attempt is made to reconstruct these ingredients in detail and to render them explicit. This is necessary since most scientists most of the time are not aware of their mental infrastructure. Becoming aware of it may enable the investigator to recognize its impact on one's theorizing. This may be helpful for overcoming scientific dead ends and for finding new solutions to problems.

A Search into Meaningfulness of Employees' Behaviors In Islamic Republic of Iran
Abolfazl Gaeini

This article aims at the explanation of the meaningfulness in the organizational behaviors of the employees focusing on the employees of the organizations in the Islamic Republic of Iran. Searching the meaningfulness is one of the important and serious viewpoints discussed in behavioral studies intending to illustrate why behaviors of human sources take place. This viewpoint extracting from the hermeneutics methodology studies tries to sink into lower layers of behaviors and at last decoding them by interpreting those layers. Discovering the meaningfulness in the organizational behaviors of the employees of the organizations overwhelmed with the Islamic culture is possible only by understanding the supernatural values. In this kind of culture man is valued and weighed according to supernatural beliefs; therefore his behaviors are not limited to material world. Motivations in such a meaningful context are not of the kind of those in different contexts. Increasing the power and wealth factors which are the determining parameters in motivating the behaviors of the man of the modern world are not the sources of motivations in this context, rather, in this regard, factors such as avoiding the sphere of power and wealth and inclination towards spiritual stuffs play the basic role. Unfortunately, in current organizations with Islamic culture, what occurs is an inclination towards material taste in motivating the employees for appropriate organizational behaviors which has been resulted from the direct imitation of the motivation models of the modern world. The hermeneutical understanding of the societies with Islamic culture declares this view inefficient. Considering them as worldliness, the meaning of the life of the people brought up in Islamic culture atmosphere denies such inclinations and interprets them as descending the meaningfulness of life into worldliness. Spiritualism as the essence of being religious which corresponds to the formal suggestions of Islam is currently considered as an outstanding viewpoint in organizational studies. Most of the spiritualist managers and the employees believe that correlation between spirituality and job will result in the meaningfulness of their job.

A Concise Illustration of the Design

As the employees are human being who attend their organizations with all their identities, and as the insights and inclinations are the components of man's identity and that which is expressed as organizational behaviors are the real and objective manifestations of that identity, the behaviors are the characterizations of the identities of the employees in their organizations.

Searching the meaningfulness is one of the important and serious viewpoints discussed in behavioral studies which intend to illustrate why behaviors of human sources take place. This viewpoint extracting from the hermeneutics methodology studies tries to attain the lower levels of behaviors and at last decoding them by interpreting those layers.

What is meant by search into meaningfulness is the characterization of the identity of the individuals in their life in general and their behaviors in specific ways.

The issue of motivation of the employees is very important. Motivation is a moving factor in organizational behaviors of the employees. There are basic factors in creating the motivations. One of them is the employees' consideration of the meaning of life.

The explanation of the employees' behaviors being meaningful should not be confined merely to the classifications and variety of the jobs and recognition of the duties. This kind of confinement will not yield an acceptable explanation of the employees' behaviors being meaningful. . The diversity of practical theories will be useful for replying the question why the employees' behaviors are meaningful, however, according to Wittgenstein, even when all the possible practical questions are replied; the issues and problems of life will remain unsolved.

In ontology and anthropology dimensions, the religious teachings teach its followers that existence possesses different layers the lowest of which is mater and the highest of which is God. Man is an existent who has gone through the levels of existence and has descended from the throne of existence to the material world and there is a choice of returning from this material world to the higher level of existence (God). Likewise man enjoys of two dimensions, body appropriate for material world and soul appropriate for the highest existence. Possessing the two dimensions develops two inclinations, an inclination towards the material world in order to satisfy the bodily needs and inclination towards the higher world, appropriate for the spiritual realm. These two realms and their inclinations are vertical so that the material dimension stays at the lower level and serves the spiritual dimension.

With this explanation, the meaningfulness of life for a faithful religious individual is not a means of establishing a worldly station and a purposeful bodily life for him, rather it has another meaning. Annihilation and bewilderment which are the fruits of a meaningless life occur when one has a definition of one's own station in the existence and has set goals for one's life and has concentrated all of one's struggles on attaining those goals, however, for some reasons, one is unsuccessful in attaining those goals.

One who confines existence to the material world, the indicators of one's life being meaningful is like the one's who considers the existence as possessing different layers and the material world as the lowest level and the absolute and abstract being as the end of the existence. The failure or success which is the indicators of understanding the life being meaningful or meaningless corresponds to this anthropological viewpoint. The more extended this viewpoint is the more diverse the indicators for the meaningfulness of life are.

The employees who, in order to help their organization attain their goals, develop behaviors, under the influence of what they know about the existence, have a special meaning of their behaviors. The organizational culture plays an important role in developing such a suggestion. Organizational culture is a subculture of national culture. The religion-oriented culture or non-religion-oriented culture in the society influences the organizational culture. The religious beliefs of the employees in an organization will result in their religious-oriented behaviors. The meaningful behaviors of such employees may not be reduced to or interpreted as developing job skills or understanding the importance of the job position or the duty assigned in the framework of the production or profit making goals of the organization.

According to the religious beliefs and teachings man is not merely a stuff of material being beside the other material things, rather he has passed through different stages and has changed with different ideas of the existence of the world, from the abstract things to the lowest of them e.g. the material world, therefore his inclinations and desires towards this existentialistic diversity are different, hence considering these diversities, being meaningful for such an existent is various and merely by supporting him with material stuffs he cannot be saved from annihilation and bewilderment and turned into a meaningful existent. Providing him with material things to satisfy some of his bodily needs are meaningful, however because of the transitory nature of body features, satisfying bodily needs may not be a meaningful cause for developing behaviors. The religion by defining man as possessor of eternal aspects lets man, in the shade of such a definition, is able to behold the continuance of life in the mirror of his own being as an eternal being.

Ethically the influence of the Shiite culture on the belief in asceticism causes the employees blame the directors unable to develop behaviors such as being humble, employee-oriented, and justice. The behavior taught by Imam Ali(A.S) and the manner of the Progeny of the holy Prophet have struck such a root in their followers that they will compare any behavior aiming at gaining power or wealth with the standards of their religious leaders' and refute it if it contradicts theirs. In other words, the meaningfulness of the organizational behaviors of the ones closer to the circle of power and wealth are interpreted according to the value system recommended by the religious leaders. The value position of any individual in an organization is assessed according to the individual's shunning power and wealth. The vigilance of the Shiites has facilitated the delicately pathology of organizational behaviors and expecting justly done and aesthetic behavior and avoiding self-glorification has been a means of group controlling. Imam Ali's (A.S) [1] instructions for Malik Ashtar [2] are considered as an important and historic source for organizational behaviors of his followers. It serves just as a pleasant tableau illustrating the recommendations on the value-based behaviors, the meaningful interpretation of good or bad behaviors. The motivating factors recommended for such a context will not necessarily accord with those in different contexts. Establishing wealth and power factors as the determining parameters of motivation, influential in the modern world are invalid in this context; rather those playing an important role in this context are inclination towards spiritual issues and keeping away from power and wealth. Unfortunately, in current organizations with Islamic culture, what occurs is an inclination towards material taste in motivating the employees for the appropriate

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[1] Reporting the growth of human societies in 2002, the U.N. declares Imam Ali's words as a model of a just government.
[2] Governor of Egypt selected by Imam Ali (the Leader of Islamic government in the early years of Islam)

organizational behaviors which has been resulted from the direct imitation of the motivation models of the modern world. The hermeneutical understanding of the societies with Islamic culture declares this view inefficient. Considering them as worldliness, the meaning of the life of the people brought up in Islamic culture atmosphere denies such inclinations and interprets them as descending the meaningfulness of life into worldliness.

Spiritualism as the essence of being religious which corresponds to the formal suggestions of Islam is currently considered as an outstanding viewpoint in organizational studies. Most of the spiritualist managers and the employees believe that correlation between spirituality and job will result in the meaningfulness of their job.

A spiritualist employee does not seek his own progress in making advance in organizational levels; rather he always looks for the spiritual opportunities to develop his own realms of existence. The individuals or the departments in charge of developing human sources should create a fair coordination between job promotion and the existential development of the employees. This coordination will lead in job satisfaction and meaningfulness of the job.

Another feature of a spiritual-oriented individual is his well wishing intention in job. This is one's spiritual feature contradicting his other desires which cause one to do the job merely for co-dependency or as a workaholic.

Well wishing motivates one to do the job neither for satisfying a need nor out of fear, are rather the motivations merely one's well wishing and spiritual inclinations.

Heidegger's Phenomenology and Daseinsanalysis
Éva Gedő

The philosophical movement of phenomenology, including Heidegger's philosophy, defines itself as a description and analysis of experience. On the one hand, Daseinsanalysis, which relies on Heidegger's philosophy, honours that self-definition. On the other, it asserts some other key normative considerations. It defines cure as its goal; it strongly differentiates between sick persons and healthy ones; and it applies conversations between the therapist and his/her client as the primary tool of therapy. Language and intersubjectivity play a decisive role in those conversations. The presentation examines the way normative considerations appear in works by classics of Daseinsanalysis: Boss and Binswanger and in contemporary representatives of that tendency: Holzhey, Kunz and in *Einfuhrung in die philosophischen dimensionen der psychotherapeutischen Daseinsanalyse* by Holger Helting, explicitly or implicitly, considerations that were not present in the self-definition of Heidegger's original philosophy. Éva Gedő considers the presence of normativity in Daseinsanalysis from two points of view: first, from aspects where normativity can be implicitly identified already among the concepts used by Heidegger, as for instance, sense and its loss, anxiety and the relationship to death and, second, what are the areas where Daseinsanalysis, in its bid to ensure the efficiency of therapy, implicitly modifies the concepts of Heidegger's philosophy.

Critical Aspects of the Hermeneutic Philosophy of Science (The Politics of Hermeneutic Realism)
Dimitri Ginev

My aim is to evaluate the critical perspective on scientism and epistemological objectivism put forward by a version of hermeneutic phenomenology. It is a version that addresses the issues of the meaningful constitution of research objects in natural-scientific research. In opposing Habermas' quasi-transcendental epistemology of the empirico-analytical sciences, I will offer an attempt at interpretative investigation of the formation of knowledge-guiding interests in these sciences. The possibility of a "dialogical research of nature" is scrutinized. On Habermas' (and Karl-Otto Apel's) position, we cannot have a dialogical (communicative) relation to nature. The talk about the "liberation of nature in the name of its own rights" does not make sense in the epistemology of knowledge-guiding interests as well as in the theory of communicative action. In opposing the allocation of the rational dialogue in the sphere of social interaction solely, I will eventually try to show that hermeneutic realism (in rehabilitating motifs of Marcuse's project for a "new science") involves the moment of a dialogical interaction with nature within the milieu of scientific practices' readable technologies.

The Double Hermeneutic of The Natural Sciences: From Perception and Description, to Prediction, Explanation and Understanding.
Simon Glynn

"The greatness and superiority of the natural sciences during the sixteenth and seventeenth centuries" Heidegger tells us, "rests in the fact that all the scientists were philosophers. They understood that there are no mere facts but that a fact is only what it is in the light of the fundamental conception…" (Heidegger, *What Is a Thing*)

Thus while:
"…one likes to appeal [*beruft*] to what "stands there" " as the ultimate foundation or ground for the discovery and justification of one's theories, "…what "stands there" in the first instance is nothing other than the obvious undiscussed assumptions [*Vormeinung*] (which is to say the implicit theories or interpretive theories or pre-conceptions) of the person who does the interpreting." (Heidegger, *Being and Time*, my addition in rounded brackets)

Accordingly, contra Husserl, who insisted, following the "phenomenological reduction," that one could provide a radically "empirical" or presuppositionless *description* of "the things themselves" or phenomena, just as they appear to immediate experience, Merleau-Ponty observed that "The most important lesson which the reduction teaches us is the impossibility of a complete reduction." That is to say that recognizing, as Kant's insistence that the sensible is inextricably intertwined with the intelligible implies, that while *perception and conception* may indeed be *analytically distinguishable* nevertheless they remain *ontologically inseparable*, Merleau-Ponty insists, along with the Hermeneuticists, that all *descriptions* of the "facts", so far from being presuppositionless, are already *interpretations* informed by our, more or less implicit or explicit, *conceptual frameworks, or pre-conceptions.*

Taking this insight as its point of departure, the paper begins by explicating in detail, both *that* and exactly *how* our (pre) *conceptions* not only inform or influence even our most basic *perceptions* of empirical data, and thus our view of the facts, but even what should be allowed to count as facts. And drawing upon the history of science from Aristotle, Galileo and Newton, to Heisenberg, Bohr and Einstein, the paper proceeds, by way of an exploration of the more general implications of all this for the relationships between *description*, *interpretation*, (causal and non-causal) *explanation* and *understanding*, to an examination of some of promising implications of the consequent reconfiguration of these relationships, for advancing both our scientific understanding of the universe, and our understanding of science itself.

Thus, to begin, while both *sense* data theorists and those who, like William James, start by assuming a "Boomin' Buzzing Confusion" of one sort or another, take our, supposedly subsequent, perceptions of objects and events as evidence of the influence of our (pre) conceptions upon these perceptions, the paper rejects this line of argument. And it does so on the grounds that that if, as Sartre -- following Husserl's recognition that "All consciousness is consciousness of an object" – affirms, whenever I am conscious "always I am conscious of….objects" then concomitantly "…we never … encounter that phantom and strictly subjective impression which is sensation…" In which case there is no more reason to believe that the objects we encounter are the product of the interpretation or conceptual structuring of sensations or sense data, than that the world is simply populated by objects *per se.* But while, without assuming sense-data or subjective sensations or their like, the simple perception of an object cannot itself, provide evidence of the role of interpretive concepts in our perceptions, the cognitive experiments of the *Gestaltists* and of Ames and his school certainly can and do. Furthermore even to simply describe my perceptions as perceptions of a particular object (e.g. a glass of water) is to *implicitly* infer that the properties I perceive will develop or change in a certain way (e.g. the contents of the glass will freeze at 0 and boil at 100 degrees Celsius). Thus as Mary Hesse insists "…inductive assumptions are all pervasive… not only in scientific inference from experience to theory and prediction but also in the very use of general descriptive terms, in stating the evidence itself"

Turning from a study of the *hermeneutics of perception*, which is to say of the role of *conceptions, interpretations* and *assumptions* in our *perceptions* and *descriptions* of the "facts", to a study of the *hermeneutics of prediction and explanation*, which is to say the role of *theoretical preconceptions* or *assumptions* in the full blown scientific enterprise, clearly Newton's *predictive* Laws of Motion, to take but one example, presuppose inductive assumptions, about the uniformity of nature. While the supposed scientific *explanatory "understanding"* of motion (be it the falling of apples off trees and of arrows to earth, the trajectory of certain heavenly bodies) or even of such phenomena as the aching of outstretched arms etc., depends upon that wholly *theoretical conception* of Gravity. A theoretical conception even in principle, for, as invisible, inaudible, odorless, tasteless and non-tactile, that "occult force", as members of the Royal Society consequently dubbed gravity, can, as Pierce has noted, clearly never be anything "in itself", which is to say independent of those experienceable phenomena (motions, aches etc.) which it supposedly accounts for. Moreover that such phenomena are widely mistaken not merely to be corroborative *evidence for*, but actual *experiences of,* gravity, demonstrates the degree to which, as previously argued, out theoretical preconceptions or assumptions enter into our experiences of the "facts", just as the notion of "gravitons", which may arguably be understood as no more nor less than "reified hypotheses", demonstrates the same

with regard to our "perceptions" (in the wider sense) of the "facts". Indeed there can surely be no clearer demonstration of Heidegger insistence that "…a fact is only what it is in the light of the fundamental conception" than that an Aristotelian would see these very same motions etc., as evidence for, and even experiences of, earthly bodies striving to reach their earthly homes. And as with gravity, or indeed gravitons, so too with anti-matter, curved space, or even such mundane "entities" as electrons, atoms and molecules, which, as inexperienceable "in themselves", owe their supposedly factual status to the conceptions and assumptions underlying our interpretation of the phenomena (such as the behavior of material bodies, tracks across cloud or bubble chambers, lines across photographic emulsions etc.) in and by which we concomitantly presume they are implicated.

Nor, perhaps surprisingly, are our theoretical preconceptions, and the "facts" of which they are constitutive, necessarily abandoned even in the face of their apparent empirical refutation. For instance, having formed the hypothesis or theoretical preconception that all heavenly bodies move in circular orbit, Galileo, confronted with the empirical evidence, derived by looking through his telescope, that comets and asteroids, not to mention planets, moved in elliptical orbits, simply dismissed such observations as illusions, caused, he theorized, by imperfections in the telescope's lenses. Indeed not only may our empirical observations be *reinterpreted* in order that they may be made to fit our theories, but they may even be ignored, or, in extreme cases, falsified. For instance, differential air resistance would surely have resulted in the small "musket ball", dropped, simultaneously with a much larger "cannon ball", from the top of Pisa's leaning tower, hitting the ground first. Yet, Galileo insisted they hit the ground together!

"In reality" then, as Einstein has noted "it is the theory that decides what we observe". A view evidenced more generally, if not so dramatically, in the dispute between Proust and Berthollet regarding chemical reactions, to take but one example. Thus while Proust subscribed to Dalton's view, that chemical reactions can only take place in fixed proportions, Berthollet did not. Consequently many of the "chemical reactions" "observed" by Berthollet, Proust "observed" to simply be physical mixtures. Or, to give another example, Kuhn reports that "An investigator asked a distinguished physicist and an eminent chemist whether a single atom of helium was or was not a molecule…For the chemist the atom of helium was a molecule because it behaved like one with respect to the Kinetic Theory of gases. For the physicist, on the other hand, the helium atom was not a molecule because it displayed no molecular spectrum." Evidently, as even Popper is forced to concede, "Observations are always interpretations … in the light of theories," while, as Polanyi has noted, "…what we see …depends very much on the way we make sense of it".

This then brings us back for a moment to Heidegger insistence that "…a fact is only what it is in the light of the fundamental conception", differences in fundamental conceptions thus explaining the differences between Newton's "understanding" of the motions of earthly and heavenly bodies in terms of the *relations* between objects, and the modern physicist "understands" these same motions as attributable to *things* (gravitons). While almost isomorphically, as Capra tells us, "In field theory the forces between particles appear as intrinsic properties of the particles" while as Bohm insists "…at the quantum level of accuracy an object does not have any "intrinsic" properties…instead it shares all its properties with the systems with which it interacts." Thus we may be able to dissolve the seeming paradox involved in Niels Bohr's theory of Complementarity, to give but one example, if, instead of reifying the notion of a "wavicle" which, thus (mis)conceived as a thing or object, ostensibly has logically contradictory properties (of both *being*

a wave, and, as a particle, *not being a wave* etc.) we instead adopt the aforementioned quantum approach, according to which its experienceable properties – from the totality of which it is, as per Hume and Husserl, empirically indistinguishable -- undergo *Gestalt like* transformations between those of a wave (e.g. the double slit experiment) and those of a particle (e.g. the photoelectric effect) as we interpret it first in terms of its interactions with one system, and then another.

In conclusion then, if, as we have suggested, and Imre Lakatos claimed "…there are and can be no sensations unimpregnated by expectations" if all, even the most basic, perceptions, are conceptually mediated, and Nietzsche's "Myth of Immaculate Perception" finally exposed as such, then as Lakatos insists "…clashes between theories and factual propositions are not "falsifications" but merely inconsistencies" between the theoretical hypotheses explicitly deployed by the sciences, and the interpretive preconceptions often initially implicit in our supposedly immediate experiences or perceptions and descriptions of the "facts". There is in this sense then a "double hermeneutic" operative in the natural sciences, understood -- not as in the human and social sciences, as an attempt by scientific observer to interpret a subjects interpretation of his or her environment, but – ostensibly as an attempt to provide at scientific interpretation, or understanding of the "facts" arising from the interpretive preconceptions informing our perceptions.

This being so, it is not a *correspondence* between our scientific theories and the facts that we seek, but a *coherence* between the explicit *conceptions* of science, and the implicit *preconceptions* mediating our basic experiences or perceptions of the "facts". Moreover, we have seen that so far from such coherence always resulting, when it does, from the theoretical conceptions of science being brought into line with the preconceptions mediating (our perceptions of) the "facts", on the contrary, it often results from these preconceptions, and consequently (our "perceptions" of) the "facts", being brought into line with the theoretical conceptions of science. That is to say that, while "facts" consistent with science's theoretical hypotheses are accepted as supporting (in the sense of providing a degree of verisimilitude for) our theories, those inconsistent with it are often reinterpreted, broken down, or, in extreme cases ignored or even falsified so that they may fit the theories. Such then are the vicissitudes of the double hermeneutic of the natural sciences.

Epistemology, Hermeneutics and Richard Rorty
Daniel L. Golden

The main concern of Richard Rorty as a philosopher has been from the very beginning epistemology in the broadest sense of the word. As told by himself in many interviews and autobiographical pieces of writings, he – as perhaps many or most in the same profession – was led to philosophy by the platonic desire to find ultimate knowledge. In order to fulfill this desire, he soon moved to analytic philosophy. And it was the same motive behind, which made him one of the typical philosophical heretics who gain their fame by the attack made against their former "religion", when he transmitted his personal discontent and disappointment about it to a general critique of the whole enterprise.

Declaring the exhausting of the old epistemological project in his *Philosophy and the Mirror of Nature*, Rorty ends up with a strange dichotomy. It looks like we philosophers can choose from

two possible metaphilosophical standpoints. One can make either *epistemology*, or *hermeneutics*. This terminology is rather puzzling in itself, since both expressions are taken quite far away from their original context. In a way resembling the Kuhnian model of science, Rorty contrasts the thinking in clear and fixed conceptual frameworks with the acts of really creative innovation. Finally in a prophetic tone he tells us that we should give up *epistemology* and do *hermeneutics* instead.

Hermeneutics means here for Rorty basically simply this: let's not be afraid to make questions and search for new possible ways of describing ourselves and our world. Indeed, one may rather call this project a *heuristic*, since the main concern is about how to reach new intellectual inventions, new pieces of knowledge.

For the reader of the later Rorty can be a bit surprising the two philosophical heroes helping him here to break with the analytic tradition. As a matter of fact, the last two chapters of *Philosophy and the Mirror of Nature* give tribute to two „hermeneutic" philosophers in the Rortyan sense: Thomas Kuhn and Hans-Georg Gadamer. While it would be hard to find two philosophers more distant from each other, what made them a pair for Rorty, is that he read them as revolutionists on the very topic of his book: the status of knowledge. As I see, under the label „hermeneutics" Rorty was searching for an *alternative epistemology*.

No Future: the Ethics of Emergent Science and Technology
Bart Gremmen

There are many possible moral problems in our everyday world. Most of them are rather 'straight forward' as they are located on a local level, concern interactions between individuals or between groups, and are in *the present*. In general we may conclude that the existing literature on normative ethics is rather helpful in 'solving' these moral problems. However, some moral problems have quite different characteristics: they are either global, or concern societies as a whole, or regard the future, or share all these characteristics, like in the case of innovation.

In a recent James Martin seminar at the University of Oxford Jason Blackstock asked ethicists to help geo-engineers to 'solve' their moral problems at the beginning of their trajectory of innovation. Deployment of some of the geo-engineering tools could bring climate change to a halt but at the same time change the weather in some parts of the globe because of the error margin involved. This could cause an agricultural disaster resulting in a famine of unseen proportions. Also in other areas of innovation, like genomics, nanotechnology and synthetic biology, ethicists are asked to help to solve moral problems.

Can ethicists help to solve moral problems in the early stages of innovation? This paper reviews the majority of answers developed in the normative ethical literature. In our view it is difficult for ethicists to assist innovators because most normative ethical theories have problems in dealing with the future. Not only do the results of an innovative trajectory have unknown consequences, but more importantly we don't known the results of innovation at the start of the innovation trajectory. This means that in moral reasoning about innovations in the making the moral relevant facts and the appropriate principles are unknown as well as the relevant moral consequences. We will evaluate a few ethical 'devices' that have been developed by ethicists and others to tame the future of emergent science and innovation.

Hermeneutic Consciousness, Perception and Natural Science
Patrick A. Heelan

Kant's philosophy, built on the foundation of Newtonian science was challenged by the main streams of neokiantian philosophy influenced by Hermann Cohen; it was a challenge that has divided European and American philosophy, and changed how human consciousness was thought to operate in the modern scientific and post-modern cultural worlds. Two streams of transcendental neokantian philosophy emerged from Marburg: one stream - a *spontaneity* stream - which stressed the spontaneous creation of new formal concepts into which category fell both Carnap and Husserl; and the other – a *hermeneutic* stream - which stressed the creative hermeneutic structures of human cultural life in the world, to which Heidegger belonged. This paper follows the Heideggerian stream in giving a mostly scientific account of human consciousness, visual perception, and quantum physics.

Heisenberg's Approach to Complementarity and the Order of Reality
Makoto Katsumori

Werner Heisenberg is commonly considered to have more or less followed and accepted Niels Bohr's philosophical point of view, specifically his idea of complementarity. As noted by some commentators, however, Heisenberg's understanding of complementarity deviates at a crucial point from Bohr's. As regards quantum theory, although both physicists speak of the complementarity of space-time and causality, Bohr means by causality the use of the dynamical conservation laws, whereas Heisenberg conceives causality primarily as description in terms of the state function. I wish to show that, through this mis- or reinterpretation, Heisenberg opened up a way of applying the idea of complementarity to the relations between different areas of reality corresponding to different modes of description, not only within the context of modern physics but as concerns the general structure of the world.

In his 1942 philosophical manuscript (published posthumously as "Ordnung der Wirklichkeit"), Heisenberg develops his conception of the world as divided into six areas of reality, stretching from the most objective area, classical physics, to the most subjective, "creative powers." To characterize the relations between these different areas, he extensively employs the idea of complementarity as reinterpreted by himself, pointing, for example, to the complementary relations between the mechanical and the chemical modes of description of atoms, between our biological linkage to the environment and our symbolic, language-mediated access to it, and so forth. Heisenberg's renewed idea of complementarity thus plays a pivotal role in his conception of the layered structure of reality, although this conception seems to contain as yet unresolved philosophical problems.

Plato, Rényi, Lakatos – Dialogues on Mathematics.
Olga Kiss

Mathematics elevates the soul from misleading evidences of senses to the truth one can apprehend only by intellect. This is why Plato chose arithmetic and geometry as the first two studies of the leaders in his *Republic*. Other dialogues of him show that mathematics played changing but prominent role in his thinking throughout his life from the early period to his late writings.

Two and a half thousand years later two Hungarians – Alfréd Rényi (in Budapest) and Imre Lakatos (in London) wrote dialogues on mathematical understanding. Both of them published their works in the early sixties.

The dialogical form can be a matter of the author's free choice: only a dramatic form without any deep intellectual message. But – as it is shown in Lakatos' *Proofs and Refutations* – it can make us see the most important point as well. Lakatos emphasizes that the growth of mathematics goes through a dialogical process. Neither Plato (a philosopher) nor Rényi (a mathematician) emphasized this role. We can raise the question: what can we say about their conceptions if we look for such a message?

At first glance we have three completely different views on mathematics. Their theories show us fundamentally different pictures about it. They emphasize some parts of its character, while leave others in shadow. But all of them can help us to see mathematics 'as it is'. And we must not forget that mathematics went through fundamental changes in these epochs.

So we start a dialogue with their writings. Our general question is whether these conceptions have meeting points? If we could find one, it could be the starting point of a deeper understanding of mathematics. The question we scrutinize in this paper: What role dialectic or dialogue can play in the development of mathematical concepts and theorems according to these authors?

Why Heidegger Was Not a Robust Realist: A Response to Dreyfus and Spinosa Jeff Kochan

Hubert L. Dreyfus and Charles Spinosa (1999) have argued that Martin Heidegger's early work contains an argument for "robust realism," a position they promote in opposition to "deflationary realism." Deflationism is, in fact, a thesis about truth. It urges that there is nothing more to truth than what is found in the Tarski schema "'p' is true iff *p*." In other words, the truth-predicate is redundant; it adds no new fact about 'p'. Most importantly, it does not add the metaphysical fact that 'p' is true because it *corresponds* to *p*. Arthur Fine (1986), the best-known proponent of deflationism in the philosophy of science, argues that realists attempt to add an "outer direction" to the deflationary account, positing an independently existing external reality and a correspondence relation between that reality and true scientific statements. Given Dreyfus' view that Heidegger rejected deflationism in favour of robust realism, it is not surprising that he has since gone on to claim that Heidegger also defends the possibility of a correspondence theory of truth with respect to the entities of natural science (Dreyfus 2001).

In this paper, I argue that the early Heidegger could not have defended the possibility of a correspondence theory of truth because he was not a robust realist. Nor, for that matter, was he a deflationary realist. In fact, he held a position intermediate between deflationary and robust (or scientific) realism, a position I call "minimal realism." Dreyfus and Spinosa overlooked the possibility of minimal realism because they failed to properly distinguish between two distinct realist theses: (1) that nature exists independently of our theories and practices; and (2) that the determinate structures of nature exist independently of our theories and practices. They assume that Heidegger affirmed both (1) and (2). I argue that he affirmed only (1).

In *Being and Time*, Heidegger introduces the term "presence-at-hand" in order to distinguish between the existence of a "what" and a "who" (*Dasein*). He reserves the term "existence" for the latter, and applies the term "presence-at-hand" to the former. According to Joseph P. Fell (1989), Heidegger uses the term "presence-at-hand" in a number of distinct ways. Central to my argument is Heidegger's distinction between what is present-at-hand "without-the-world" and what is present-at-hand "within-the-world." A further critical point is the dependency of the world on *Dasein*, i.e., on our theories and practices. Seen in this light, the distinction between presence-at-hand without- and within-the-world correlates to the distinction between (1) and (2) above. In the first place, nature exists independently of our theories and practices because it exists without-the-world. In the second place, the determinate structures of nature do not exist independently of our theories and practices because they exist only within-the-world. *Dasein* determines the way nature becomes a referent for truth assertions.

In sum, Heidegger was a minimal realist because he affirmed the independent existence of nature, and he was not a robust (or scientific) realist because he did not affirm the independent existence of the determinate structures of nature.

Dreyfus, H. L. (2001). "How Heidegger Defends the Possibility of a Correspondence Theory of Truth with Respect to the Entities of Natural Science." In T. R. Schatzki, K. Knorr Cetina & E. von Savigny (eds.), *The Practice Turn in Contemporary Theory* (London: Routledge).

Dreyfus, H. L. & C. Spinosa (1999). "Coping with Things-in-Themselves: A Practice-Based Phenomenological Argument for Realism." *Inquiry* 42: 49-78.

Fine, Arthur (1986). *The Shaky Game: Einstein, Realism and the Quantum Theory*, 2nd edn. (Chicago: University of Chicago Press).

Fell, J. P. (1989). "The Familiar and the Strange: On the Limits of Praxis in the Early Heidegger." In T. J. Nenon (ed.), *Heidegger and Praxis* (*The Southern Journal of Philosophy* 28, Spindel Conference Supplement), pp. 23-41.

Hermeneutics of the Graeco-Arabic "Translation Movement"
Duane J. Lacey

With the transition of power to the 'Abbasid Dynasty in the 8th Century AD there evolved a massive cultural exchange known as the "Translation Movement," whereby Greek scientific, medical, mathematical, literary and philosophical texts were translated into Arabic and studied by

leading intellects and scholars of the period. This movement has been analyzed from various perspectives, including philological, sociological, historical and scientific, but it has not, to the author's knowledge, been addressed from a hermeneutic (particularly Gadamerian) or truly philosophical approach. In this paper, the rigorous political and historical scholarship that we have on the translation movement is utilized in order to inform the author's own philosophical analysis of the status of science as a subject of translation and of the cultural exchange at work in this unique historical period. In particular, Gadamer's theoretical notions of cultural horizons and exchange are applied to the specific circumstances and motives surrounding the translation movement, which, it is hoped, yields a descriptive analysis of the manner in which science is at once fragile, in the sense of its dependence on historicity, translation and political motives, yet at the same time powerful in the sense of being able to preserve its integrity and maintain its influence as a means and even motive of cultural exchange. In this regard, the concept of translation itself will come into focus, and a detailed account of the manner in which the translations of the period themselves developed and were cultivated into a science of translation in its own right will be recognized as well. Underlying these considerations, the author will introduce a concept of "inadvertency" which, it is believed, is a kind of missing element in the phenomenological tradition. Thus, the major points of the paper are threefold: 1) the nature of science as a subject of translation and a motive force of cultural exchange, 2) the process of translation as itself a science and activity, and 3) the concept of inadvertency as a crucial yet underdeveloped element in phenomenological and hermeneutical analysis.

Radical Embodied Realism: A Nonrepresentational Ontology
Roberto Di Letizia

Classic ontological issue is the problem of relation between objective world and the representations. Representationalist assumption is that what we perceive of the world is a pattern that "stands for" something in the outside world. So, the problem of the skeptic is as follows: the subject knows features of the outside world only through internal mental representations, so that he may not have an *a priori* certainty that these represent something that actually exist in the outside world, for which the global error, theorized by Descartes, is always lurking. In representationalism, we can distinguish two conflicting approaches: the realism and anti-realism. On the one hand, the anti-realism claims that does not exist outside world but only representations. The anti-realism is weak because of the problem of relativism and the miracle argument (e.g. Putnam). On the other hand, realism argues ontologically that a subject-indipendent world exists, and epistemologically that some representation, in particular those of mature science, can be aligned, approximately, with the properties of the world. Current versions of realism acknowledge that there is not a neutral datum, but perception is theory-ladness, and that representations are not fully independent of the subject, but have the function to indicate external states of affairs and to prescribe certain actions, for which they are *action-oriented*. The argument proposed by new realism is separable in two ways. The first refers to the argument of miracle, or explicationist defence: some mental representations have more successful predictive than others, so they are approximately true more than others. The second is, instead, refers to a well known

evolutionary argument: natural selection acts as a training procedure that enables neural patterns to make the descent of the gradient. The argument of explicationist defence has been criticized on two fronts: historical and philosophical. On historical front, it was noted that, in the history of science, the success of a scientific theory does not mean that it is approximately truer than others (e.g. Laudan). On the philosophical side, they were proposed arguments which weaken significantly explicationist defence (e.g. Fine). The evolutionary argument is, however, been criticized because there is no a priori reasons to believe that what has been selected by evolution, as perceptual systems which generate representations about outside world, is approximately truer than what, instead, was eliminated (e.g. Kitcher, Stich). The *Embodied Realism* (ER) could be an ambitious alternative to realism and anti-realism. There are two differing approaches on what we mean for ER. We can distinguish between, in fact, a Representational Embodied Realism (RpER) and a Radical Embodied Realism (RER). The RpER argues that there is an animal-indipendent world. For this, it postulates internal representations that extract information about this world: objective features of reality are represented by internal representations. This position is not like the classical realism because internal representations are not neutral and disembodied, but embodied and embedded. Unfortunately, the RpER is still based on the explicationist defence which implies tautological and nondemonstrable assumptions. Moreover, RpER is inconsistent with the realism because the essential action-oriented representations does not represent an animal-independent world, as the disembodied representationalism does, but they guide behavior providing affordances which are dependent on animal's specific needs and sensomotory skills (i.e. Chemero). This means that there is a multiplicity of different sensomotory systems, each of which appropriate to guide the adaptive animals' behavior of which they are systems. Thus, the embodied cognition is intended to be anti-realist? We propose a **Radical Embodied Realism** (RER). The RER, proposed initially by Varela, Thompson and Rosch, does not dicotomically separate subject and object because there is no organism which can be isolated from the world nor an organismindependent world. The organism and the world are coupled through embodied interactions in which there is a reciprocal and mutual specification; therefore, there is not a pre-given world "out-there", with extrinsic and animalindependent properties, but world and organism mutally specify through reciprocal relationships. Unlike the idealism, the RER does not think that the world is dependent on the subject, and, in despite of realism, the RER does not think that the world is subject-independet. What offers the RER is, instead, a middle way in which world and subject are interdependent. This means that the ER radical must explain the adaptivity of the cognitive systems' behaviour and preserve realism i) without an organism-independent world, and i) without falling into a ruinous relativism/idealism of sensomotory systems. If perception is sensomotory-dependent, then consists in perceived affordances. The affordances depend on animal's sensomotory skills which, in turn, depend on its experience and body structure. The affordance are neither subjective or objective, however they are real and meaningful because implemented by embodied animal actions which are body-dependent and immediately perceived without the mediation of internal processes that occur between sensation and perception. Only if the agents have some battery of sensory, motor and cognitive skills and some body structure, can implement certain relations with the environment and, therefore, to access certain affordances (e.g. Noë). If we are looking for forms of realism consistent with the RER, certainly these are the Ian Hacking's *realism of the entities* and the Arthur Fine's *natural ontological attitude* (NOA). Our conclusion is that we can design a embodied realism without necessarily embracing the representationalism,

rather the properties of the world are *relational*, they are real patterns that emerge from the dynamical and embodied agent-environment interaction and that, for this reason, are manipulated by the embodied embedded agent for their own purposes.

Husserl Platonicus
Balázs Mezei

In my talk, I offer a twofold hypothesis. On the first level I identify the specific, Platonic cosmology, as is summarized especially in the post-Platonic *Epinomis,* as 'cosmo-theology'. 'Cosmo-theology' is the term I have coined to designate the philosophical cosmology of Plato which demonstrably serves as the basis of his wider and more abstract philosophical views of world, man, and gods. According to the cosmo-theological view, the world is construed along the lines of the naïve experience of the cosmos, the Earth, the Moon, the Sun, and the stars, in the framework of ancient animalism. This cosmo-theological view is the framework of Plato's philosophical problems. Whatever Plato addresses as a philosophical question, even the very notion of philosophy or dialectics, have their meaning in the cosmo-theological framework. This understanding of cosmo-theology as an interpretation of Plato is based on the work of a number of scholars, beginning with those of the Munich School, especially G. Reale and T. Schlezák, through Eva Brann of Annapolis to the recent discovery of the British scholar, Jay Kennedy.

On the second level I argue that the cosmo-theological content of philosophy was not discovered until the main representatives of the transcendental turn, especially Kant and his followers, offered their new versions of philosophy. Yet even transcendentalism, including the phenomenology of Edmund Husserl, was not able to fully overcome the Platonic heritage due to the lack of a thorough critique of Plato. Husserl's understanding of Plato is under the influence of his contemporaries, especially of Paul Natorp. Natorp, however, considered Plato as introductory to transcendentalism and ignored the need for a deeper criticism of Plato.

In Husserl's view, Plato was the first transcendentalist, and phenomenology was the ultimate formulation of this ancient tradition. Husserl offers a critique of what he calls 'Platonic realism' but did not notice the need for a genuine criticism of Plato; he did not see at all the importance of cosmo-theology in Plato's philosophy. Thus Husserl too remained Platonic in a number of ways. These include logical Platonism, phenomenological Platonism, Platonism of the *Lebenswelt*, and historical Platonism (regarding Plato's role in the history of philosophy). Husserl can indeed be called *platonicus.*

The overcoming of cosmo-theology became philosophically possible only when the Platonic foundation of our philosophical vocabularies received a sufficient criticism. While there had been sporadic attempts at a deep understanding and critique of Plato, e. g. by Nietzsche, it was only Heidegger's epochal *Plato's Doctrine of Truth* of 1934 which offered an overall grasp and criticism of Plato's notion of philosophy. The cosmo-theological foundation of Plato's philosophy, however, was not recognized by Heidegger either.

Wissenschaftliche Hermeneutik: zwischen Verstehen und Interpretieren
Alexander Nesterow

1.   Der Begriff der Hermeneutik lässt sich dreifach definieren. Gunter Scholtz hat 1992 gezeigt, es gäbe technische Hermeneutik, philosophische Hermeneutik und hermeneutische Philosophie. Die erste befasst sich mit den Regeln der praktischen Tätigkeiten des Interpretierens/Verstehens; die zweite – mit den von den angegebenen Regeln festgelegten Voraussetzungen dieser Tätigkeiten; die dritte deutet das Problem des Seins im Kontext eines hermeneutischen Jargons und ist so ein anderer Name für die Ontologie im Aristotelischen Sinn (Hegel hat so den Namen „Logik" gebraucht).

2.   Wissenschaftlich (Überprüfbar) sei Hermeneutik dort, wo sie genaue Vorschriften oder Regeln angibt, die das praktische Resultat des Verstehens gewährleisten, also wo sie als technische Hermeneutik auftritt. Geschichtlich sind es z.B. die von Fr. Meier gesammelten Regeln oder die bekannte „positive Formel der Hermeneutik" von Fr. Schreiermacher oder die Analyse von Verstehensstufen von W. Künne und O.R. Scholtz. Man vergleiche die schon von Plato in „Ion" geschilderte Hilflosigkeit (Nichtwissenschaftlichkeit) einer methodenlosen Interpretation.

3.   Das Problem ist, wie das Verstehen definiert wird und wo genau (geschichtlich und logisch) die Kontoverse zwischen den Begriffen des Verstehens und Interpretierens entsteht. Die klassische Definition, welche seit Aristoteles und Augustinus bis etwa W. Dilthey die einzig mögliche war, setzt Verstehen als Übergang vom Zeichen zu seiner Bedeutung oder als „Nachkonstruieren der uns gegebenen Rede". Wenn also bei Fr. Schleiermacher die Rede eines Anderen rekonstruiert wird, erweist sich das Verstehen bei W. Dilthey als „an sich eine dem Wirkungsverlauf selber inverse Operation".

4.   Wenn Verstehen eine Rekonstruktion ist, so was (welche Bedeutungen) wird rekonstruiert? Der Rezipient eines Textes rekonstruiert nach W. Dilthey zuerst die vom Text bezeichneten Denotate oder Sachverhalte (wenn diese Sachverhalte für diesen Rezipienten in irgendeiner (von der Wahrnehmung oder Vorstellung vorgeprägten) Form überhaupt dürfen vorhanden sein) und danach – die Realität, wie sie dem Autor des Textes in den so gefundenen Sachverhalten gegeben war. Dies bedeutet, Hermeneutik als Auslegungslehre löse neben klassisch hermeneutischen auch epistemologische Fragen, nämlich die Frage nach einer inhaltlichen Übertragung des «Knowledge by Description».

5.   Wenn sich K. Popper explizit auf Dilthey bei der Beschreibung der Wissensevolution bezieht (wo Tatsachen im Lichte einer Theorie interpretiert werden und die semantische Theorie von A. Tarski an die realen Tatsachen statt an die sprachlichen Zeichen angewandt wird), entsteht eine gute Möglichkeit, die Tätigkeit der Interpretation als Erkenntnis zu definieren und sie so von der Tätigkeit des Verstehens zu trennen. So hat A. Bühler festgestellt, Interpretation könne falsch oder wahr sein und Verstehen sei immer wahr (es sei denn, kein Verstehen sei überhaupt vorhanden).

6.   Nehmen wir eine strengere Terminologie der Semiotik von G. Frege, so erweist sich die als Erkenntnis definierte Interpretation als eine Rekonstruktion von Bedeutungen der uns gegebenen Rede; das Verstehen – als eine Rekonstruktion von Sinnen der uns gegeben Rede. Sollen als Zeichen nicht nur sprachliche Zeichen, sondern wahrzunehmende oder einzubildende Gestalten genommen werden, so wäre Interpretation stets eine Suche nach Wahrheitsbedingungen (nach

einer niedrigeren und festeren Klasse der Zeichen) und Verstehen – eine Suche nach Sinnen als Systemorten (nach den syntaktischen Regeln innerhalb einer Klasse).

7.   Soll also die von K.Popper angedeutete wissenschaftliche Verwendung «der weichen Interpretation» akzeptieret werden, so ist zu gestehen, dass die Form und Funktion des Interpretationsaktes die des Bezeichnungsaktes seien, was nur möglich ist, wenn die allgemeine logische Form der Welt die semiotische sei, wie sie im 18 Jh. von der „allgemeinen Hermeneutik" zur Schau gebracht wurde.

Literatur

Albert H. Kritik der reinen Hermeneutik. – Tübingen, 1994.

Bühler A. Die Vielfalt des Interpretierens // Bühler A. (Hrsg.) Hermeneutik. – Heidelberg, 2003.

Dilthey W. Der Aufbau der geschichtlichen Welt in den Geisteswissenschaften. – F.a.M., 1981.

Künne W. Verstehen und Sinn. Eine sprachanalytische Betrachtung // Bühler A. (Hrsg.) Hermeneutik. – Heidelberg, 2003.

Meier G. Fr. Versuch einer allgemeinen Auslegungskunst. – Hamburg, 1996.

Popper K.R. Objective Knowledge. An Evolutionary Approach. – Oxford, 1979.

Schleiermacher F.D.E. Hermeneutik und Kritik. Mit einem Anhang sprachphilosophischer Texte Schleiermachers. – F.a.M., 1977.

Scholtz G. Was ist und seit wann gibt es "hermeneutische Philosophie"? // Dilthey-Jahrbuch. Bd.8. – Göttingen, 1992-93.

Scholz O.R. Verstehen und Rationalität. – F.a.M., 2001.

Uncertainty Within History and Historiography
Friedrich von Petersdorff

Historical research is based upon meticulously developed methods and critical questioning of the relevant sources. The result of this, however, is not merely an account presenting a collection of facts to be taken as obvious for being based upon such a research. Rather, it is apparently the case that a lasting truthful account of past events is not achievable – due to the fact that history is being rewritten and viewed from new perspectives whenever historians ask new questions or gain access to new sources. Accounts of historical events are, therefore, bound to be rewritten at some time in the future. It follows that previous accounts of past events are necessarily valid for a certain time-span only, resulting in a degree of uncertainty when evaluating the truthfulness of historical narratives. The past events do, of course, not change when being reinterpreted or reviewed. But their role and significance are being put into a new perspective as certain events are viewed differently by later generations – for whatever social or political reasons (especially following events such as those having occurred during 1989). Apparently, hermeneutical approaches are required when trying to come to terms with this uncertainty regarding the truthfulness of historical accounts. However, it appears to be insufficient to simply ask for a single hermeneutical step within the process of historical research and writing. Rather, I argue that at least three hermeneutical distinct approaches seem to be necessary as not only 1) the past itself is to lose its strangeness through a process of understanding. Furthermore, in addition to this hermeneutical

operation it appears to be worthwhile to consider as well how 2) the previous questions by the historians are being replaced and finally 3) to reconsider the previous narrative which is to be replaced by the historian. In other words the hermeneutical approach required by historiography does not merely focus upon the understanding of events sometime ago but includes, as well, a continuing understanding of previous accounts and of the questions they were based upon – in order to gain a coherent perspective of the past and to somehow reduce the unavoidable element of uncertainty included in any historical narrative. In my paper I shall analyse these hermeneutical requirements of historical research, thereby to achieve a better understanding of historiography and of how to cope with the underlying uncertainty regarding historical knowledge. Furthermore, the possibility exists that an analysis of the hermeneutical necessities of historical research could result in a clarification of the hermeneutical requirements of the natural sciences – as they, too, have their own historical narratives.

Representation, Concealment, and Techne: 21st Century Reimaginings of Heidegger's Work
April Pierce

> "If you have any doubts about how technology affects our lives, you just have to go to any major city. This is not the stomping ground of our ancestors. What's happening is we're taking this technology, it's becoming more precise, more potent, and we're turning it back upon ourselves. Before it's all done, we are going to alter ourselves every bit as much as we have changed the world around us. And it's going to happen a lot sooner than people imagine."
> -Gregory Stock: To upgrade is human

Using several 21st century archetypes, this paper will struggle to reconcile modern technological realities with Heidegger s work in *The Question Concerning Technology.* Among the technologies addressed, we will discuss Avatars, bioengineering, and gene modification as archetypes that fundamentally change the worldhood of Dasein. The enframing and unconcealing work of technology is remarked upon at length in Heidegger's text. The challenge modern technologies respond to involves revealing the actual (332). But when a mode of technology represents its own world to some extent- when it does not operate as tool or object alone, but as a complete environment, how can we pose the crucial question of essence? With an eye towards world-altering technologies, we will ask three questions of each archetype: 1) How does this technology enframe or represent? 2) How does this technology alter Dasein's worldhood, by revealing or concealing "reality"? 3) Would Heidegger consider this technology a supreme danger or a saving power?

Though seemingly simplistic, these questions will show the complication and reward of applying Heideggerian thought to our modern technological advances. Far from his own favored example of the Windmill and Hydroelectric power, these examples, as alterations of Dasein itself, lead us to re-evaluate our ontological expectations, and challenge us to seek the essence of techne anew. Hardly understood and rarely questioned, Avatars, bioengeneering, and gene modification

will give us an ontological continuum to confront. When do we attend to the change of our worldhood? How do we address the change, and what dangers or saving powers are available through these systems? How might a reassessment or modification of these technologies be inspired by a richer ontological understanding of their effects?

Domestic Hybrids: 'Smart Homes' At The Juncture Of Man And Technology
Michele Rapoport

'Smart Home', 'Digital Home', 'Networked Home', 'Home of the Future' – all of these refer to the automatization of the domestic sphere that has become a staple feature in many homes in the developed world. Domestic automation devices include multimedia systems, energy devices, sensors, lighting systems, control systems, home robots with programmable machine intelligence, and more - the intention being to connect appliances, systems and networks both to one another, and to the outer world. These systems claim to provide a safer, more comfortable, and more economical dwelling experience, and cater to both upper and middle class homes, as well as to the elderly and infirm and various forms of assisted living. Smart Home devices rephrase questions pertaining to the relationship between man and machine that move beyond revealing and enframing (Heidegger), and beyond embodiment, mediation, and background (Ihde). Instead, they facilitate the formation of a hybridized domestic sphere more akin to Latour's notion of the 'collective' that embodies both the human and the non-human. They have more in common with the cyborg that marks the merging of the organic and the technologic, technicizing the human and humanizing the technological.

How is the 'human' envisioned in the eyes of these new technologies? What kind of man emerges through these technologies geared at creating a domestic environment of comfort and safety? In order to address these questions this study will focus on three submitted and accepted patent claims as they appeared in the official website of the United States Patent and Trademark Office. These claims are, in fact, texts open to hermeneutic readings, residing at the juncture of legal, technological, and economic discourses. On the cutting edge of technological innovation, patent claims recognize but also redefine the user whose needs justify their creation. Propelled by economic incentives and the promise of monetary gain, patents identify hidden lacunas and insufficiencies in earlier products, acknowledging, but also perpetuating lack and need.

The three patent claims that will be examined - a transmitting device that ascertains the identity of household members present in the home, a personal service robot that monitors its owner for symptoms of distress, and a bedside unit that monitors audible safety and security alarms and sends notification signals to a communication site accordingly – offer hybridized readings on human physicality as the site of identity on the one hand, and on notions of automated intelligence, learning and knowledge on the other. The creation of a hybridized domestic sphere will be shown as undermining binary divisions between subject and object, as well as distinctions between *being a body* and *having a body*.

Smart Home technologies offer two alternative readings on the nature of selfhood and knowledge; in both cases, however, perceptions on individual identity and the self are irrevocably altered following the union of technology and the human body. On the one hand, these technologies

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breach the boundaries of body and self once both bodies and machines can be theoretically defined or programmed as data or sequence. Yet on the other, this new technological reality can also fulfill a desire for transcendence in which disembodied subjectivity overcomes the failings of the human body, freeing itself from limitations of human physicality.

Contextualizing the hermeneutic philosophy of science
László Ropolyi

Philosophy of science can be considered as a special kind of philosophy. Its peculiarity consists in the fact that world views are built up in the process of characterization of science. In this process philosophers try to focus on the following three central questions: What is science? How does it work? How does it change?

The typical variants of philosophy of science can be basically characterized on their view on the question what science is. Answering this question three main contexts has been applied in the philosophy of science: a logical-linguistic, a social, and a life-world context. According to the logical-linguistic context the science can be considered as a specific set of sentences; in the social context the science is a kind of social prod, while in the context of life-world the science is a result of special human efforts. These contexts are dominantly applied in the so-called analytic, social constructivist and hermeneutic versions of philosophy of science. An additional possibility of classification of philosophies of science can be based on the further characterization of the contexts. According to some views the above mentioned contexts (logical, social and life-world systems) are given as stable entities, but in some other views these contexts can be changed during the scientific activity. This means that based on these meta-methodological principles we can distinguish six typical variants of philosophy of science: analytic, social constructivist and hermeneutic approaches, but each of them can use its relevant "passive" or "active" context, too. And, of course, we can reject any relevant established context for identification of the sciences – applying an anarchist epistemology and showing up a seventh tradition in philosophy of science. Decisions about the application of the above contexts can be based on accepted or rejected philosophical ideas, theories on society, views about the human nature – in general an accepted cultural position.

These seven typical versions of philosophy of science represent the mainstream styles of thinking on science. Our classification is based on general principles, so it is insensible to the individual views of philosophers, but it is a useful tool for comparative analyses. The additional two central questions – How does science work? How does it change? – have also important role in this characterization of the individual philosophers of science and contribute to the proper classification of their views.

Such a metaphilosophical analysis of the historical versions of philosophy of science can show the coexisting components within them. For example in the case of Kuhn or Lakatos it is easy to demonstrate that their views overlap in a specific way the above classes. On the other hand using these views we can contribute to the analysis of the history and philosophy of SSK, STS, cultural studies, and another similar descriptions of the scientific sphere.

Interpreting Notions of Extremism – When the Search for Certainty Leads to More Uncertainty
Shahzad Shafqat

Extremist beliefs are meaningless if taken independently, but can be life-altering if put in a particular context. These beliefs both individual and group are a consequence of many internal and external factors, and they do not exist in isolation. Certain issues sometimes get convoluted to formulate conflicting ideations, which can give rise to polarization in the global society. Whatever shape this conflict might take, the origin of most of these issues lies in the perception of others' attitudes and behaviours. Thus, if this representation is appropriately interpreted, then appropriate interventions can be planned and executed where required. Yet when we think about extremism, we are inclined to think only about the negatives which feeds into the uncertainty associated with this term. And this is one major reason why we are struggling to get to grips with extremism. The challenge in unravelling the hermeneutical domain of extremism is confounded by labelling the term – almost always – in a negative fashion. This judgemental framework is indeed counter-productive for the operational zone in which philosophy operates. Bias in tagging theoretical concepts as 'bad' or 'evil' can be counterproductive in epistemological discourse. Perhaps then, there is a need to categorically, objectively, and at times even unsympathetically, describe phenomena without being a party to its impact and consequence. Simply put, every person has a tendency to take something to an extreme. Thus, there is a case to be considered for the extremism is not 'bad'. Surely, violent extremism is counterproductive and negative in its repercussions, but not all extremism is violent. But who should have the licence to interpret any given version of extremism with certainty? This functional and conceptual disparity needs to be made clear so that this volatile mode of human behaviour can be properly understood and tackled.

Einstein's tTime in Heidegger's Context
László Székely

Summary:
The paper analyzes Einstein's concept of time in the context of Heideggerian fundamental ontology. Whereas both pre-Einsteinian and Einsteinian physics belong to the post-Cartesian history of European thought and are determined by Descartes' "de-worlded" ("entweltlichen") ontology, the contrast between Einstein's new concept of time and the temporal concepts of classical physics reveals that despite its de-worlded character pre-Einsteinian physics still preserves traces of worldhood (Weltlichkeit). The new features of time in relativity theory originate from the fact that relativistic time (due to its extreme mathematical and instrumental character as well as its spatialisation by merging it with the three spatial dimensions) has lost certain traces of worldhood still present in the pre-Einsteinian physical world view. Even the anti-commonsense feature of Einstein's physics recognized both by Einstein's followers and his critics follows from that feature of the theory. Therefore in the context of fundamental ontology Einstein's time appears to represent a new stage in the historical process of the de-worlding of the world and the oblivion of Being. As such, it also serves as a scientific instrument and justification for concealing

the limitedness of human life and for the escape from Being-toward-death, Dasein's authentic relation to death.

Extended abstract

Physicists and philosophers of science often reproach Heidegger for failing to deal, in his bulky volume on *Sein und Zeit*, with Einstein's theory of relativity, alleged to have brought about a revolution in our notion of time. However, everybody acquainted to any extent with the German philosopher's book knows that the reproach is pointless. In *Sein und Zeit* Heidegger does reflect two times on the theory of relativity, and definitely determines the relation of his work to Einstein's theory. In this regard his point of view is clear and unambiguous:

i.   Einstein's theory of relativity is not about time but only about the measurement of time.
ii.   The precondition of any physical theory of the measurement of time is the temporality of the Being of Dasein; hence a physical theory of the measurement of time, however important, cannot contribute to the philosophico-ontological elucidation of the problem of time. It is not fundamental ontology that needs relativity theory for understanding temporality and time; the understanding of the philosophical meaning and significance of the physical theory requires fundamental ontological (philosophical) analysis.

Taking into account the wider context of the relation between philosophy and science, the second claim may be characterized as an application of the thesis of the priority of philosophy over particular scientific theories. Whereas it restricts the philosophical significance of Einstein's theory regarding the question of time, it also claims that fundamental ontology will be able to elucidate the philosophical meaning of Einstein's new approach. The present paper will make an attempt to contribute to this promise by placing Einstein's time in the context of *Sein und Zeit* and outlining a fundamental ontological interpretation of the concept of time in relativity theory.

Heidegger's claim that relativity theory concerns only the measurement of time and not time itself, is in agreement with the point of view of a definite group of physicists and philosophers of science who attempt to detach the theory from its original positivist (Einsteinian) metatheoretical framework and provide it with an ontological foundation. However, in the context of *Sein und Zeit* that claim has a very special meaning. Namely, the concept of the measurement of time has no sense unless it relates to a notion of measurable time; consequently, in the context of *Sein und Zeit,* the measurement of time assumes as precondition the everyday - vulgar - notion of time. Even if relativity theory concerns only the measurement of time, it implicitly involves a notion of time whose measurement it speaks about and this notion necessarily relates to the perception of time, belonging to the „alltaegliche Seinart des Daseins". Einstein's time as a scientific concept of time appears in the history of European thought as a new – revolutionary or non-revolutionary – concept only as one in a series of the scientific and philosophical concepts of time based on the measurable character of time implied by the vulgar notion of time.

In this respect it is important to emphasise that Heidegger does not use terms such as „scientific time" or „the scientific version of the vulgar notion of time". Nevertheless, in the spirit of his analysis on the emergence of theoretico-scientific approach to the world in *Sein und Zeit* 69. (b), we can introduce the concept as one originating from the everyday, vulgar notion of time by means of a transformation, and belonging to the theoretical mode of the Being of Dasein. It is an abstract-mathematical concept which focuses on measurability. Since in Heidegger the vulgar

notion of time is not incorrect or false but grasps the phenomenon of the "concerned" ("besorgte") time Dasein necessarily encounters within its everyday existence, the fact that the scientific concepts of time derive from and are based on it does not concern their truth or falsehood in terms of scientific truth. The various versions of scientific time represent the time characterising existing entities in the Cartesian kind of interpretations of the world and their adequateness or inadequateness, truth or falsehood are a matter of physics and philosophy of science.

Einstein's theory of relativity, however, also offers a new physical world view which radically modifies the concept of space and time of earlier physical theories. And the meaning of this shift – whether the theory is correct or not – may be analysed and interpreted in the context of fundamental ontology.

In this respect the following aspects should be considered:

i. Einstein's definition of „time" in his original study with the help of measuring instruments.
ii. Spatialising time by Minkowski and the radicalisation of Minkowski's innovation by Einstein in his general theory.
iii. The extreme solution of the general theory with closed time-like curvatures making possible „time-travel".

The main focus of *Sein und Zeit* is neither Being nor time but the phenomenon of the oblivion of Being (Seinsvergessenheit). The replacement of Being with existing things (beings) characteristic of modern (post-Cartesian) European thought is both a cause and a symptom of this phenomenon. Another key term in *Sein und Zeit* is the de-worlding (Entweltlichung) of the world and Dasein which closely relates to Seinsvergessenheit. As is well known, in Heidegger's analysis de-worlding became a characteristic phenomenon due to the Cartesian turn of ontology. However, Heidegger also makes it clear that this turn had a pre-history and Descartes' philosophy only radicalised and made explicit certain tendencies present in European thought since Greek philosophy. Therefore it is not against the spirit of *Sein und Zeit* to assume that the Cartesian turn, however radical, did not accomplish Entweltlichung to its full extent, and that de-worlding as a process also has a post-Cartesian history. We will argue that the three aspects mentioned above, which characterize the notion of temporality in relativity theory, confirm this assumption, and Einstein's time represents a radicalisation of the phenomenon of de-worlding within the post-Cartesian history of the Cartesian, de-worlded ontology. Namely, classical physics and especially Newton's theory are scientific theories which emerged in the context of Cartesian ontology. As such, they represent the de-worlding of the world in the field of science. However, if we compare them to the three aspects mentioned with regard to the Einsteinian notion of time, then it will be clear that even these former theories preserve several traces or „remnants" of worldhood ("Weltlichkeit"). The three new aspects of the concept of time in relativity theory remove that traces of worldhood still present in classical physics and thus Einstein's theory of the measurement of time and the concept of time implicitly assumed by the theory amount to a radicalisation of the de-worlding of the world. In the light of this we may also discover the fundamental ontological meaning of the ontological reinterpretations of Einstein's theory (as for example the Lorentz-like ether based reinterpretations). These interpretations aim at a correction of the anti-common-sense character of Einstein's theory which they consider to be the basic deficiency of the latter. In the context of fundamental ontology this anti-common-sense character appears to be a consequence of a more extended deprivation of the world of worldhood than is the case in the original Cartesian ontology

and Newtonian physics. Hence, in the context of fundamental ontology, the anti-common-sense character of Einstein's relativity theory and the attempts to restore the correspondence between physical theories and common sense with the help of alternative interpretations of relativity theory, appear to be a struggle for a physics that still preserves certain features of the worldhood of the world.

This characterisation of Einstein's relativity theory (independent of the latter's truth or falsehood) is valid even if we consider Einstein's physics only in a restricted sense, as a purely scientific theory. However, in the context of twentieth-century culture and thought, Einstein's theory and his new scientific approach to the measurement of time tended to acquire a philosophico-ontological significance. The belief that in the light of Einstein's new concept of time philosophy and ontology should abandon their traditional concepts and theories of time, became a conspicuous ingredient of twentieth-century culture. The reproach levelled at Heidegger, and referred to at the beginning of this paper, is an expressive symptom of this tendency.

Of course the tendency to transcend its own limits and become basic ontology characterizes not only relativity theory but science in general and is closely related to the replacement of Being with existing things, a phenomenon which in Heidegger's analysis is one of the main features of European thought in the post-Cartesian era. But Einstein's new approach to the physical concept of time is especially effective in this regard, and this effectiveness has both historical and existential grounds.

In the light of the above analysis, the receptiveness regarding the new world view of relativity theory so characteristic of twentieth-century thought appears as a phenomenon determined by the historical process of Seinsvergessenheit. Twentieth-century man, characterised by the oblivion of Being and living in his de-worlded world, found scientific support and confirmation of his feelings and world perception in relativity theory which, in turn, also contributed to his de-worlded state and oblivion of Being.

As for its existential ground, the popularity and the significant influence that Einstein's spatialised time enjoys even in our days are closely related to Dasein's inauthentic relation to death tending to conceal the limitedness of human life and escape from Being-toward-death. Namely, if we detach Einstein's notion of time from its limited physical context and attribute to it an ontological significance (that is, if in the light of his theory we question the autonomy of time as a basic phenomenon radically distinguished from space), time will loose its privileged ontological place. Spatialised time creates the illusion that temporal events are similar to spatial points to which we can return and - considering the basic significance of time in Heidegger's philosophy of authenticity - this will destroy all phenomena of authenticity analysed by Heidegger. The structure of concealing death characterising the inauthentic mode of the being of Dasein receives an instrument and confirmation as if from science: a true believer of such an ontology of time will be closed in Einstein's spatialised time without any possibility of Being-toward-death. Einstein's theory will be endowed with a religious character offering an illusionary consolation for the limitedness of human life.

Thus, in the context of fundamental ontology, Einstein's new theory of the measurement of time and the notion of time assumed by this theory appear to be phenomena of the post-Cartesian history of European thought characterised by Seinsvergessenheit, Entweltlichung and escape from facing death. The theory, in turn, also contributes to the latter phenomena by removing certain traces of worldhood still present in classical (post-Cartesian) physics.

Furthermore, the readiness of twentieth-century thought to attribute a basic ontological significance to Einstein's new scientific notion of time is closely connected to the inauthentic relation to death: Einstein's spatialised time is especially appropriate to be an „instrument" for concealing the limitedness and unrepeatableness of human life. Whereas the emergence of Einstein's theory is only a shift within the post-history of the Cartesian turn, it is significant and appears to be a new stage in the historical process of de-worlding of the world and the oblivion of Being.

Culture of Embodied Skills in Human-Computer Interaction. How Embodied Users deal with Embedded Computers.
Arun Kumar Tripathi

Since the human race began, human invents technology: technology invents humans. The characteristics that make us human will continue to be manifest in our relationship with technology. Shifting boundaries between computers and everyday world; the more we depend on technologies to carry out or mediate our everyday activities, the more we will need to trust than to do so. New technologies inspire new interface paradigms, while new interfaces utilizing these emerging technologies encourage their continued refinement by revealing aspects most useful in their application. Computer technology gives a new way to understand the world by virtue of having bodies. We can think of the body as a uniquely sensitive and manifold interface. The role of computer in the world has evolved from specialised computing machines to information devices that pervade our daily lives. As research in Artificial Intelligence attempts to make computers more human, some approaches to human-computer interaction are becoming analogous to human-human interaction. By attempting to emulate human conversation, natural language technologies are poised to replace traditional graphical interfaces as a more natural means of interaction. This approach, however, overlooks the embodied nature of communication, leading to serious difficulties in usability and implementation. In the seminar, I will demonstrate how integrating the multiplicity of input channels leads benefits in interactive efficiency and robustness and will also show that in trying to understand the user, multimodal systems should take into account both the user's thoughts and emotions, the motivation of affective computing. In my seminar, I will suggest to rethink on how is the role of computer in the world to understand embodied nature of communication by dealing with embedded computers, through multimodal systems to sharing phenomenological experiences. To deal with these issues, it is argued that HCI needs to develop a philosophy of technology and embodiment, where I shall apply the philosophy of body & technology approaches of North American philosophers Don Ihde and Robert Rosenberger to develop a phenomenology of relations between human users, artefacts and the world where technologies are seen as inherently non-neutral. This account of phenomenology is useful to highlight the importance of the habitual aspects and embodied skills of our everyday experience of the technologies.

Perspectives about Hermeneutics, World and Science
Roberto Wu

The role of the scientist doing discoveries and resurveys of results leads, in Gadamer's terms, to a conversation with tradition. This tradition, however, does not offer its contribution as explicit transmission, but demands of the interpreter an appropriation of its legacy which consists, in Heideggerian language, in a destruction of the sclerotic interpretations to an unconcealment of the research subject. The *Dasein* is always being-with others, which implies that its project in the world is always a project shared in some degree with others. All the existential projects occur in this crossing, assuming that science is a way of being derived from an opening to the being. Therein, the scientific inquiry is in debt with an interpretation of the reality formed for several relations of meaning that compose the world of the researcher. The recent literature about the connections between hermeneutics and science has been polarized regarding the role that hermeneutics can play concerning the research and the scientific study: on the one hand, it is emphasized the holistic relation that scientific contents have by themselves, on the other hand, the relation of the researcher with the history of science - whichever the aspect, hermeneutics is thought in terms of applicability. At the same time that this methodology is welcome as an alternative to the traditional scientific method, some substantial aspects of the relation between hermeneutics and science seem to have been considered in a wrong way. Among several substantial aspects of this relation, it can be distinguished: I) the ambiguity between lifeworld and natural sciences; II) the misunderstanding of the role of the hermeneutics in relation to science, reducing it to an application; III) the hypothesis that Gadamer's hermeneutics isn't so universal since it resists to embrace natural sciences, as Kisiel (1997) pointed it; IV) as well as Gadamer, Heidegger would have a negative judgment of science in its relation to technics as pointed by Bevilacqua & Gianneto (1995). The present communication intends to examine these points from the following perspective: I) some authors who had worked recently with these topics have interpreted lifeworld as opposing to the scientific world, as Bevilacqua & Gianneto (1995), when actually the scientific activity is always founded in a pre-theoretical realm - Husserl's lifeworld or Heidegger's being-in-the-world; II) to consider the hermeneutic character of science is wider than verifying its methodological applicability in natural sciences, which is also possible, but doesn't embrace the critical character of conceiving science as a possibility derived from a more original disclosure of world; application is still thought in a methodical way in the sense of using hermeneutics to make more productive the scientific relations; III) Gadamer criticizes the dogmatic use of natural sciences, which doesn't imply in a refusal of the hermeneutic dimension in these sciences; there is not a shift of the question of understanding back to human sciences (*Geisteswissenschaften*) in the Dilthey's sense, but a displacement of hermeneutics to a prior realm before the division between *Natur* and *Geistes*, which doesn't include, therefore, a restriction of the hermeneutics to the realm of the *Geistes*, since the hermeneutic activity is more original than this split; IV) the assertion that Heidegger makes a negative judgment of science is inexact, since he talks about the possibility of gaining a free relationship to technology insofar science is destiny but not fate (Dreyfus, 2002); besides, Rouse (2005) has demonstrated the proximity between Heidegger's ontological conception of science and the philosophical naturalism.

Discourse and Dialogue in Seneca
Dana Zahan

My paper discusses the concepts of dialogue, discourse, text, time, distance, message, letter, meaning, transcendence.

In *Du texte a l'action. Essais d'hermeneutique,* Paul Ricouer analyses the distance between discourse and dialogue, stressing time implications. Speakers are affected, in dialogue, by a minimum of message distortion as they may recede, rephrase, they may make sure that their message is accurately understood. In discourse, the lack of a collocutor creates the premise of a text configuration that may completely evade the author's intention. The text reader, placed in near or far future has maximum liberty of interpretation.

Awareness of this hermeneutic issue, made me notice that in Seneca, *Letters from a stoic,* there is a possible solution. At least a solution, which the author reasons in the sence of ensuring optimal reception of message.

I do not agree that Seneca epistles are authentic letters (A. Deissmann). Although addressed to Lucilius, they are meant for posterity. How does Seneca approach this conformity issue with the intent as author?

Firstly, *Epistles* are presented as a dialogue *(dialogus).* Thus, the issue of meaning distortion present in any discourse is at least diminished if not even suppressed. The source of this dialogue is not the classical Platonic dialogue, but rather the Cynic-Stoic diatribe under moderate form. Seneca does not speak to a real partner, but to an imaginary one. He dissociates and attempts to anticipate through the objections of the imaginary partner, the objections of any possible reader. Seneca oscillates between particular and universal. If exposition of human conduct generally implies reference to an individual conduct, the satirical attacks against real individuals acquire generalizing value. Numerous paragraphs in Seneca may be discussed here (and are preset in *full text*) as argument of such presumption.

Secondly, Seneca finds a solution in his report to transcendence. The epistles comprise the Seneca's moral philosophy, and to Seneca, virtue may grow only by resemblance to God. Or, God (transcendent or immanent?) inter-conditions the author's intent. He would inter-condition the reader's intent as well. Thus, the moral message is ensured, according to Seneca, objectivity.

Hermeneutic Phenomenology, Physical Geography and Risks
Barbara Zahnen

The presentation tries to provide an insight in what it means for a physical geographer to be concerned with hermeneutic phenomenology. Its crucial point is that being concerned with hermeneutic phenomenology as a physical geographer calls for revising one's understanding of physical geography as a field or subject. In this sense, the presentation begins with the fact that in the last decades, physical geography seems to be nothing but a hotchpotch of approaches of different earth sciences (geology, meteorology etc.), being applied to certain regions of the earth, just as physical geography's counterpart, human geography, seems to be nothing but a hotchpotch of approaches belonging to the social, economic or cultural sciences, being applied to certain

regions of the earth. In other words, the presentation begins by facing the fact that geography seems to be split in "two cultures".

Drawing on the example of risk research, however, and posing the question how geographers can contribute to risk research in *their own* way – rather than as either "natural scientists" or "human scientists" or scientists representing both cultures in an additive way – the presentation aims at showing the possibility of a revision of such a fragmented view of geography. In fact, hermeneutic phenomenology (implicitly) comes into play in the presentation inasmuch as it reveals a level of potentiality that – although necessary and foundational for any kind of risk research concerning natural phenomena of the earth – has not only been overlooked in risk research so far, but also touches pivotal traits of geography prior to any divide between the realm of humans and the realm of nature.

Hermeneutics, Tafsīr and the Future of Theological Interpretation
Wan Fariza Alyati Wan Zakaria

Hermeneutical method has been widely accepted within Protestant circle for proclaiming the evangelical message in accordance to the demand of the twentieth-century man. Such method can be found in the works of Edward Schillebeeckx, Paul Ricoeur and H.G.Gadamer. Mainly influenced by Martin Heidegger in his *Being and Time*, hermeneutical problem raised from the existential question posed by modern and thereafter postmodern man with regard to his relationship with the scripture and hence his own existence in a changing environment – a new context that is totally alien to the context of the text when it was first revealed and communicated. This tension that had long agitated in modern and postmodern Christian theology, has, to some extent, similar to the same question and problem posed by modern and postmodern Muslim on the same problem – the continuity and relevance of a living Scripture, the Qur'an, with the modern and postmodern challenges of our time. Modernist scholars such as Tariq Ramadan, Abdulkarim Soroush and mainly Mohammad Arkoun, sought to propose a sort of new reading and engagement with the Qur'an, in fact, an assessment on how Muslims understand and interpret the Holy Scripture. The traditional method of interpreting the Qur'an - the *tafsīr* method - has been put under close scrutiny. It is the aim of this paper to evaluate both traditions – hermeneutics and *tafsīr* – through a comparative analysis so as to find the similarities and differences in both methods. It also seeks to understand both methods and find ways to benefit from each of them. It is hoped that such an analysis would help in dealing with the challenge for a religio-theological interpretation in our modern and also the future.

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