Knowledge, truth and invention

by Bart Nooteboom

23. From inside and outside   published 21-8-2012

Now I start a series of items on the big question of knowledge and truth.

What comes from inside the human being and what from outside? The question arises in relation to all three of the true, the good and the beautiful. Here I focus on knowledge. Later I will consider morality and ethics.

Does the self produce its own knowledge? Does that come from innate ideas that are aligned beforehand with reality, by some gift of God? We find this for example with Descartes. Or is the brain a clean slate on which sensory perceptions inscribe themselves and form ideas, in a process of *association*? This we find with mostly English empiricist philosophers (starting with Locke). Or do we form and understand perceptions by pre-existing forms of thought, such as space, time and causality? The philosopher Kant proposed that, and ever since we are uncertain about our knowledge. Where Kant still assumed that there remains an objective reality, outside our ideas, though we cannot know it as such, subsequent *idealists* argued that if we cannot say anything about that the only relevant reality is that which is produced by ideas.

Who is right? Do ideas come from inside or outside? Do ideas form themselves from perceptions or vice versa? Is there anything like 'sense data' that serve as elementary 'building blocks' from which ideas are 'constructed'? The difference is not so large as it may seem, if we look at how ideas and knowledge develop. Descartes already indicated that ideas are not available beforehand in developed form but in potency and arise or not depending on sensory triggers. Empiricists on their side grant that the process of association between sensory perceptions also creates ideas of a 'higher' level, in some sense, that affect our perception and interpretation.

Nowadays almost everybody thinks along the following lines. As a legacy from evolution we have the potential to produce forms of thought and ideas, but how that happens and what comes out depends on the circumstances of nature and culture in which people develop their ideas in the course of their lives. The mental forms according to which people perceive develop in interaction with reality, in the development of the human being in evolution and of the individual in its life. Ideas thus arise both from inside and outside, in interaction between what mentally we already had as potential and the realization of that dependent on the environment.

The fact that people construct their ideas implies, as Kant said, that we do not know the world as it is in itself. More precisely: we don't know that either. We don't know in how far and in what way we grasp the world correctly. We cannot descend from our minds to inspect how our knowledge is hooked on to the world. But we must take into account the

possibility that we see the world wrong. Objectivity then is not pure, cognitively immediate perception, which is impossible, but openness to views of others.

24. Body and mind   published 21-8-2012

A tenacious tradition in western thought, under the influence of Plato, religion and Descartes, is that body and soul are separate and thereby reason and passion, knowing and feeling are separate. For redemption and eternal life it is needed that the soul or mind is not inseparately tied to the perishable body. Also for true knowledge and for rationality the mind must transcend the body and matter. Only universal ideas, abstracted from chaotic, differentiated and mutable reality give certain and stable knowledge, such was the idea of Plato. Also for transparency of the self to the self the mind must stand apart from the body.

On the basis of neural science and social psychology we increasingly understand how and to what extent body and mind, and thinking and feeling are entangled. The embodiment of cognition not only robs us of the illusion of life after death, but also of a free, autonomous self that hovers, as it were, above the body and its limitations. Our self is chained to the body and that gives a feeling of being locked up, and a will to escape from the self. The self wants to escape from imprisonment in itself and for that directs itself to the other human being. That is a basic idea of Emmanuel Levinas (in his early work).

Because of embodiment of thought we should not only consider thought in the reflective, intellectual sense. We should also consider cognition in a wider sense, including perception, interpretation, sense making, feelings and emotions. We undergo, experience much without understanding. The greatest part of our mental activity is unconscious, and intuitive, unconscious 'thought' governs many of our choices, and often does it better than rational evaluation would have done. I discussed this earlier in a piece on free will.

A fundamental idea is that cognitive functions (perception, interpretation, explanation, valuation, judgment, language) build on feelings and underlying bodily functions. That idea is not new but becomes more tangible in terms of neural structures and processes. A second fundamental idea, which has by now been widely accepted, is that cognition arises from interaction with the environment, especially the social environment.

As infants develop, reaching for something develops in pointing and calling for something develops into a linguistic capability of reference. The construction of mental categories to a large extent is accompanied by proprioception (motor activities of groping and handling). Maxine Sheets-Johnstone showed the importance of movement, and the feeling and perception of movement (kinaesthetics) of the body in the development of cognition and meaning, in evolution and individual development. The grasp of intentions, goals, emotions of others are narrowly associated with the feeling of one's own body and comparison of it, and its movement and gestures, with those of others. From that congruence between movement and feeling, bodily, kinetic attunement leads on to

empathy of attuned emotions, in 'emotional resonance'. We recognize emotions because we recognize the kinetic expression of them. That is important for trust, for example.

25. Forms of truth   published 23-8-2012

Notions of truth correspond with ideas of knowledge. For the philosophical *rationalist,* such as Descartes, knowledge comes from *innate* ideas that are true because God infuses them. For the *empiricist*, such as Locke, something is true if it *corresponds* with reality, on the basis of objective *sense data.* For others such not already interpreted atoms of truth do not exist, and truth is *coherence* with a relevant body of knowledge. That can take the form of logical *deduction* from assumed premises, but also *consistency* or mutual *reinforcement* with things that are taken for true. That comes close to the notion of *plausibility.* There were ample conditions where it might have been refuted but was not. According to a related notion propagated by pragmatic philosophers, something is true if it is *fruitful*, i.e. contributes to successful practice, if it remains standing in action.

There is a well-known distinction between *analytic* truth by definition or logical deduction, and *synthetic* truths of fact. The strict distinction has been criticized because truths of fact are often dependent on definitions and hence analytic truth. They are also *theoretically laden*, i.e. are theory-based interpretations of phenomena.

An entirely different notion of truth concerns 'truth to form' as in 'that is not a true work of art'. It can also refer to lack of authenticity, with falsehood referring to insincerity, false pretense, and the like, as in 'you don't truly mean that'. One might speak of moral truth, as true to moral precepts, as in 'he is truly a good man'.

Traditionally, a clear distinction was made between the 'is', the *descriptive* and the 'ought', the *normative.* That also has become doubtful. Observations, and their theoretical interpretations, are routinely subjected to standards of methodology, which are normative. Descriptive statements are mostly intentional, i.e. are part of a project, directed towards a goal, an interest, as a result of which one looks in selected directions and ignores others. In other words, scientific theory is *value laden*, by both methodological norms and intentions. Many economists, for example, pay no attention to theories that are not mathematically formalized according to the prevailing fashion.

Much in our use of language is a form of action and a matter of effectiveness rather than a matter of truth or falsity. In his work on *Doing things with words,* Austin made a distinction between expressions that are *locutionay* statements, with *propositional content*, saying something about the world, and *illocutionary expressions* that are intended to affect someone, such as an order, request, accusation, and the like. Many statements are both at the same time. Earlier I used the example of my wife calling out 'that is not a screwdriver' as I use a knife to turn a screw. That has propositional content but the point of it is illocutionary.

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26. Pragmatism

Descartes began with radical doubt to arrive at the indubitable 'I think therefore I am'. But there are many other things we cannot doubt. Nor can we prove everything. Between doubt and proof lies *belief that we are prepared to act upon*. Beliefs are temporary and fallible, but we adapt or transform them as we gain further experience, in the practice of our doing. That is the insight from American *pragmatism*, in the work of C.S. Peirce, Dewey, William James and G.H. Mead. The idea goes back further, to David Hume and the practical wisdom of Aristotle.

Pragmatism is a theory of meaning, knowledge and truth. The meaning of a word or expression lies in its implications for phenomena or actions. A proposition is meaningful if it explains: if something could not have happened unless the proposition is true. Once, it was meaningful to claim that God must exist as designer and creator, because it was otherwise inconceivable how complex forms of life could have arisen. Now, from evolution, we have an alternative explanation.

But how about *a priori* truths of logic and mathematics, then? Do they have implications for practical conduct? As the philosopher C.I. Lewis argued: yes and no. Internally, in deduction from a set of axioms or assumptions, truth is formal, ruled by the principle of non-contradiction. Deductions are valid given the assumptions. However, different systems of logic and math are judged by their contribution in constructing theories that help in our practical conduct.

Concerning truth, somewhat misleadingly pragmatism has been attributed the view that something is true if it useful or satisfactory. That was more or less the standpoint of William James, but not of Peirce and Dewey. It is nonsense. Lies often work well but are nevertheless lies. Delusions can be satisfactory. However, truth is still meaningful as *warranted assertability*: we have good reasons for a belief, on the basis of its fruitfulness, its contribution to solving problems, and the ability to maintain it in critical debate. The warrant may be direct, in its contribution to practice, but also indirect, in its *coherence* with a system of thought that contributes to practical conduct.

In contrast with philosophical rationalism, the warrant of truth is taken from experience, but not the immediate, uninterpreted *sense data* of empiricism, but experience as mediated by cognition and sense making. Experience is not atomistic sense data but coherent, purposeful 'things going on, things being done'.

Concerning knowledge, pragmatism is oriented towards action, and opposes the 'spectator theory' of knowledge as contemplation of eternal, immutable truths. It has emphasized problems and their solution: situations where an existing idea turns out not to work or not to fit and needs to be adapted or replaced. I add, however, that another source of new ideas lies in new opportunities: the idea does fit but alternative ideas turn out to also fit while being more fruitful, providing an opportunity for novel combinations with ideas one had.

28. Realism?

The question still stands: do we know the world as it is? According to the empiricists we know it through elementary 'sense data'. According to idealists it is all in the mind. I argued that we see and conceptualise the world according to mental categories that we develop in interaction with the world. That effect of the world on our thought yields a form of realism. However, this implies the assumption that the world exists. On what is that based?

We cannot prove that reality exists but we can hardly do other than make the assumption, as a 'natural belief', as the 18th century philosopher Hume already said. The philosopher Heidegger also argued that we cannot do other than think in terms of being, of a world that exists. It would be difficult to make sense of our life and the world without it. If the world does not exist, how could we have developed ideas to survive in it? But this argument is circular, assuming a world to survive in.

To believe in evolution we need to believe in a reality that forms a selection environment. Let us assume that this reality indeed consists of objects in space and time, things, animals and people that act. Especially those are salient for functioning and survival in the world. We would not have survived if we hadn't formed a reasonably adequate mental representation and understanding of them. And that implies that we have an inclination to categorize in such terms of time and place, form, volume, matter, mass, place and movement. Those were of predominant importance to find food, hunt prey, and escape from the sabre-toothed tiger. As Gilbert Ryle indicated in 1949, 'intelligence' does not refer to some psychic object, but to a constellation of capabilities, inclinations and practices. All this does not prove that reality is indeed as postulated, but it does form a coherent argument. That view of reality, plus evolutionary theory, and an explanation of our survival and the consequences for our thought then form a coherent whole. That makes the assumption of external reality a warranted belief, even though we cannot prove it. Admittedly, it is like a house of cards: different elements supporting each other. Not strong perhaps, but still better than a single card.

29. Object bias

In their book *Metaphors we live by*, Lakoff and Johnson argued, in 1980, that apparently self-evident categories, even in what appears to be direct observation, are in fact metaphors rather than 'literal descriptions'. In fact, literal description does not exist. An apparently literal description is always already a conceptualisation. We grasp our actions in the physical world, in which we have learned to survive, to construct meanings of abstract categories. 'Up', 'upwards' and 'rising' according to Lakoff and Johnson indicate something good, and 'downwards' and 'falling' something bad because when we are alive and well we stand up while we are prostrate when ill or sick.

The basis for far-reaching metaphorization lies in 'primary metaphors' that build on proprioception (groping, grasping) and bodily survival. Think of our own movement in the world, the speed and direction of the sabre-toothed tiger, the shelter of a roof, a spear and its trajectory, the whereabouts of a lost child, the carrying of a burden. We would not have successfully evolved if we hadn't been reasonably accurate with such categories. This yields a certain basic conceptualisation in our thought and language, in terms of things, including actors, their movement in time and space, distinction between subject and object, and their action, including causal action.

This is reflected in Chomsky's *universal grammar*, where the basic elements of sentences are *noun phrases* and *verb phrases*. The basis for thought lies in things (including living things) that 'do' something. Those 'things' form the paradigmatic nouns and the 'doing something' forms the paradigmatic verb.

The object bias would suggest that we think in terms of distinct, discrete entities that appear in sequence in time, and that it does not come easily to us to see entities connected in a continuum, or in a field of force, or in an integrated process of *duration*, in which moments are not experienced as discrete but as integrated in a flow, as Henri Bergson proposed. We experience it but are unable to conceptualise it.

When we move a word from one sentence to another we are inclined to think that its meaning remains the same, as if we move a chair from one room to another, while in fact the meaning shifts. As if the legs drop off the chair or it changes colour. We think of communication as the transfer of meaning-things across a communication 'channel', while in fact in expression and interpretation meanings are transformed.

In sum, my thesis is that in our conceptualisations we have an *object bias* and an *actor bias*, a difficult to dodge inclination to see everything, including abstract, immaterial things as objects that have a location, move or do something. The grammatical notions of 'subject' and 'object' still carry intuitions of causal action while mostly there is no question of that. How does that conceptualisation do under current conditions, where abstractions, such as happiness, meaning, truth, morality, not to speak of democracy, identity, and so on, may now be crucial for human survival?

31. Invention   published 2-9-2012

How does pragmatism work? How do ideas arise and change, from action? In an earlier work *Learning and innovation in organizations and economies* (2000), I proposed a 'cycle of discovery'. The basic idea, which accords perfectly with pragmatism, is that knowledge develops by applying existing knowledge to new areas. That yields challenges and insights for change.

In a nutshell, the cycle is as follows. In *generalization* an existing mental scheme or practice is applied to novel contexts. Generalisation is needed for four reasons. First, to escape from the existing order in the present area of practice. Second, to obtain fresh

insights into the limitations of existing practice. Third, to create pressure for change for the sake of survival. Fourth, to obtain insight into alternatives. Generalisation can be real, as in a new market for an existing product, a new field of application of a technology, or virtual, as in a computer simulation, laboratory experiment, or a thought experiment.

To survive in the new conditions the scheme is *differentiated* in an attempt to deal with them. For this one taps from existing repertoires of possibilities and capabilities learned from previous experience. If that does not yield survival, one tries to adopt elements of local practices that appear to be successful where one's own practice fails, in *reciprocation.* This yields hybrids that allow experimentation with novel elements to explore their potential, while maintaining the basic logic or design principles of the old practice. One next obtains insight into the obstacles from the old architecture that prevent the full utilization of the potential that novel elements have now shown. This yields indications for more fundamental changes in the architecture, in *accommodation.* Next, the new architecture, with old and new elements, is still tentative, requiring much experimentation and subsidiary changes, and elimination of redundancies and inappropriate leftovers from old practice, in a process of *consolidation.* There is often competition between alternative designs, which mostly results in a *dominant design.* And next, to get away from that one again needs generalization, and the circle is closed.

One illustration is the following. Before in the car direction indicators with flashing lights were invented, direction was indicated by waving a hand, as on a bike. From signs at railways one learned that it could be done better with a mechanical hand, without needing an open top or window. In fact, those indicators at first did have the stylised shape of a little hand. The mechanical hand has all the disadvantages of moving parts: in getting stuck, breakage, stalling, rusting, and maintenance. But when also electrical light was inserted the leap was made to using a flashing light instead of moving parts. To distinguish it from basic lighting it had to flash.

Another illustration is that when in the construction of bridges the move was made from wood to iron, use was at first still made of 'swallow tail' connections that make sense for wood but not for iron, which can be welded.

35. The scripture of invention   published 12-9-2012

The notion of scripts can be used to elaborate on the theory of invention discussed earlier (item 31). When self-service restaurants emerged, compared to service restaurants the order of nodes, and details of their functioning, were changed into entry, selection, paying, seating, eating, and leaving. If one does not know the script, and one enters and sits one will not get food. The altered sequence of activities has implications for the nodes. Selection is no longer done from a menu but by picking up items on display.

In the item on invention I employed a cycle of *generalization, differentiation, reciprocation, accommodation* and *consolidation.* They can each be clarified in terms of scripts. In *generalization*, i.e. application in a novel environment, an existing script is fed

into a new superscript. In *differentiation*, script structure and nodes are preserved but in one or more nodes a different selection of subscripts is made from existing repertoires. In *reciprocation* one borrows subscripts or entire nodes from other, outside scripts observed in the novel environment. In *accommodation*, one tries to eliminate obstacles in existing script structure for realizing the potential or efficient use of new nodes, by changing the order of nodes or the nature of their connections. When in this way a new script emerges many secondary changes are needed, in modification of nodes and their repertoires of subscripts, in the process of *consolidation*.

The logic also indicates hat there are different levels of novelty: a new selection of subscripts from an existing repertoire, or addition to the repertoire, or a whole new node with its repertoire, or architectural change of network structure. In invention one should also look at the superscript of the user into which the invention has to fit. What changes of that script would the user have to make? The more radical that change, the more difficult it will be to have the innovation accepted.

Cognitively, scripts may be embodied in neural networks. Gerald Edelman's 'neural Darwinism' seems a viable view of how embodied cognition could work, in terms of neural networks. They arise more or less by chance, in diverse, parallel and sometimes rival networks that compete (hence 'Darwinism') for reinforcement, according to the frequency, speed and continuity with which they are triggered, yielding easier passage of the thresholds (synapses) between neurons and a greater density of connections with other neuronal groups. New groups can arise from combinations between existing ones. The simultaneous 'firing' of neurons can lead to novel connections: 'firing yields wiring'.

In sum, scripts serve to identify and make sense of perception but are also affected by it, in 'novel combinations', yielding novel concepts. I don't think this process is well characterized by the empiricist phrasing of 'elementary sense data used as building blocks in the construction of ideas'. All this is hardly described adequately by the phrase that 'sense data build ideas'. However, the process of assimilating perceptions into scripts does contribute to the change, transformation or breakdown of scripts.

57. The value of difference

Differences in knowledge, perception, emotion, feeling, views, ethics and culture, which I have called *cognitive distance* in my scientific work, are bothersome, because they are a source of misunderstanding and prejudice and make collaboration difficult. On the other hand they are also interesting as a source of learning. The challenge is to find partners with optimal difference: sufficient to be able to tell or show each other something new but not so much that one cannot understand each other or cannot deal with each other.

Empirical (econometric) research (that I did with associates) shows that such optimal difference yields economic advantage through improved performance in innovation. The ability to work together with people who think differently yields economic advantage. That

yields hope for diversity and tolerance, because if those were economically disadvantageous they would hardly be viable.

The ability to collaborate has a cognitive component in the narrow meaning of intellectual understanding (*absorptive capacity*), and a cognitive component in the wider, also affective sense of ethics and morality, of views on good and bad. One should not only understand each other but also have empathy for each other.

The complement of absorptive capacity, the other side of the coin, is the ability to help others understand one, with the use of illuminating examples or metaphors that help them to absorb one's thought into theirs. One can develop both types of ability, for absorption and for communication, by accumulating knowledge and experience in collaboration with people who think differently. This enables relationships at larger cognitive distance, offering a higher degree of learning and innovation. The positive effect of that has also been demonstrated in empirical research.

One can also make use of go-betweens that help to bridge cognitive distance, preventing or eliminating misunderstandings, clarify views and habits, and take away suspicion.

To the extent that relationships last longer and are exclusive, i.e. closed off from relationships with other, more distant parties, cognitive distance will in due course decline. One becomes so familiar with each other that one begins to see, think and act in the same way. That is convenient, in fast and easy agreement, but it can also yield intellectual incest and lack of learning and renewal. However, long lasting relationships can retain their cognitive vitality when parties also maintain relationships with different others that can feed the relationship with fresh ideas and perspectives.

In communities, the advantage of strong local connections is that they enable close cooperation, with social control, reputation effects and mutual trust, but they can also lead to rigidity and stagnation. Isolated, cohesive groups are in danger of losing the impulse of novel ideas and experience, and to prevent that from happening bridges should be built to connect with other groups. And for that one must overcome the inclination to distrust outsiders.

This analysis serves to give more substance to the claim from evolutionary theory of the economy (see item 30) that variety matters for innovation. Variety is not only needed for selection to work, but also to generate novelty and produce new variety.

104. Truth as argumentation   published 29-7-2013

The philosopher Kant made a distinction between the realm of knowledge and truth concerning the world and the realm of ethics. This corresponds with the distinction between causes, which operate in the world, and reasons, which belong to ethics. As part of the physical world, the self is constituted by causes, as part of the ethical world by reasons.

This brings Kant into great problems. One problem concerns the issue of free will, which I discussed in item 5 of this blog, and I will not repeat my position here. In viewing the self as part of the world Kant sees its actions as governed deterministically by causes (in

the brain). In the view of the self as a moral agent, however, the self (the *transcendental subject*) is free and fully responsible for its actions. This separation of realms, I think, is not very helpful, and I don't see how it can be tenable.

According to Kant, and I agree, in our knowledge of the world there can be no certainty in any *correspondence theory* of truth, according to which elements of knowledge, either rationalist Cartesian *a-priori ideas*, or empiricist *elementary sense data* correspond, somehow, with elements of reality. We cannot know the world as it is *in itself*, or rather, we cannot know whether or in what way we do. We cannot do other than apply categories that are part of language and cognition, right or wrong, to form perception and understanding.

In item 28 I adopted an evolutionary perspective. There I accept that reality exists even if we cannot objectively know it. Then there is realism in our conceptualization of objects and agents in time and space: If it were not in some sense adequate to reality we would not have survived in evolution.

According to Kant, in the ethical realm, outside the realm of causality in the world, we *can* achieve certainty, in rational ethical judgement, as in the *categorical imperative*. Earlier in this blog, in items 17 and 95, I accepted that imperative as a guideline, but subject to conditions, not as an absolute universal.

In my discussion of forms of truth (item 25) and pragmatism (item 26) I proposed to use the notion of truth as *warranted assertability*. This is wider than pragmatism in its traditional form: an assertion is adequate if it 'works' in practical application *including debate*, i.e. stands up to logic and facts.

I now propose that it applies to both knowledge of the world and ethics. We can never be sure about either. I add that while the distinction between causes and reasons makes sense, in our cognition reasons are causes that we are aware of, in contrast with drives that operate outside our consciousness.

In knowledge of the world the warrant for assertions lies in both logic (and mathematics) and empirical observations. With Kant I accept that observations are constituted cognitively, so that facts are *theory laden*. However, they still form a basis, albeit not an absolute and sometimes a somewhat shaky one, in that facts are more intersubjectively and temporally stable than the theories they are used for to test. Warranted assertability is never certain and always provisional, as pragmatism claims.

Morality is based on warranted assertability in arguments concerning the good life and ways to promote it. I can say this because I follow Aristotelian virtue ethics, not Kant's rationalistic, universalistic, *deontological* duty ethics.

106. Relativism   published 12-8-2013

The philosopher Jacques Derrida initiated the notion of *deconstruction.* Here, constructions of language, in science or narrative, are analyzed, taken apart, for their possible, possibly hidden, and possibly multiple meanings. A text has no unique, best or final interpretation. There is no single, unambiguous meaning, given in 'what the author really intended'. Authors may themselves admit that what they intended is ambiguous, multiple, paradoxical, or hidden. That arises most of all in poetry. Interpretations depend on the context and on who interprets.

Readers develop their own interpretations, though those are not unrelated to what the author may have intended. This is in line with the theory of language that I proposed in this blog (in items 32-37). There I argued that *reference*, i.e. that what a story is *about,* is identified on the basis of *sense*, the way in which one identifies things on the basis of a repertoire, formed in personal experience, of what one knows and associates with what is talked about. Identification is achieved in combination with the context, which triggers selection from the repertoire of sense. In dialogue, different ways of making sense by different people are put up for discussion. This may lead to convergence or divergence of views. And the discussion will contribute to the development of one's repertoires of sense making. Discussion alters the way one looks at the world.

Some people seem to interpret deconstruction as implying that theory of meaning should drop the notion of *reference*.

This idea has been inspired, in part, by Ferdinand de Saussure, who claimed that meaning is *structural*: derived from the position of a word or expression in a totality of language or discourse. 'A word means what other words don't mean'. Thereby language becomes *self-referential.* I think this is valid and useful, but the idea has run amok in the position, adopted by some *postmodern* philosophers, that 'therefore' language no longer has external reference. I don't see that has to follow. Meanings may shift depending on other meanings, while there remains an intention to refer to something.

I think the abolition of reference is madness because it would abolish the *aboutness* of language. Surely, a central aim of language is to talk about things, and that is what reference means. True, as I showed earlier, language is not *always* reference, or *only* reference, and often constitutes a *speech act* of *illocution*, as in making requests or giving orders, accusations, endearments, etc. But animals have that, in growling, calling, warning, posturing, luring, purring, or barking, while with them reference is in doubt. Dropping reference is to take away what people have more than animals have. It is de-humanizing.

Is all this *relativism*? Yes, in the sense that interpretations depend on the context and on the cognitive make-up of the interpreter, resulting from his/her path of life. But *not* in the sense that any interpretation is as good as any other. There is argument, a comparison or confrontation between differences in sensemaking.

This is closely related to the notion of *warranted assertability* replacing truth in any absolute and universal sense, discussed in item 104. There may be different judgements

of purported truths in the same way that there may be different interpretations. Knowledge of the world is an interpretation of it. But some truths and interpretations are more warranted, have better arguments, than others.

157. What is rational? published 4-8-2014

Is being rational using reason, calculating optimum utility, giving reasons, or being reasonable?

Using reason is associated with logic, being consistent, making valid inferences, using argument, seeking truth, and respecting facts.

However, logic does not always have a grip. It builds on assumptions that are not always clear. It takes things for granted that perhaps should not be. Some situations are undecidable. Inconsistencies may be built into options or actions.

Facts are subject to interpretation and may be in dispute. As I argued in this blog, truth cannot be much better than warranted assertibility.

Aristotle distinguished between theoretical reason, as in science, and practical reason, as in morality. However, he considered the first to be the highest of a range of virtues, and able to reconcile all virtues in one harmonious whole. I think that good things may be difficult to reconcile, may be *incommensurable*.

In utilitarian ethics, as in economics, rationality means the choice of an optimal solution, for an individual or group, given desires and limited means. The underlying assumption is that all ideas, ideals, convictions, and desires are commensurable, can be brought together in a one consistent system of preferences.

Utilitarianism does not do justice to certain convictions. To adopt an example from Bernard Williams: racial discrimination may then be allowed, if it causes only limited damage to a few victims and great satisfaction to a large number of perpetrators. One may also, for reasons of conviction, go against one's self-interest.

Also, the best choice is not always a good choice. One may have to choose between two bads. As Bernard Williams put it: '*For utilitarianism tragedy is impossible*'[1]

Alternatively, reason is taken as giving reasons, based on the idea is that every act must have a specifiable reason, standing apart from the act, outside it, hovering above it, so to speak. That is foundationalism. As Bernard Williams noted, the fundamental underlying idea is that the goings on of the world must and can be made transparent.[2]

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[1] Bernard Williams, *Morality; An introduction to ethics*, Cambridge University Press, 1993[1972], p. 86.
[2] Bernard Wiiliams, *Ethics and the limits of philosophy,* London: Routledge, 2011[198], p.112.

Foundationalism has gradually lost its credibility. The world, and certainly actions, are not always transparent. People do many things for which reasons cannot be specified. Judgements are based on assumptions that are often tacit, or taken for granted, and an outcome of one's socialization into a culture. Often, as Wittgenstein said, we cannot give better reasons that 'That is just how it is done'.

That does not mean that one cannot give reasons, but they are to be accepted as partial, tentative, and subject to revision. The crux of rationality then lies in debate, putting reasons up for discussion, not in indubitable foundations. That is reason as being reasonable.

Look around in the world. People indulge in blind ideologies and murder each other for it. This is fed by two things. First, the delusion that since values and views must be universal, only one's own are valid and the rest are to be annihilated. Second, surrender to emotion, to the neglect of argument and facts.

Philosophy had to learn that the ideal of simple, abstract, universal and fixed foundations, to regulate thought and action, is not viable and human, is even authoritarian, imperialistic. It cannot cover life, society and humanity in all its complexity, variety and variability. What remains is practical reason, being reasonable, willing to give reasons, debate, listen, be open to opposition, and be as truthful as possible. We now seem to need that more than ever.

Giving reasons when possible, putting them up for discussion, trying to be logical and consistent, respecting facts whenever available, choosing an optimal solution when it does not violate ethical principles and is not otherwise hampered by incommensurability, and empathy for the other while keeping an eye on one's self-interest.

169. Truth on the move   published 28-10-2015

The best-known notions of truth are static, concerning a state of knowledge. Here I add a dynamic notion, concerning a process of learning.

In item 25 of this blog, I discussed static notions of truth. The dominant notion was that of *correspondence* of ideas and knowledge with reality, on the basis of objective *sense data.* A second notion is the view of truth as *coherence* with a relevant body of knowledge, including accepted facts and logic, or in other words *plausibility*. A third is the *pragmatic* view, where something is true if it is *fruitful*, i.e. contributes to successful practice.

I combine the coherence and pragmatic views into the notion of *warranted assertability.* This includes both practical success in action and consistency with accepted facts, related knowledge and logic. It is a matter of debate what the relevant existing knowledge, logic, and accepted facts are.

A different notion of truth concerns *truth to form* or *fidelity* to some ideal, in ethical and aesthetic truth, as in 'he is a true friend' and 'that is a true work of art'.

I adopt a wider notion that includes both warranted assertability and fidelity to ethical and aesthetic ideals, which I call *adequacy*. This re-establishes the ancient idea of bringing together the true, the good and the beautiful.

Truth in a dynamic sense lies in a process of trying to achieve truth in a static sense.

The most notorious dynamic notion of truth lies in the philosophy of Friedrich Hegel. In his view, absolute truth, in an absolute spirit, manifests, realizes itself step by step in the course of history. This notion was adopted in the historical materialism of Marx.

An ominous result was that an appeal could be made to people to submit to suffering as a sacrifice to progress towards a horizon of truth and justice. And what is to be sacrificed is up to the ideologues, the Politbureau or the apparatchiks, to decide, as the visionaries of historical necessity.

Nietzsche's view is closer to my heart: what matters is the ongoing search for truth, not the illusory claim to have reached it.

Final truth cannot humanly be achieved. In this blog I argue that adequacy is *imperfection on the move*. Things will come to be seen as truths that now seem absurd, unthinkable.

Can the static and dynamic notions of truth be reconciled? I propose two ways for this.

The first way is this. My ideal, my view of the good life, a flourishing life, is to utilize one's talents in a creative contribution to the hereafter that one leaves behind, in a dialogic fashion, in debate and collaboration with others.

Then, truth in the form of fidelity to that ideal yields a dynamic notion of truth, in the ongoing striving for truth in the form of adequacy, defined above, combining warranted assertability with fidelity to ideals of ethics and aesthetics.

For the second way to reconcile the static and dynamic views I use the notion of the *regulative* vs. the *constitutive*. This is related to a distinction made in the philosophy of science between the *context of justification* and the *context of discovery*. The regulative, in justification, lies in criteria for good argument, such as factuality, logic, and coherence with what we know, and fidelity to ideals. The constitutive, in discovery, lies in the process of achieving such adequacy. How that may work is a different story (see item 31 in this blog).

The first and second ways of reconciling the static and dynamic views of truth amount to the same.

172. What do you have in mind?   published 17-11-2014

In thought and language, we treat abstractions as if they were objects in time and space. That is what in this blog I called the *object bias* (in item 29). One major instance is the *container metaphor*: people are 'in love', 'in the mood', 'in error', 'in panic', and so on. Also, we have things 'in mind'.

As if thoughts were entities contained in our brain, as stowed away in a drawer, which we can 'look at' from within that brain. In fact, ideas are as much outside the brain, in practices, habits and institutions, as in it. There is no private language, as argued by Wittgenstein. To make sense we need corrections from others. Making sense is playing a 'language game'. One cannot have an idea and 'look' at it from outside the idea. Some things are not selected but happen to us. There are things we do not believe but 'have'. It is odd to say 'I believe I have a pain'.

So what, if anything, do we have 'in mind'? As I discussed earlier in this blog, I propose that we do have 'representations' in the mind, of a sort, in the form of neural pathways that are constructed from our interaction with things and people in the world. But one cannot step out of a representation and 'look at it' 'from outside'. One dwells in it. One cannot have the cognitive cake and eat it too.

Also, I proposed that much of our thought is based on *scripts*, structures of connected *nodes*, which represent structures of logic, causality and action. The classic example is a restaurant script of entering, seating, food selection, eating, paying and leaving. The order and precise content of nodes was upset with the invention of the self-service restaurant. There, selection of food is not from a menu but from a display. If you do not play the game and sit to be served, you get no food.

Scripts are triggered in the mind by circumstance, and perception is unconscious assimilation into scripts, attempting to find a fit into a node of a script.

I imagine that in the brain such scripts are embodied in patterns of connection between neurons. That, I propose, is the embodiment of Wittgenstein's language games. The scripts emerge as a function of perceived success or failure, with corresponding emotions, with neural connections strengthening or weakening (in adaptation of synaptic thresholds) or arising anew. Neural networks that occur simultaneously, or under similar conditions, more or less often, are tentatively connected. This is the embodiment of *association.*

The triggering of a script by circumstance embodies what in social psychology is known as *framing.* Scripts entail prejudice, stereotyping. If observations cannot be fitted into scripts they are ignored, not even registered. If something does fit into a node or several nodes of some script, the rest of the script is attributed to it, in 'pattern recognition'. People 'see' things that are not there.

This prejudice limits substantive rationality, but in evolution it probably was adaptive, in speedy recognition and action, conducive to survival and procreation.

All this, I propose, is how the formation of ideas and meanings from practice, discussed in foregoing items in this blog, is embodied. In terms of the theory of meaning: a script represents what is identified in *reference*, or *denotation*, and the 'slots' of nodes and features fitted into them constitute the *sense* or *connotation* that produces reference.

173. Where does argumentation stop?   published 24-11-2014

Earlier in this blog I endorsed the idea (attributed to Wittgenstein and Heidegger)[3] of social action in the world, or *language games,* as the cradle of meaning, but I objected to the all too easy acceptance that judgement of adequacy or 'truth' is simply up to consensus, established practice. That would yield an unacceptable, horrendous surrender of personality, creativity and responsibility.

Personality would be sacrificed to the collective. There would be no room to deviate and create something new, a new game with new rules.

Such radical social, cultural relativism would entail surrender to prejudice and discrimination. It would entail submission to the rule of powers that be. Large-scale aberration from justice, like the recent financial crisis, would be taken for granted (as indeed it seems to be, in view of the limited rebellion against it).

Yet, argumentation does indeed have to stop somewhere, and some basic conventions, terms of discussion, have to be taken for granted, to avoid *infinite regress.*

So, how far should argumentation go, and how can it escape from prejudice? How can individuality and sociality, self and other, be combined? How can unity and variety, and stability and change be combined? Those questions constitute perhaps the biggest theme in this blog.

While I accept pragmatic, temporary stops to argument, I cannot accept permanent ones. Indeed, that would be against the spirit of pragmatism that I employ in this blog, because it would raise temporary truth to the level of an absolute. One should not too easily assume *incommensurability* between language games (or *paradigms*) and accept differences of view as irreconcilable.

Earlier in this blog (item 21) I criticized some basic elements of the Enlightenment, but here I maintain its basic value of commitment to discourse, debate and attempts at mutual understanding.

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[3] See Lee Braver, 2012, *Groundless grounds; A study of Wittgenstein and Heidegger*, MIT Press.

Earlier, I discussed *cognitive distance,* as a source of variety for creation, and the need to 'cross it' in order to realize its potential.

How does that work? One central tool to trigger understanding between views (or *paradigms,* or *language games*) is metaphor: describing one thing in terms of another. This can be elucidated in terms of the *scripts* discussed earlier in this blog. In those terms, metaphor would entail the attempt to substitute items from one script into another, or to import a node from one script to another. Or in linguistic terms, to exchange connotations.

There is an evolutionary argument, from evolutionary psychology, why gaps between rival language games or paradigms should not, in principle, be unbridgeable. The human species developed ways of cognition that contributed to survival in the world, and that, I propose, has somehow become part of our shared genetic make-up. Perhaps that will sometime show up in brain science.

As a result there is a fundamental similarity between people in how they see the world. That similarity is greatest where it concerns interaction with nature, with its stable laws, in what I would call 'first order similarity'.

In this blog I argued that this has also led to what I called the *object bias*, whereby we try to make sense of abstract notions on the basis of metaphors taken from experience with physical objects in time and space.

As a result, socially, culturally and morally cognitive distance is greater. Nevertheless some common basis remains, if only in the basic, primary, natural, physical experience that supply those metaphors used to make sense of abstract notions. I would call that 'second order similarity'.

216. Theory, concept and fact   published 14-9-2015

In debates in the philosophy of science, it has been claimed that the notion of empirical testing is problematic because observations and facts are 'theory laden'. One always looks at the world through the glasses of some prior theory, or concept, or mental category. I have gone along with that. Now I take a closer look.

If facts are theory laden, how can theory be tested empirically? Isn't there circularity involved? There is, of course, if facts are based on the same theory as the one that is tested. But one can distinguish between concepts underlying facts, and theories tested on them. This distinction between concepts and theory was made by the French philosopher Canguilhem[i].

Here, concepts are based on different, earlier theory, now taken for granted and embodied in instruments and methods of observation.

For example, a microscope embodies theory of light, and yields data on which one can test biological theory. Later atomic theory yielded the basis for electronic microscopes that can look 'deeper'.

Later in this blog I will criticize mainstream economic theory, but I will maintain useful concepts from economics, such as, for example, *economies of scale*, *substitution* between factors of production*, entry barriers* to markets, and *transaction costs*.

There are levels of factuality. Suppose one has a cloud of data, in some two-dimensional space. One theory might draw a straight line through the cloud, another a curved line, and they fit equally well. They give different interpretations of the cloud but they see their own curve as the 'fact' represented by the cloud. Then they might agree about the cloud but not on what the cloud means. One theory may forbid curvature of the line through the cloud while the other demands it.

An economist might construe the cloud as 'evidence' of individual rational choice, a sociologist as 'evidence' of imitative herd behaviour. They may accuse each other of 'not making sense'. They may also try to go back to the cloud and look behind the data to investigate them more closely, or to collect additional data aimed at settling the difference of interpretation, if they can agree on the method of observation.

'Lower level' theory underlying concepts used for observation may be more widely shared, even among people adhering to rival 'higher level' theories. But the lower level is not infallible or eternal. There regularly are discoveries that alter concepts underlying 'the facts'.

Hopefully, in a conflict between rival theories one will sooner or later find facts explained by one theory but 'forbidden' by the other. It may happen that one theory can explain a fact that the other cannot. There are two views of light: as a stream of particles and as a wave. The wave explains phenomena of interference that the particles do not, but the particles explain phenomena that indicate that light has mass, which the wave does not. So, a dual theory remains.

The problem with social sciences is that such 'crucial experiments' seldom exist. There, observation more often remains a matter of perspective, which often hardens into dogma or even ideology.

245. Forms of realism   published 7-2-2016

I discussed realism before, in item 28 in this blog, but here I want to elaborate.

According to 'metaphysical realism' ideas of the world are realistic, objective. According to Plato they exist independently from the thinking subject, but can be grasped, with difficulty. According to the 'rationalism' of Descartes, they are innate, given to us by God, in pre-established harmony with reality.

According to empiricism (think of British philosophers Locke and Hume), knowledge is realistic because based on elementary observations ('sense data'). Ideas arise by association between such elementary observations. But how objective are the elementary observations?

According to philosophical idealism, observations, even elementary ones, are formed by ideas in the form of mental categories. According to Kant, our perceptions of the world are formed by fundamental categories of time, space and causality, and we do not know the world 'as it is in itself'. This caused a revolution in the theory of knowledge that still reverberates in philosophy.

Later philosophers (e.g. Hegel) contested the notion of the unknowable 'thing in itself'. How can we even know whether or not we know, if our ideas are formed by mental categories? Classical scepticism (Phyrronism) renounced judgement on the issue (called 'epoché'): we cannot know whether or in what sense we have true knowledge of the world in itself. That is the line I take.

Some philosophers have tried to get away, more or less, from the Kantian constraint. In his 'phenomenology', Edmund Husserl claimed the possibility of 'bracketing': setting aside forms of thought about the world, the whole of 'symbolisation', to see how phenomena enter our experience. I think it is an illusion to think that we can set aside all forms of thought.

Jacques Lacan, and following him Slavoj Žižek, assumed that the 'Real', beyond the established symbolic order, shows up as a 'gap' in that order, manifests itself in contradictions. I accept that contradictions may indicate the falsehood of our conceptualisations.

I do think that our conceptualisation of the world can and does change. Einstein's theories transformed our notions of time and space.

As formulated by Žižek[ii], there has been a shift from the question 'how, if at all, can we pass from appearance to reality' to 'How can something like appearance arise in the midst of reality?'

That is the line I have taken in this blog, developing an argument from evolution. As I argued in item 28, if we assume that the world does exist in some form, whether or not we know it, and it is difficult not to make that assumption, then the basic notions or mental capabilities with which we have developed those ideas must have been realistic in the sense of being adequate for survival in evolution.

We are inclined to think of the thing in itself as a substance. The priority, in most of human evolution, lay in dealing with objects in time and space, such as food, prey, shelter, enemies, weapons, … I proposed that this has yielded the *object bias*, a tenacious grasping for substance. Perhaps reality may better be conceived as a wave phenomenon,

or a field of force, or a network of relations. But whatever new way of looking at the world we come up with, we cannot be sure that it is the final revelation. The intuition of substance is inadequate for abstractions, such as happiness, love, knowledge, meaning, justice, identity, nation, morality, etc. This is important because the proper conceptualization of such abstractions may now be crucial for survival of the human species.

To see how ideas may be constructed from action in the world, I developed a 'cycle of discovery' (see items 31 and 35). The basic logic is as follows. An established view is carried into a new area. There, it encounters misfits, things that cannot be accounted for. This exerts pressures to adapt. First, one will seek solutions from established repertoires of thought and practice. When that fails one seeks inspiration from practices in the new environment to mend the problems, experimenting with hybrids, combinations with the old. This yields insight into the potential of novel elements as well as obstacles in the old logic that prevent the realization of that potential, and insights into how one might try to alter the old logic. This yields new prototypes that need to be tested, and this will sooner or later converge on a 'dominant' design that develops into a new standard.

In this, realism enters in two ways. First by submitting what exists to the stress of novel conditions, with novel demands and opportunities. Second, in competition between old and new, and between different versions of the new.

246. Is it wrong to be right?   published 11-2-2016

Philosophers often say that it is the task of philosophy to ask questions, not to answer them. In Socratic debate, Socrates only elicits, by intellectual midwivery, the recognition by the debaters of the errors in their thought. Socrates is cagey, not giving his own view.

To me, this is a cop-out. One should be willing to commit to one's views and defend them, claiming one is 'right', and submit to the criticism of others. By not doing so, Socrates robs himself from the opportunity to learn, as if he has nothing to learn, thereby violating his own principles.

My position follows from my pragmatist stance concerning knowledge. It is by bringing one's views into practice and into debate that one discovers their limitations and opportunities for improvement. In the quest for knowledge, not answering questions and committing to the answers is self-defeating.

It has happened to me several times that people tell me I am wrong when I talk in terms of 'who is right and who is wrong', because, they claim, my stand on knowledge disallows me to do that. A decent relativist is supposed to say that there 'is no right or wrong'.

Concerning truth, I have adopted a 'relativism light'. Absolute, objective, universal truth cannot be achieved, and knowledge is socially constructed. Claims to truth depend on the

context and on the perspective taken. However, that does not mean that 'anything goes', that any opinion is as good as any other. One must be prepared to offer, defend and revise arguments. For this I adopted the term of 'warranted assertibility', and in ethics 'debatable ethics'.

What remains of older, more ambitious claims of rationality, of Enlightenment values, is this: the commitment to debate on the basis of arguments. This may resemble the position of Habermas, but counter to his view I do not think that debate can be 'herrschaftsfrei'; free of power, domination. In preceding items in this blog I followed Foucault in recognizing the role of interests, positions and power, individual and systemic, in knowledge. Also, rationality is limited in subconscious drives. There is only limited free will (see item 5). It is not always, perhaps never, possible to achieve full mutual understanding, in view of what I called 'cognitive distance'. But all that does not yield an excuse not to try to cross that distance as much as possible.

I think we should commit to arguments, as long as we believe in them, saying 'I think I am right' but being prepared to concede 'no, you are right'. If we surrender claims of right and wrong, what is the point of debate?

The commitment to debate entails that one offers arguments for one's views, in terms of purported facts, logic, coherence with accepted views. Recognizing that none of this yields 'rockbottom truth', one is still seeking the best arguments, in deciding who is 'right'. The debate may be undecidable, resulting in rival views co-existing together. But each side will pursue further arguments to boost the warrant of assertibility. And upon debate one might conclude that one is right here and the other there. While it is odd to say that something can be both true and false, in debate one can be partially right or wrong.

While I admit that in some ways the distinction between normative and descriptive, between 'is' and 'ought', is problematic, I think that in some ways it is still valid and useful. The search for warrant applies normatively and descriptively. Normatively because that is what debate should be about.

Descriptively, people want to be right as part of an inherent drive to exist, to manifest themselves, in what is called the *conatus essenti* (e.g. with Spinoza), and to win, in a Nietzschean will to power. Trying to win arguments transcends physical violence. I would add the spirit of Levinas, discussed in item 61, with the awe for the ineliminable otherness of the other, as a fount of spiritual awareness, and, I would add, a source of learning that contributes to the flourishing of life (see item 64).

It all becomes problematic when the Levinassian spirit is lacking, and one side subdues the other, imposes his/her 'truth', or when one's position in some institutional structure imposes it. This I grant to Habermas. Then, one may hope to have the courage to rebel or opt out.

260. What is an intellectual?   published 7-5-2016

In item 218 of this blog I used a definition of the intellectual from Foucault[iii]: 'The person who uses his knowledge, his competence, and his relation to truth in the field of political struggles'. Elsewhere, I found a similar definition[iv]: '… engagement in public life, in the service of a cause that divides politicians, elites and simple citizens'.

The paradigmatic case is that of Emile Zola, with his 'I accuse', in the upheaval in France with the affair Dreyfus. Another is that of Sartre. The notion of a public intellectual seems especially French.

This leaves room for a wide variety of intellectuals[v]: of the left, the right, progressive and conservative, of humanism (Thomas Mann was mentioned, but there was doubt whether he might be too a-political), and even of Nazism (Heidegger). Some defend universal values, such as freedom (Sartre), while others (Foucault) militate against universals in defence of particulars. One may even be an intellectual at arms against any hegemony of intellectuals.

While Foucault pleaded for the intellectual as an expert in some area, Sartre proposed that the intellectual begins where the 'technician of practical knowledge ends'.[vi]

An important feature is independence, if not autonomy. In item 218 I discussed how difficult it may be to maintain it.

Connected to that, and connecting with Bergson and Derrida, as in preceding items of this blog, I add what I think is a central feature: the intellectual is engaged in Bergsonian 'duration' and Derridadaist 'deconstruction'. This elaborates on the idea that the mission of the intellectual is to break dogma and shift established, taken for granted beliefs or perspectives.

Even deconstruction may be deconstructed. As I argued in item 251, the change, transformation involved in duration and deconstruction cannot be without pause. Some stability is required, and it is part of the task of intellectuals to bring it about, in diffusing, explaining and defending perspectives.

Max Weber distinguished between a 'morality of conviction' and a 'morality of responsibility'. The first may be obvious, but is the latter a requirement for an intellectual? And is the criterion for responsibility then feasibility of the views expressed? I am inclined towards responsibility, but I grant that feasibility may lock one up in the status quo.

While feasibility and stability may be virtues, it is a challenge not to be co-opted in dominant perspectives, as I argued in item 218. The intellectual must have the courage to maintain independence even at the cost of being ignored, ostracized or persecuted. That is easier said than done. Nazism denounced intellectuals as enemies of the state, forcing

them to either conform (Heidegger) or to emigrate, either in reality or virtually, in 'inner emigration'.

But often, in liberal democracies the price intellectuals pay is bearable, with a little courage. It can help to congregate in societies of their own. Yet, one may ask how many exercise such criticism, at universities, academies of science, and editorships of scholarly journals.

To use other terminology from Foucault: the intellectual engages in *parrhêsia*, or should do so, taking risks in engagement, being committed rather than maintaining the aloofness of a philosopher, teacher or scientist. The art of it then is to nevertheless maintain the telling of truth, or the search for truth, in the form of warranted assertibility, and not fall into rhetoric to mould assent.

263. Order and disorder in thought   published 28-5-2016

With babies, thought is erratic, incoherent, in what the philosopher William James called 'a blooming, buzzing confusion'. As they develop coordinated movement, in focused action, thoughts mirror this in some coherence, in neural configuration. Then comes the miracle of language to further form and order thought.

Montaigne withdrew from public life to his castle, disenchanted by the hypocrisy, cowardice, mediocrity, and inanity there. He withdrew into himself and to his dismay found his thoughts flying off in all directions. He found that he had to discipline his thought in the order of writing them down, addressing some indeterminate audience.

Wittgenstein argued against the possibility of a private language. Meanings of words need to be stabilized in the order of discourse.

In sum, one needs others to stabilize one's thoughts.

Nietzsche was insane for the last ten years of his life. One speculation about it is that his insanity was due to a syphilis that purportedly he contracted from a whore, seemingly the only time he had sex in his life. I offer an different possible speculation. Nietzsche argued for will to power, sublimated in transcending the self, overcoming resistance of the self to its transformation. Pain, suffering is an inevitable part of that, a price to be paid. Nietzsche certainly had his share of pain and suffering. Physical pain from a chronic migraine. Mental pain from loneliness and isolation. His one friend, Paul Ree, with whom he had a triangular relationship with Lou Salomé, was ultimately chosen by her over him. His earlier infatuation with Wagner's wife Cosima was dissolved in his break with Wagner. Nietzsche ostensibly believed in self-transformation, in lifting himself from the swamp by his own bootstraps. I wonder: could this have contributed to his insanity?

As I argued extensively in this blog, one needs opposition from others to correct and develop oneself. To order one's thoughts it helps to write them down, as Montaigne

discovered. It may help even more to call in the discipline of logic, or mathematics, if possible, to get a grip. But response from others, rejoinder in debate, yields a more powerful boost.

One needs that to get out of rigidities, ruts, vicious circles of thought. In this blog (item 49) I argued that it contributes to the highest level of freedom: freedom from one's prejudices.

However, perhaps discourse, harnessed in language, is still too structured, too limited in its scope of variety. Perhaps one also needs more random sources of disturbance. The role of randomness for learning is shown in so-called genetic algorithms in computer science, inspired by the evolutionary logic of random mutations of genes and cross-over of parental chromosomes to generate new forms of life. Earlier in this blog (item 35) I referred to the 'neural Darwinism' developed by Gerald Edelman, which applies such evolutionary logic to the brain.

And how about dreaming? And mind-blowing drugs like LSD? I recently read in a newspaper article that MRI scans of the brain show that patterns from LSD are similar to those of sleep and of babies.

Perhaps thought requires an alternation of order and disorder: order of language and logic, minor disorder of shifts from discourse and debate, and more radical leaps of disorder in dreaming. Perhaps this entails the same logic as the one for invention that I developed before, which also included a dialectic of order and disorder, in assimilation and accommodation, in exploitation and exploration, with convergence and divergence (see item 35).

In item 137 of this blog I suggested that this may be linked to the dialectic of Yin and Yang in Taoist philosophy.

264. Useful, warranted, or workable?   published 5-6-2016

In this blog I have adopted the notion of truth as 'warranted assertibility'. The warrant is to be based on arguments and facts. In this blog I have also adopted pragmatist philosophy, found in American philosophers Peirce, James, and Dewey, but also in Nietzsche (see item 149) and Wittgenstein. Some people[vii] claim that pragmatism demands that we no longer claim or ask whether someone or something is 'right' but only whether it is useful. That is not my view.

As I argued in item 246 of this blog, it is still useful and warranted to claim one is right, compared to some rival claim, in the sense that one has better arguments. Without any such claim, what is the point of debate? To stand behind one's arguments is to claim one is right.

Note that there is a pragmatist argument here. If usefulness is the criterion of warrant and we can argue that debate is useful and that for debate claims of being right is useful, then claims of being right are warranted.

While some (American) pragmatists indeed claim that something is true if it useful, what I make of it is the wider criterion that 'it works'. To be useful something must work, but if it works it need not be useful. What does 'it works' mean? Dutch has the expression 'het klopt'. That expresses exactly what I have in mind, but is difficult to translate. It means something like 'it fits', 'hangs together', 'stands up', 'works'.

In science, something is taken to be true if it 'works' in the sense that its implications accord with logic and experience. For warranted assertibility I propose that an assertion should work either in that sense or in the wider sense that it has implications for action that are effective, reach some goal, are indeed useful in that sense, or for which there are arguments also in a moral sense. In the latter, warranted assertibility becomes what I called 'debatable ethics'. In sum, I render 'warranted' as 'workable', which is wider than 'useful'.

I recall that the philosopher Hegel said, in German, that 'Das Vernunftige ist das Wirkliche, und das Wirkliche ist das Vernunftige'. 'Vernunftig' means rational, or reasonable. 'Wirklich' means real or actual, but literally it says 'workable'. So perhaps what I am saying in this piece is attributable to Hegel.[viii]

'Working' has several dimensions: logical, empirical, practical, moral, validity, …. Thus warrant is relative to which of these aspects one is talking about. These, in turn, depend on perspective, context, purpose.

The question then is what or who determines whether 'it works', or what criteria apply. Here I arrive again at Foucault's view that it is determined by established, institutionalized 'regimes of truth'.

In philosophy, one such regime is analytic philosophy, and another is 'continental' or 'non-analytic' philosophy (see item 158 of this blog).[ix] They have different views on what are interesting and legitimate assumptions and questions.

In economics, mainstream, neo-classical economics gives priority to formal rigour, in the use of economics. Heterodox economics attaches more importance to plausibility and realism of assumptions.

If in one such system one disagrees and does not conform, one needs to accept the price of ostracism, go in a hiding of some sort, or opt out, or switch to a different system.

Genuine novelty does not fit, offers new meaning, 'does not work', lacks recognized warrantand hence is not accepted, until it is shown to 'work' in novel ways and gathers cognitive, social and political clout the break the old frame. It is 'untimely', as Nietzsche called it.

Are there assertions, questions or expressions where it does not make sense to ask for a warrant? Consider poetry. Is it not the point of poetry to escape from warrant, to say something unwarranted? Even there one may debate, as among literary critics, whether or not, and in what way, a poem 'works', in terms of rhythm, sound, tone, rhyme or alliteration, metaphor, originality, ….

Consider *illocutionary speech acts,* such as 'go read that book'. One could ask 'why, explain'. And consider expressions of feeling, in the following exchange: 'I love you', 'that is not love', 'why not?', ….. There is a saying that there can be no dispute about taste, but why not? One can explain the liking of something by comparing it to something else that is evidently likeable. But at some point argumentation must stop, as I argued before (in item 173 of this blog). At some point the debate will end in 'that is just how I feel', or 'that is just how it is done'[x].

270 Rationality unravelling   published 5-7-2016

In this blog, I have been criticising the dreams of reason from the Enlightenment. But present culture appears to go around the bend to replace rationality with intellectual rubbish. We cannot go back to the Enlightenment, but a renaissance of reasonableness is needed. In the preceding item of this blog I argued that philosophical and scientific claims of firm, fixed, indubitable foundations are themselves unfounded. But more modest claims of knowledge as the best we can do at any moment, in 'imperfection on the move', are still warranted.

While reason was overrated, emotions and play have been neglected in traditional education. There was too little art, expression and personal development: features that were included in the ideal of 'Bildung' proposed by Wilhelm von Humboldt. But now knowledge, analytical skill and depth of understanding appear to be crowded out by feelings, emotions and a craving for excitement and hype.

Opinions are given equal standing as arguments, hunches are presented as facts, invective replaces debate. Public debate becomes uninformed, not only from a dominance of emotion and excitement, but also for lack of capacity to absorb requisite information and insight.

This was evident, in particular, in the recent upheaval of Brexit. Voters were lured by partial truths, at best, and with outright lies. They were diverted with appeals to sentiments of resentment, nostalgia, nationalism and xenophobia.

This is a political, economic, and intellectual disaster.

On Twitter, invective, unsubstantiated accusations, bogus facts, contradictions, and lies are presented on equal footing with facts and logic. Informed arguments are made

suspicious as fabulation by 'the elite' to protect their privileges. This sets the gate wide open to political opportunists and narcissists to grab power.

The tragedy is that beneath all this lie justified complaints and grudges concerning lack of democracy and lesser involvement of the lower educated, less prosperous citizens in prosperity and policy.

In a recent article in a Dutch quality newspaper (NRC Handelsblad) the question was put: how to respond to the sloshing waves of twitter garbage in the approach of the upcoming parliamentary election, in 2017. Continuation with informed and well-reasoned argument is discouraged as having an adverse effect, deepening sentiments against the elite, as it did in Brexit.

In the article, the recommendation was given to counter in the same fashion, going along with the tide, with ridicule, accusations and invective against the populists. But this will yield a vicious circle of unravelling rationality and reasonableness. Going along with the barking on twitter (see item 219) will turn politics into a dogfight.

271 Dumping the deep   published 9-7-2016

In addition to the unravelling of rationality under the terror of twitter, discussed in the preceding item in this blog, there are problems even in the effort to be rational, in knowledge becoming more shallow, with less depth, in a dumping of the deep.

There is a widening gap between an increasingly complex and fast changing world, requiring a greater depth of insight to cope with it, intellectually, psychologically, and politically, and the decreasing depth of actual knowledge and learning.

There is less time as well as capacity for depth of knowledge. One has to deal with a fast and vast surge of information. Slogans replace expositions. Slow, focused, printed knowledge is replaced by faster, wide range, pictorial, iconic digital information.

In the economy there is a prerogative of the fast and the short term in finance and investment, knowledge and learning, organization and work. This crowds out deep investments, in knowledge, products and production, and this holds back economic growth.

Politics is focused on votes in the next election. This crowds out orientation to structural change, reflection on novel ideology, changes in the undertow of politics, pressures building up, which then break out unawares, as in Brexit.

What deeper, slower knowledge there still is, is increasingly ignored by policy makers. Absorbing and implementing the deep knowledge offered by scholars and scientists requires a horizon that goes beyond that of policy as well as the horizon of the

incumbency of politicians and managers. By the time the ideas bear fruit the manager or politician has moved on.

This demotivates the providers of deep knowledge, and tempts them to throw in the towel. There is a demand for quick application of knowledge, discouraging the more fundamental, long term research. Newcomers at universities see this and are motivated to dodge the deep and go for the quick and shallow. Scientists also have to reduce their findings to catching sketches.

Or I am being too pessimistic? Is this the muttering of a grumbling old man? If what I say concerns individual deep, specialized knowledge, could this be compensated by patterns of complementary knowledge in groups? Can individual wisdom be replaced by wisdom of the crowds? Bees in a hive rather than in a single bonnet? But if individual knowledge is shallow, how can pooling provide depth? Scientists increasingly work in teams, with a whole ream of authors crowning a publication. But there, individual depth of knowledge is combined, in division of labour, to cover complex issues.

Many things are still individual. Choosing a job, an education, a profession, a home, insurance, health care, and forms of saving and investment. And take voting: one can deliberate with others, but in the booth one has to make up one's individual mind about a whole political programme. And in a drive for more democracy there is pressure for more voting, in referenda, even on complicated things like exiting from the EU or not. In the existing system of representative democracy the voter votes for a party with a programme, delegating expertise. In referenda that is bypassed, and the shallow wins.

273. Philosophy, science, and literature   published 22-7-2016

Science, or 'normal science', as Thomas Kuhn called it, takes certain primitive terms and basic premises for granted, often not even consciously, as the rock bottom to build theories on and conduct experiments. That is what makes it 'hard'.

We might see it as the playing of a Wittgensteinian language game.

In his 'theory of scientific research programmes', Imre Lakatos proposed that a scientific theory consists of a fixed 'core' of basic notions and principles, with a 'protective belt' of auxiliary assumptions that may be adapted to protect the core from falsification, accommodating misfits, thus 'saving appearances'.

When contrary evidence becomes 'excessive' (Kuhn), and repair with auxiliary assumptions becomes too forced and contrived, there arises pressure for a more fundamental change of view, called a 'paradigm switch' by Kuhn, consisting of a breakdown and replacement of the core.

Here, I want to re-connect this with the 'hermeneutic circle', discussed in several earlier items in this blog (see e.g. item 252). Along the 'paradigmatic axis' words and concepts

('paradigms') are taken for granted, are inserted in sentences/propositions, in specific contexts of action, along the 'syntagmatic axis'. Let me call that 'the way down'. There, abstractions are enriched, infused, nourished to life from practical life. And then, in application, in the practical business of life, one sooner or later encounters misfits or novel opportunities, where concepts seem forced, and this occasions tentative shifts or replacements of them, along the paradigmatic axis. Using words shifts their meaning. Let me call that 'the way up'.

That is the business, in particular, of literature, in storytelling, where life is shown to be richer than theory. Conduct that according to norms of normality are irrational or immoral are swallowed in a 'suspension of disbelief'. Literature burrows into individual experience that bursts the seams of abstraction. The most telling case of meaning shifts is that of poetry.

Then, the difference between science and literature is that between applying paradigms in application, in normal science, and using experience to shift notions and meanings, in literature. Philosophy used to be seen as belonging to the first category: using concepts to clarify experience. 20th century philosophy rejected that and made philosophy more literary, narrative, going from experience, from action in the world, to shifts of concepts. No longer only the way down but also the way up.

Science is in crisis when it also needs to take the way up, to craft a paradigm shift. Established abstractions are unhinged. Then it becomes more like literature. Fundamental discovery is the poetry of science. It remains narrative until scientists have put novel abstractions in place, and scientists can again throng along the way down.

These days I am confronted with this as follows. I am participating in a large project to transform economic theory and teaching. The financial crises have woken up some economists to the inadequacies of their science. In a recent meeting, new principles were proposed. They were discarded by other economists as 'mere story telling', in betrayal of the established rigour and clarity of their science. There, in defending and maintaining its analytical strength science becomes a force of conservatism.

Elsewhere in this blog, I proposed a 'cycle of invention', with an alternation between fitting experience into existing theory, along the 'way down', in 'assimilation'. In several stages this can lead to a break into new theory, along the 'way up', in 'accommodation', and I indicated the connection with the hermeneutic circle. The cycle of invention is one guise, or form, of the hermeneutic circle.

In earlier work I used the term 'discovery', but that literally means the removal of a cover from something that exists, lies there, 'behind experience', waiting to be dis-covered. The term 'invention' is better, with its connotation of 'creating by thought'.

274. Is pragmatism conventional? published 30-7-2016

I has been claimed (e.g by Richard Rorty) that pragmatism is conventional: 'treating conventionally accepted norms as foundations'[xi]. I am a pragmatist and yet I disagree, up to a point. If pragmatism were conventional, it would be inherently conservative, and I propose that pragmatism can support novelty.

What is conventional? I propose that it can be rendered as operating within an established language game. Certain terms, meanings and 'rules of the game' are taken for granted. In science, it could, I proposed in the preceding item in this blog, be rendered as preserving the 'core' of a ' research programme', in the terms presented by Imre Lakatos: fundamental theoretical and methodological principles that are not susceptible to falsification. Empirical anomalies are to be dealt with by means of alterations in a 'protective belt' of auxiliary assumptions.

In my view, as I argued before (in item 264 in this blog), something is to be accepted as 'warranted' when it 'works', logically, empirically and practically. I propose that this does not necessarily require fit in some existing language game, and hence can escape conventionalism in that sense. I grant that it does presuppose some agreement on criteria concerning logic, empirical testing, and practical success across language games. There is no rock bottom for truth beyond any and all perspectives, but we may not stand empty handed in trying to step out of a language game, or a research programme, into a wider, more generic one. I am not claiming that this is always possible, and that there is some ultimate, authoritative language game that can decide universal legitimacy.

There is overlap of at least some terms, principles, assumptions, perspectives, between language games, even if they are in different languages (English and French, say). If terms are shared, they are not likely to have identical meaning, since meanings depend on relations between terms in the game, but, I propose, they are likely to have some family resemblance if they are used across games.

To be specific, let me expand a bit on a project for a radical transformation of economic science, which I mentioned in the preceding item in this blog. That is based on radically different perspectives on human conduct, ethics, scientific conduct, and the notion of uncertainty. Many economists reject this out of hand. However, I do employ some established concepts from economics, (such as 'transaction costs'), though twisting and extending them a bit, and I refer to phenomena that economists might acknowledge (though they look differently on their relevance for theory). My ambition is to show that alternative theory explains certain facts better if only one accepts them as relevant. That ambition may fail, but it is not necessarily hopeless.

Can a pragmatist offer rigourous arguments? Richard Rorty said he/she cannot because rigour requires unshakeable foundations, which the pragmatist does not accept. Again I disagree. He confused rigour with certainty. One can have rigorous arguments on uncertain foundations. Take mathematics. It is rigorous on the basis of uncertain, merely assumed axioms. The grounds for rigour may shift, but they are still there for some time or in some area. Euclidean geometry was supplemented by other geometries. It applies on a plane but not on a sphere.

I agree (with Rorty) that rigorous argument requires a shared language game, terms with shared meanings, shared assumptions, shared grammar or method (rules of the game), and shared explanatory goals.

Compare this with Thomas Kuhn's notion of a ' paradigm shift' involved in breaking the rules of a game, stepping out of the game, resulting in ' incommensurablity', an impossibility of rigorous argumentation between games.

But, as I suggested, one may still have the benefit of a wider, roomier, more general game. A different ball game is still a ball game. Parts of argumentation may show a family resemblance between language games. I do think that discussion between language games involves differences of meaning and intention, and therefore is always imperfect tinkering, and often does fail. Moving between games is more like literary narrative than like rigorous scientific discourse. That may be rejected as unscientific, and then debate is indeed hopeless.

What games are there in philosophy? I take this question also from Richard Rorty. One game is to take philosophy as 'transcendental', reflecting on the conditions under which some theory or practice (concerning truth, reality, or morality) is possible. But what are the conditions for such conditions to be possible? It yields an infinite regress of conditions for conditions. The underlying intuition is that there are, must be, independent, fixed principles to build on.

Another game, going against that intuition, is that of anti-essentialism, anti-foundationalism, as in pragmatism. Think of philosophers Peirce, Dewey, Nietzsche, Wittgenstein, Quine, Derrida, and Rorty.

Are these two games incommensurable, with no recourse to sensible debate? One may think of the supposed rift between analytic and continental philosophy. However, they still have things in common, such as the themes of knowledge and morality, even if they differ fundamentally in their views on them. Disagreeing on fundamentals, they may still compare implications for science, politics, economics, literature, …. They may even agree that in some cases the other side seems to be making sense. And indeed, some bridging between analytic and continental philosophy does seem to be taking place.

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[i] Gary Gutting, 1989, *Michel Foucault's archaeology of scientific reason*, Cambridge U. Press.

[ii] In his *Less than nothing*.

[iii] In an interview on 'Truth and power' in 1976, reprinted in James D. Faubion (ed.), *Essential works of Foucault* 1954-1984, volume 3, Power, The New Press, 2000.

[iv] Michel Trebitsch & Marie-Chistine Granjon (eds.), *Pour une histoire comparée des intellectuels*, Editions Complexe, 1998.

[v] Also from Trebitsch & Granjon

[vi] Jean-Paul Sartre, *Plaidoyer pour les intellectuels*, a lecture given in Tokio in 1965.

[vii] e.g. Richard Rorty in his *Essays on Heidegger and others.*

[viii] I have not checked with the literature on Hegel whether this has perhaps already been said and is warranted.

[ix] 'Continental' is a misnomer, since American pragmatist philosophy is also non-analytic.

[x] As argued by Wittgenstein.

[xi] E.g. by Richard Rorty, in an essay on Derrida, in *Essays on Heidegger and others*, Cambridge U. Press, 1991, p. 119