Meaning – Thinking – AI

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Abstract: This paper investigates on the relation between consciousness and meaning. Questioning AI's ability to produce both, it first makes the case for a sharper terminology regarding AI's 'cognitive' abilities. In arguing that meaning requires more than content production, it offers a definition of meaning that offers a clear distinction between human and non-human intelligences.

Keywords: Artificial Intelligence, consciousness, cognition, meaning

1. INTRODUCTION

The discussion about AI for quite a long time evolved around the question of whether machines could think. The term 'thinking' complicated the matter immensely, for what is thinking after all? We all do it - but the presumed selfawareness implied in it nonetheless does not lead to a clear definition of what is taking place when we think. Where does it take place? In the head, in the body or in the world (cf. e.g. Noë: 2009)? Does it involve a reflexive closure upon itself, or is it about bringing our whole bodily and worldly existence to conscious appearance (cf. Straus: 1935)? Does thinking take place as an inner monologue? Does it necessarily involve images, sounds, emotions and bodily enaction - or can it be completely abstract from all of these? Is it necessarily representational, a mere fact of imagination, or is, perhaps, a flow-like existential experience be a necessary part of it as well? What part play emotions, moods or what Matthew Ratcliffe (2008) calls "feelings of being" to our thoughts; and how do bodily sensations and activities orient our thinking? Can we not-think, as some Buddhist meditation practices promise, or is thinking inevitable and inescapable? Once we start thinking about thinking, the only thing that seems clear is that thinking is somehow conscious. And this single point of clarity is exactly what - at least so far - artificial intelligence is unable to do.

Thus, it seems wrong to state that Artificial Intelligence can think, recognize, decide, learn and so on – as long as all of this is taking place without consciousness. Without consciousness, even the term Artificial *Intelligence* itself is questionable. On the other hand, it would be equally mistaken to say that data processing devices do *not* think, know, recognize and so on – and that they are *not* intelligent, if they outmatch humans in nearly every discipline, and if they no longer need human programming but thought re-enforcement learning can evolve and develop a kind of intelligence that humans cannot understand, and it is also able to expand the reach of AI towards the realm of the Polanyi Paradox (see: Polanyi: 1966), i.e. getting a grip onto tacit knowledge, and even start to approach enactive forms of cognition (cf. Flint & Turner: 2016). So, to begin to describe what is going on,

we need a whole new set of words, describing processes that are neither thinking, nor *not* thinking. These words are not at hand yet; so, for today, I will address this limbo between thinking and not thinking through double negations, talking about not *not* understanding (which is not understanding either), not *not* knowing (which nevertheless is not knowing either), and, most importantly, not *not* thinking.

What I find even more interesting than these terminological troubles, is a related, but by far more controversial point. Within the last 50 years, what could be called "human" in cognitive processes has shifted with every large advance in the field of AI – and the residual humanity was getting smaller and smaller: Nearly every intellectual faculty that had been claimed to be human and human only, has indeed been replicated and then exceeded by computers. Moreover, consciousness evidently is a phenomenon emerging from all kinds of neuronal activities; as such, why shouldn't it emerge from technically induced activities too? This is all the more worthy of consideration, since brains, like computers, use electrical signals and connections.

However it can also be argued along with the philosophical and physiological tradition of the Platonic and Aristotelian traditions who understood the mind or spirit or sentience as that, what gives life to the dead matter of the body that consciousness requires life. Thomas Aquinas (1225 –1274) prominently argued for a view that (the divine) life is not only the highest form of consciousness, but also its very foundation. Thomas' theological thinking, however, wasn't able to say why and in what exact manner life was needed for consciousness in terms that would be convincing still today (cf. Velpula & Nath: 2019). Indeed, the essence of 'life' is even more elusive to definitions than that of 'consciousness. Even if this argument cannot be proven wrong, it still isn't very satisfying either.

Behind this question three more questions are looming:

First, what would happen if a machine developed consciousness? Might this immediately lead to the Singularity – that is, the moment when machines will be not only smarter than humans, but advanced enough to build their own, even more powerful machines? According to theorists of the Singularity such as Vernor Vinge (1993), David Chalmers

(2010) or Ray Kurzweil (2005), those newly constructed second generation of machines will in turn build even more efficient machines, and in an even shorter time. The following generation of machines will do the same, and so on and so forth, so that in a very short span of time the intelligence accumulated on earth will grow exponentially. Once a machine is conscious, would its own decisions automatically lead to this very scenario?

- 2) Second, what if the singularity happened without the prerequisite of consciousness? This anxiety comes from our knowledge that intelligence is a profoundly powerful tool – and from our fear of this tool failing in the hands of the stupid: mindless engineers, or even worse, unconscious machines, therefore prone to errors (cf. e.g. Gill: 2018)
- Third, what does the existence of such an idea as the singularity – be it realizable or not – say about the current state of humanism? More concretely: What is humanity if a) there are more intelligent, more rational beings around, and b) life is no longer a precondition for this rationality? What value will thinking, and most of all: what value will humanity then have? Will humans be deskilled (cf. Cooley: 1980)? The anxiety behind this third question also has a lot to do with the implicit insult AI constitutes to us; it challenges our pride in being the sole rational beings in the universe, or at least on this earth. It is also about power, because if the tool of superior intelligence finishes in the hands of the machines, then, most probably, they will soon be in charge and we will be in their custody.

This is where the question about whether machines can think, ends up: In even more difficult, yet urgent questions. The discussion leads to questioning life, the present historical moment and humanism (cf. Gill: 2016).

This set of questions gave the terminological discussion a new twist, because all of these questions arise from that of what machines would need to *think* in the full meaning of the word – and not just not *not* think. Unfortunately, this is a question about which philosophy and psychology have pondered for millennia without any clear outcome. The good news, however, is that the existence of current AI makes it much easier to ask this question – precisely because AI is able to replicate so many of tasks suggested as possible definitions of thinking. Thus, now we know that everything that is realized by AI does not suffice for thinking, since evidently all these tasks can be executed *without consciousness*; and, as a consequence, in order to understand thinking better, we have the easy starting point of setting it apart from not *not* thinking.

2. Consciousness and meaning

Again, there is some bad news for a similar approach – because the easy answer is that what is missing is consciousness, and consciousness is nearly impossible to define. But again there is some good news too, because if everything that AI can do thus far does not suffice for

producing a consciousness, then we can look at what else is missing in all the given artificially intelligent procedures. And indeed, there appears to be a common denominator for what is lacking. It is all about meaning.

The first takeaway of this observation is that meaning is not an effect of symbol manipulation and neither the combination of signifiers according to a syntax – because this is precisely what Computers do. If this symbol manipulation can produce semantically correct content, but does not lead the machines into experiencing anything as meaningful; if, for any meaning production, humans are needed; and if even in Cyborgs or other Post-Human couplings between human substance and technological substance, all the meaning issues are left to the human parts - then it becomes a probable conclusion that meaning is not an effect of signification. Meaning needs more than symbols and syntax. What symbols and syntax do for humans is not a production of meaning, but a sophisticated articulation, shaping, reformation of and elaboration of it. Meaning is shaped, formed and articulated – but it is not *produced* or constructed by these very processes. It is only transformed - its already existing form is restructured (cf. e.g., Di Paolo, Cuffari, De Jaegher, 2018).

But if meaning is not the mere effect of signification, what else is it then? Again, a look at what computers cannot (so far) do helps to clarify the matter. Computers start off with symbol manipulation and content production, which are the so-called higher faculties of the human mind. And they do an amazing job in this – even the enigma machine used by Alan Turing in World War II outsmarted humans using pen and paper. But the so-called higher faculties of humans are, indeed, the youngest in evolutionary terms – they are difficult for us, because evolution had no time to prepare us for them. Small wonder that machines that are built only for the latest acquisition of the human brain have a much easier task in outsmarting us there, even if they cannot do so with the older and thus much elaborate stuff humans can do.

And meaning is part of the older stuff. To argue for what meaning is, I can easily refer to an example Martin Heidegger (a philosopher whose importance for AI has – despite some of his highly problematic political dispositions - been stressed by Hubert L. Dreyfus: 1992) used in his Being and Time (1927): The example of a slamming door. If a computer has to recognize a door slamming by its sound, it has to execute a not not comparison of all kinds of similar sounds, and then infer the probability of it being a door slamming which is quite a task, since sounds are very complex phenomena and often diverge in only very few traits. Such a comparison is not part of the human experience – and if our brain pursues it, it does so in a non-algorithmic way: That is, like a computer, it might use not not thinking – but if so, this not not thinking is structured differently and also produces a different outcome. Humans immediately hear a door slamming. More than this, by dint of being primed to understanding things emotionally as an interaction, rather than hearing the door itself as a door, they hear the door as part of an interaction; they hear the anger of somebody slamming the door; and more than this: they hear their own being part of an anger-filled situation and in the very same perception, they emotionally are prepare their body to act in it. All of this takes place before any ascription of significance

(only later one might come up with a thought like "ah, it was only the wind"). The sound, however, was experienced as meaningful all the time and long before this act of interpretation and ascription.

Why am I so sure about this? Well, because evolutionary psychology and neuro-psychology have come up with all sorts of proofs for similar facts. For example, if we see a snake, we first jump away, then get scared, and then, finally recognize the animal (cf. Gallagher: 2009, p. 61-2). Both inborn and learned action-directed evaluation of the situation comes first and it comes with the action itself. Emotive meaning comes second. And only then you experience something as something, or better: only then you give in to the assumption of an ascribed signification. This, too, is the exact opposite way round like a Computer would have to do it – it would have to first cognize the snake, than evaluate it and then deduce an action from this process.

So, according to both Heidegger and evolutionary psychology, meaning does not require signs and syntax in order to occur, it does not have to be ascribed to the world and things in the world – the world is rather always already meaningful. It is even impossible to avoid its meaning. Meaning is an unavoidable part of our Being-in-the-World, as Heidegger would call it, or better we might say, our acting-in-the-world (since I rather believe the Darwinians and Enactivists who argue that the term *Being* would be all-too philosophical: evolution has not primarily taught us the essence of Being-in-the-world, but rather to *socially act* in it – just like it did not teach our predecessors the essence of their Being-in-the-World, but rather to climb trees).

From these observations I draw the hypothetical conclusion that human thinking is a *meaning* phenomenon. Even consciousness itself can be called an epiphenomenon or better an articulation of meaning. And this, again, can be shown by the impasses of current-day AI in its attempt to create conscious experience. The fact that meaning is always already there, indeed, makes me pretty sure that the attempt of most coders and computer developers to start with cognition and then ascribe value and emotional meaning, is most probably doomed to fail. If meaning is to be understood as meaning rather than not not meaning, it is not due to signification and ascription.

There are, indeed, many ways in which meaning escapes AI; and I wish to pin them down more precisely. Fortunately for a German speaker, all of them are amazingly well assembled in the etymology and the use of one German term - namely *Sinn*. (To avoid a misunderstanding: The following definition of this term has everything to do with good German dictionaries and with Erwin Straus [1970] – but has nothing, I repeat, nothing at all to do with Frege [1884], whose usage of the term is completely off the normal usage.) So, what is called "Sinn" in German?

- First like the English word sense, the word Sinn engulfs a unity between meaning and sentience, between making sense and sensing. Sinn is meaning but the five senses, and the sixth sense go under the name of Sinn too.
- Second, also like the English term sense, the term *Sinn* extends towards skills or attitudes and the feel for these skills. "Einen Sinn für Humor haben"

- means: to have a sense of humor. But there is more to the German term.
- *Sinn*, in German is, thirdly, the mind i.e. the place, where consciousness and desire takes place. "Im Sinn haben" means having in mind. "Etwas kommt mir in den Sinn", can be translated as "something occurs to me" or "comes to my mind." The unity of meaning and sensing, as it is condensed in the word *Sinn* is also used for the notion of mind itself it is even safe to say, that the word *Sinn* in German could be used for everything conscious before Philosophers came up with the rather Cartesian notion of Bewusstsein (consciousness), and that, different from the notion of consciousness Sinn is conceived of as a non-cartesian alternative: as the unity of sensing existence and mind.
- Sinn is therefore, fourthly, the place of desire as well

 "Mir steht der Sinn nach einem Kaffee" (literally:
 The Sinn desires me a coffee) means: "My mind desires a coffee" or better simply: "I want a coffee."
- Fifthly, *Sinn* also expresses directedness or direction. The Old High German sinnan meant travelling or wandering, and still today "sinnen" signifies a kind of mind-wandering. And thus *Sinn* can also mean direction: Der Uhrzeigersinn is the clockwise direction.
- And finally, *Sinn* is a kind of intention, it is about purposes or rather purposefulness: "Das zu tun hat keinen Sinn" can be translated into "there is no purpose in doing this."

So the meaning, or better the "Sinn" I wish to talk about unifies the concepts of:

- sentience and emotionality instead of mere signification
- the feeling for a skill and attitude instead of content production (what is the content of riding a bike?)
- orientation, directedness, intentionality and desire
- participation in and attunement with the world instead of reference
- acting-in-the-world instead of drawing information about it
- and consciousness or rather the sense of a self as well. *Sinn* is the place for all questions about "what is it like to be something" (as Thomas Nagel (2012) would argue).

These aspects are united under the umbrella of meaning, which *Sinn*, of course, primarily denominates. "Sinn ergeben" is to be translated as "making sense." And this means that *Sinn* also denominates the appearance or disclosure of a felt order. *Sinn* may not be logical – but it is not a Dionysian tumbling either. *Sinn* requires a structured feeling or the feeling of structured directedness – it denominates a Gestalt-experience, one might say. Moreover, since *Sinn* is also intentionality, directedness and embedded in the situation, it is all about taking part in bodily situatedness rather than contemplating about the world. The difference can, again, be shown by a simple comparison with AI: A self-driving car won't change its style of driving

according to the music that is played. It is closed upon itself and not not understands the situation by input and output of discrete signals, not by being part of it. In short, the notion of *Sinn* avoids the Cartesian misunderstanding that a cogito in its self-presence were a pre-condition for meaning; the term rather primes us to understand that meaning is a precondition of consciousness, or better that consciousness is an aggregate state or articulation of meaning.

Taking Sinn as a starting point means to state that consciousness is much more than can be pinned down to the notion of mental representations, and it is not even enough to say that it can be described by recurring to the "what it is like to"-question, i.e. the qualia of experiencing. It is rather what Edmund Husserl would have called "the things themselves" ("die Sachen selbst", Husserl: 1901, p. 7) of what his deciple Martin Heidegger (1919/1999, p. 75) has described as the primordial precondition for every experiencing of anything. Explained this way, the notion of Sinn might appear to be overly romantic or New Age-y, somewhat all too harmonious, but this is not the case. Sinn can also be very ugly. To understand this, once more, Heidegger and Darwin help out. For Heidegger the basic mood of Humans is Angst (anxiety), because humans have the knowledge of their limitations, most acutely that of their mortality. This Angst is Sinn too. Darwin's theory of the emotions as action preparation or rudimentary action is very telling, too; emotions like anger or fear serve the evolutionarily acquired ability of getting people into the right position to act and orienting your action by the perfect feel for it – especially in moments of conflict or even threat.

So, *Sinn* is all but simple or beautiful. The feeling of distress has its *Sinn*, pain has its *Sinn*, and even the melancholy of meaninglessness paradoxically has its *Sinn* in so far as it has its own felt order and in so far as it feels like something. Moreover, this possible awkwardness of *Sinn* is also part of its dimension of directedness and desire to leave the unpleasant *Sinn* behind – and that means *Sinn* is always a value phenomenon as well. As such the phenomenon *Sinn* as value is not only positive and negative but has a qualitative dimension to it too.

In order to understand that, let us just have a look at language acquisition. While we can upload a complete grammar and dictionary in a couple of seconds, and a program that is processing language in only insignificantly longer time, humans need years and years to learn a language. In the earliest stages, language comes as babbling. Here it is already sensual and emotional in its prosody, even before it takes up content. Then comes an endless form of repeating words and testing them in given contexts. These contexts are already emotionally and sensually meaningful - what has to be learned, though, is the fact that words have content too. The outcome of this process is an aggregate state of meaning that William James pointed out as a "feeling", not a content going as far as to claim that there is not just a "feeling of blue" or a "feeling of cold", but also a "feeling of if" and a "feeling of but", i.e. that the logical and syntactical combinations present in language rely on bodily felt dynamics (James: 1890/1950, p. 246). So, while computers only learn signification, humans most of all have to learn to press Sinn into signification - and while computers, so far,

have not found a way to make signification meaningful, humans *have* found a way to make *Sinn* follow the laws of signification and thus to evoke things not present or talk about mere fictions.

This means on the other hand that even fictions do not create their own words, but draw meaning from their being lived through: In order to become meaningful they have to be mentally enacted by embodied minds situated in the world – even if, on the other hand, it allows these embodied beings to live through new and unseen kinds of *Sinn*, exceeding the worldly necessities of the human condition. They allow for what Robert Musil called "Möglichkeitssinn", i.e. the sense of the possible and even impossible – rather than only a *Sinn* for what is given.

3. Humanism and AI

Understood this way, our pondering on *Sinn* makes it easy to see what computers still lack. Their attempt to produce a cogito goes along with the division of that mind from the objects present to this cogito. When trying to produce meaning, computers are limited to signification and to input and output – information drawn from an outer world to be processed by software. So, it is not by chance that the measurement according to which computers leave behind the human mind in a seemingly exponential way, is still the Turing Test, i.e. a test that only measures according to input and output and which blackboxes the mind.

This way computers can come through to the not not cognition of Sinn, but they do not get through to Sinn itself. They can analyze and reproduce the effects of Sinn, but they cannot experience it, simply because the (not not) recognition of a sentience is not a sentience itself – just like you cannot eat the recognition of an apple or ride in the recognition of a car. So it is small wonder that while computers outsmart us is in the domain of not not pattern recognition, not not decision making or even the not not cognitive and the not not intuitive outcomes of re-inforcement learning – they still lack conscious experiences.

What is so unsettling about all this *not not thinking* is that it shares its limitations with nearly every method of the sciences. One could even say that most of the scientific methods explicitly aim at the elimination of *Sinn* and attempt to replace Sinn by content. This aim, as far as humans are concerned, requires a difficult act of thinking oneself out of the world, usually known as "critical distance" or "objectivity" - as well as the avoidance of so-called subjectivity (which often is not as subjective as it might seem, but rather shared, interactive or existential as is Sinn itself). Having a look at these procedures makes us understand the turn humanity had to take in order to organize knowledge in an objective way such that it was no longer obfuscated by Sinn. Martin Heidegger, however, for the very same reason (which he formulated in different terms), concluded from this very fact a very anti-enlightenment statement: "the sciences don't think." According to him, the sciences do not think because they replace the self-disclosure of human existence with information, the world with its representation, and thinking with logical methods.

Computers do not need these procedures of replacement – they are already there, because they never have been part of the world. Nonetheless, their *not not thinking* is quite a striking argument in favor of Heidegger's observation that the sciences do not think (cf. 1951/1968, p. 16). The condition of their not not thinking displays quite a lot of similarities with the not not thinking of the sciences – and they therefore aim at leaving the sciences behind, just as pocket calculators have left behind human calculating capacities.

This leads us back to the questions about humanity – and it is easy to understand why: Sinn, as defined in this paper, is closely tied to human existence - more precisely to the human condition of having to cope with potentially unlimited and unconditioned knowledge while being a limited and conditioned animal. Sinn is limited by evolutionary prerequisites that are then encultured in skills; by a world shaped by culture, in which we grow up; by the limitations of one's life-span; and by the limitations of the cultures we incorporate as skills, habits and attitudes. But on the other hand, Sinn is always in contact with the lack of limitations, as it is paramount to fiction and invention and knowledge. As seen, both the sciences and computers challenge the limitations of Sinn by replacing it with knowledge. And however rudimentary this attempt might be in the case of human scientists, who still experience this knowledge as full of Sinn: today's computers, by leaving behind the limitations of Sinn, promise to soon do a much better job, perhaps even reaching the Singularity - which then in turn would be void of Sinn. In a way they thereby fulfill and disclose the intrinsic telos of the sciences, namely to replace the world and thereby replace the human animal too.

But what kind of thinking would be an alternative to this exponentially increasing knowledge without Sinn? We can go back to different linguistic forms of organizing knowledge, which the Humanities and the Liberal Arts have studied for quite a long time, and whose very special kind of thinking includes Sinn. Sinn can be organized, for example, along a musical paradigm – i.e. the subliminal or manifest dancing that we execute while making Sinn out of music: Going along with a melody, sensing tensions, embodying rhythms and so on. One of the major tasks of connecting these kinds of meaning with knowledge is songs and poetry. We can also go along an enactive paradigm: The unity of Sinn and knowledge can be acted out and played through, e.g. in child's play or drama, and can then be observed as such. And, last but not least, we can link Sinn to knowledge according to a narrative paradigm, which shows that logical problems can take on the form of manifest conflicts, that thinking is also a play of attitudes, inclinations, desires, skills, habits and so on - rather than the insights of a cartesian cogito.

On these grounds we can now come back to the looming questions from above. I repeat them:

- 1) What would happen if a machine developed consciousness?
- 2) What if the singularity happened without the prerequisite of consciousness? And:

3) What does the existence of an idea such as the singularity – be it realizable or not – say about the current state of humanism?

We can now reformulate these questions. They would become:

- 1) What would happen if a machine could experience Sinn?
- What if machines took power without having such an experience? And:
- 3) What can we learn from these questions about the current state of humanism?

I think, instead of giving an answer, I can point to a narration. It may be the most humanist narration I would know of, since it is about the hero who answered the most humanist question ancient Greek culture had thought about: The riddle of the Sphinx about what is walking on four legs in the morning, on two legs at noon, and on three legs in the evening. The hero was Oedipus, and the answer was: anthropos, the human being, crawling in youth, walking freely in adulthood and needing a walking stick in the state of senescence. Well, actually, the answer was Oedipus himself as a person, too. As a child, he had to crawl for a longer period than usual, his feet being mutilated when his parents, Laius and Jocasta, nailed them to the ground in an effort to escape their foretold fate, in which Laius would be killed by that son and Jocasta, Oedipus' mother, would be wed to him. In the beginning of the play he still stands proudly on his feet – but in the end, he will blind himself and he will need a blind-man's stick after finding out that he had realized exactly this destiny.

Now how does this story speak to the three questions about humanism?

Firstly, Oedipus uses the science of logic in order to answer the riddle of the Sphinx, and also to meet the pestilence that befalls Thebes because of the corruption that will turn out to be his own one. This allows him to understand things objectively, but he cannot understand the *Sinn* of it, since this *Sinn* takes place: not in his ponderings but in his existential condition, which is bound in the *storyline* instead of his inquiries, in the *myth* instead of the logos.

Secondly, this narrative *Sinn* is tied to his limitations – first of being an *anthropos*, a human being inheriting his destiny from his parents who tried to avoid their own destiny (and, as the myth has it, destiny always takes on the form in which you try to avoid it). Second, at the same time this *Sinn* – and thereby this understanding – is lacking to any non-interested observer such as this logical observer Oedipus thinks to be: floating above his own limitations and answering the Sphinx by talking about humanity, while not taking into consideration himself being human as well. This means that, while thinking to meet his destiny, he rather avoids it too. The critical and objectifying scientific stance is the very form that destiny takes on to meet him.

So, to answer the third question first: What can we learn from the challenges of AI in order to understand the current state of humanism? We appear to have created machines that, in their knowledge production, take on the same stance as Oedipus takes on, too. But they do so without having to face his destiny, since they have none. They are no longer tied to the limitations of human existence; and thus, if they were

able to produce *Sinn*, it would be a very different and non-human kind of *Sinn*: an unlimited one. This might lead to very different answers to our limitations too – maybe their enhanced power in solving logical problems will solve the problem which Oedipus symbolizes. Perhaps technology will no longer be a way of trying to avoid *Sinn*, but rather replace it: Laius and Jocasta might have better avoided their destiny by looking at a good computer-based scenario; the pestilence Oedipus faces would be healed by new medicine; his destroyed eyes could be replaced by prostheses; maybe even death can be defeated; and thus, *anthropos* will walk forever on two legs. Yet: What would this new condition mean in terms of *Sinn*? I'm not sure whether this question could be answered as easily. But for sure, the answer to it would no longer be: *anthropos*.

So let's turn to the second question: What if machines took over without having such an experience? The moment this would happen is exactly the moment when the problem of *Sinn* would, in a way, be solved or rather dissolved: the human condition world replaced by an infinitude of knowledge – since humans would then have to face these machines and the world they produce rather than the world as we know it. Oedipus' approach to the world – replacing myth and *Sinn* with knowledge about it -- would become the world itself; it would even become the destiny to be faced by humans, if we wish to use this all-too metaphysical and pathos-laden word.

This future, to an extent, has already arrived. The seemingly exponentially growing potency of how computers do not not think makes it practically impossible for humans to follow them; moreover, even if in the beginnings of computer technology, human symbol manipulation was a model, these times are over, and many other non-human forms of computation are executed. An ancient dream – the dream of an Apocalypse replacing the limited immanent world by a transcendent world following the laws of knowledge – is already slowly becoming the reality inhabited by humans, or, better, *not not humans*: because thereby the tension between *Sinn* and knowledge, which I have defined above as the tension defining the *anthropos* would be gone too.

The alternative to this scenario lies in the first question: What would happen if a machine had a meaningful experience?

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