

WHY DO SO MANY PEOPLE SEARCH SO DESPERATELY FOR A UNIVERSAL LANGUAGE (AND FORTUNATELY FAIL TO FIND IT)?

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1. Introduction

The search for a universal language seems to be as old as human culture itself. Whether once upon a time we lived innocently and freely on the face of the earth in all peace and quietness in a paradise-like state and necessarily spoke the same language as it was Gods own personal present to us, or, as it is assumed now, roughly some seventy-thousand years ago a rather small group of near-humans moved out of Africa or thereabouts, and, if they developed some form of (proto-)language, it is extremely likely that they all spoke the same language, in either case you must agree that once we did have a universal language. And whether it is the tower of Babel or the evolutionary process going about its work in its typical random-like, highly contingent fashion, everyone agrees, whether scientist, philosopher, believer, atheist or plain ordinary being, that we have lost this language. One is tempted to say: so be it, that's the way things go, whether by divine will or by blind evolution. Once things were such and now they are so. We know how to do quite sophisticated mathematics, our ancestors did not. They most likely had a well-developed sense of smell, we have nearly lost it. You win some, you lose some. So why is it that we keep so fanatically searching for a universal language? In these few pages I cannot answer this question completely, but what I will try to do is to shed some light on possible reasons for such a search.

It could be that some readers wonder why I made this curious juxtaposition: am I claiming that the biblical story is just as good as the scientific, in this case biological narrative? Is there a hidden creationist at work here? Nothing of the sort. However, I do believe that the idea of a universal lan-

guage has both religious, philosophical and scientific origins. The importance of the existence of this common root explains, among other things, why universal languages are so often NEGATIVELY connoted. From the religious point of view, especially in Christianity, the search for a universal language is equal to a recreation of the world as it was in the beginning, before the expulsion from paradise, before the Babel adventure and hence equal to a restoration of the state of innocence; in short, we are getting much too close to the idea of man imitating God and that's heresy for sure. It also explains why in the Renaissance and later on, alchemists were on the one hand so keen to find lost universal languages and on the other hand why they were considered heretics. Finding the original lost language was from the church's point of view just as bad an idea as the recreation of man in the form of a 'homunculus', as doctor Faustus was to experience with full force. Finally, it would explain why in modern times the search for universal languages is all too often associated with crackpots, lunatics and pseudo-scientists¹. Poor souls for whom the existence of God in a separate realm is an unbearable thought, and who instead insist on finding a 'real' God here and now and so invent lost civilisations – remember Atlantis – speaking a universal language but sadly gone forever.

Nevertheless, apart from these negative connotations, there are many good reasons to believe at least in the possibility of a universal language (leaving aside the implementation problems that tend to ruin everything). At the same time, these reasons can be highly divergent or even incompatible, as I will try to show in the first major part of the paper. In the second major part I discuss two figures from 20th century philosophy, Otto Neurath and Ludwig Wittgenstein, because both had ideas about (a) universal language(s), but for entirely different, even antagonistic, reasons. The fact that they are usually mentioned as part of the same philosophical 'movement', viz., the WIENER KREIS or THE VIENNA CIRCLE, makes the case more intriguing and thus more interesting.

¹ Books have been written about so-called 'fous littéraires'. See, e.g., Van Boxsel (1999) and (2001). To quote one famous example: Jean-Pierre Brisset (1837–1919) held the 'theory' that human language derived from the 'language' of frogs. Brisset is at the same time an interesting figure because writers such as André Breton, Raymond Queneau, and others wrote about him, thus giving him a status that transformed 'ordinary' madness into literary madness.

2. *Let a thousand universal languages bloom*

2.1 *A first-order classification*

Note first of all that, as everyone knows, there is no universal language around at the present moment, and, therefore, if one is looking for such a language, it will necessarily have to be constructed, invented, imagined, thought up or guessed. Hence, universal languages are part of the extremely large family of artificial languages. Inversely, any artificial language can be a possible candidate for universality. Now the family of artificial languages is quite extensive. In Albani & Buonarroti (2001) a total of no less than 1,100 such languages are listed. This obviously requires some kind of classification, and, indeed, that is what the authors actually present. A first major distinction – and this fits in nicely with the remarks in the first section of this paper concerning scientific and religious connotations – is between:

- (1) Sacred languages, and
- (2) Profane languages.

Category 1 is further divided into:

- (1.1) Structured languages, and
- (1.2) Unstructured languages.

Category 1.2 may seem rather strange. After all, how could one possibly communicate anything at all using a system that fails to be systematic? However, the prototypical example is the language spoken by a magician or a shaman who is in a state of ecstasy or the language produced by the oracle of Delphi or a secret language that, although universal, can only be understood by the initiated or the original language that was spoken between God and Adam². Nonsense to the layman, revelation of the true nature of things to the enlightened. I will not focus on 1 since these languages are too tied to a particular religious world view, but rather focus on 2.

² See Eco (1995) for an extensive historical overview of all candidates that have been considered for the language that God spoke to Adam. These range from a sort of direct mind language to Hebrew, Chinese and, yes why not, the Antwerp dialect, one of the dialect forms of Dutch.

Category 2 is further divided into:

- (2.1) Languages for social communication, and
- (2.2) Languages for ‘fun’ or artistic purposes.

As I will focus mainly on 2.1, let me say a few things now about 2.2. The most prominent feature is the sheer number and the variety of such artistic languages that have been proposed, such as:

- the work done in the OULIPO, leading us back to the DADAISTS, Alfred Jarry in particular, and to mathematics via Raymond Queneau and François Le Lionnais³,
- Thomas More, François Rabelais, Jonathan Swift and other chroniclers, positive or negative, of utopian worlds, all having their own (obviously universal) language,
- Lewis Carroll, H.P. Lovecraft, J.R.R. Tolkien and other masters of fantasy.

Note that this covers just a fraction of artificial languages in literature. However, and perhaps less amazing, is the fact that literature itself in its turn only covers a fraction of such languages. As might be expected music and the visual arts are a natural home for such artistic expressions. It explains, to a certain extent, the interest of mathematicians in music as both may claim (I will return to this observation later in the paper) universality. And, of course, whether right or not, most of us still seem to believe that the eyes are somehow more directly connected to the world – is not a picture worth a thousand words? – than language where meanings tend to introduce distortions and consequently misunderstandings.

As the title of this section indicates, this is a first-order classification. As the distinction between artificial and universal languages is an important one – the links are all too obvious, nevertheless they do not cover the same field – from now on I will focus on category 2.1, and approach the topic by attempting to answer three questions. Firstly, what are the presuppositions for the existence of a universal language, secondly, do we have ‘real’ (or ‘serious’, if you like) candidates for such a language, and, thirdly, what are the motives of its designers.

³ The historical details of these artists, writers, mathematicians, and scientists are quite intriguing. I can refer the reader to Van Bendegem (1998), where details are given.

2.2 Presuppositions to be satisfied for the existence of a universal language

Rather obviously, the first presupposition that has to be satisfied is the brute fact that a universal language is at least possible, i.e., we are making an EXISTENCE claim or, in other words, we have to assume that we are not looking for the square circle. This is indeed obvious on the one hand, but on the other hand, it is quite a curious presupposition, since, as said before, there are no actual functional or operational universal languages (or anything similar to them) that could be presented as factual evidence in support of this claim. This implies that it is only in an indirect sense that we can substantiate the existence statement.

At first sight, there are actually more arguments against this claim. The most important is surely the consequence that, if universal languages can exist, then there must also be universal MEANINGS. After all, if a word, sentence, or whatever the unit of meaning is in such a language, can have different meanings, we have an ambiguity and that would disrupt the uniqueness and hence endanger the universality of such a language. But what arguments could there be to support the fact that universal meanings exist? Are we not kindly asked to forget all the work done by such philosophers as W. V. O. Quine, to name the most important one? From a formal point of view, the point I am trying to make is that, if we consider a language in a first-order approach as a set of (structured) signs and a set of meanings somehow linked to the signs, and if we accept that two languages are different if at least one of these sets is different, then a universal language where the same signs can have different meanings ceases to be unique and it fragments into an overlapping set of languages⁴.

A second consequence must be that all existing 'real' languages are contingent entities. Imagine that there were a 'real' language that is in some sense necessary. I add 'in some sense' because there are many different ways to fill in the details. In other words: what kind of necessity are we talking about? Since the 'real' language already exists, it is clear that it had to develop since it is here in the first place. That does not seem all that interesting. Instead let us look at the future. The necessity can express that that particular language will not disappear. In that case there is obviously a problem. Suppose that we do find or construct a universal language and suppose that it

⁴ In formal(ist) terms: let $L = \langle S, M \rangle$ be a language, where S is the set of signs and M the set of meanings. Given $L = \langle S, M \rangle$ and $L' = \langle S', M' \rangle$, if $S \neq S'$ or $M \neq M'$, then it follows that $L \neq L'$. The same observation can be made in Saussurian vocabulary, i.e., in terms of 'signifiant' and 'signifié'.

spreads all over the world (to use religiously connoted terms), how is it to replace all existing languages – for that surely is what a universal language must succeed in doing; what would be the point otherwise? – if at least one of them ‘refuses’ to disappear? Is it not obvious that that particular language would be the true candidate for a universal language, implying that we already have what we were looking for? If we want to oppose such a thought, then ‘real’ languages have to be contingent.

A third consequence, previously mentioned, is the necessary ARTIFICIALITY of (a proposal for) a universal language. Whether or not it takes as a point of departure existing languages, as is the case of ESPERANTO, for example, the resulting language itself must be artificial (in the sense of man-made according to a reasoned scheme or plan). This raises a question about the existence claim that is quite similar to the discussion that still reigns supreme in the philosophy of mathematics: are mathematical entities created by humans or discovered by humans? In terms of universal languages, the question becomes this: if universal languages are thought up by humans, are they ‘merely’ constructed by them or have they been around somewhere (though not here in the ‘real’ world) for us to discover or, perhaps, to rediscover, as we cannot be sure that they have been around but have for some reason or other disappeared? Note here too the likeness with mathematics: all too often superhuman mathematical powers are happily granted to lost civilizations.

These considerations justify the idea that there are more arguments against a universal language than in favor of it. After all, it will have to be made, so it is a human-made product (and most likely just a few humans) that is highly artificial, claimed to have exceptional properties such as uniqueness of meaning and, to top it all, no real obvious candidates to be inspired by. Unless, of course, to escape the second consequence one does believe that there are contingent languages around that could somehow be turned into candidates for a universal language, hence are capable of acquiring the necessity character⁵. There are in fact, as far as I can see, at least three plausible candidates.

⁵ At first reading this sounds funny: something acquires a necessity. Does that not imply that it always has been necessary, hence that it could not be acquired? All depends on how the notion of necessity is spelled out. Take a universe with n objects. Suppose that some objects have a property P and some do not. Suppose finally that over time all non- P objects change into P . If a stage is reached where all objects have property P , then that property will have become a necessary property. Of course, if we enlarge our talk about this particular universe to talk about a set of universes, then, even if there is a universe where all things are P , it is sufficient that in some universe there is a non- P object, to conclude that P is not necessary

2.3 Real candidates for a universal language

2.3.1 Languages based on logical calculi. When I discuss the work of Ludwig Wittgenstein, this case will be treated in more detail, but at this stage, it is helpful to remember that within the domain of logic there has been and there still is a strong tradition that holds that a logical system of whatever kind reveals, if not models human thinking, and since all humans are alike, there must be a universal feature to it. Hence the interest in logical systems. In addition, logic and mathematics are closely tied together promoting the idea of a calculated reasoning or an arithmetic of thinking, so that the universality goes with the possibility of certainty as anything can be calculated if necessary.

Needless to say a particular expression of this logical approach is to be found in programming languages as these are based on particular logical calculi. There is not enough space here to enter into that beautiful discussion about the relation between computers and the world – if the language of nature is mathematics and mathematics is reducible to logic and computers are hardware implementations of logic, then why not, could the universe itself not be a computer, a view that is actually defended by some scientists and philosophers⁶ – or about the relation between computers and problem-solving – was not one of the first major programs, constructed by Herbert Simon and Allen Newell, called the GENERAL PROBLEM SOLVER, and both authors really meant it – or the relation between computer and human beings, ranging from Chinese Room Experiments (all about language for that matter) to (philosophical) zombies.

Do note however that, as far as I know, none of these languages can claim the label ‘universal’ (assuming that its designers would want to do such a thing).

2.3.2. Languages based on mathematics. These candidates can be rightfully considered as prolongations of the first case: to the same extent that logic is seen as universal, so is mathematics (especially if one holds the contested view that to a certain extent mathematics is reducible to logic). It probably is

(even if you happen to be in the all-P universe). This simple example is an indicator for the full complexity of notions such as possibility and necessity, as all modal logicians know so well.

⁶ A perfect example of recent times is Wolfram (2002). Not surprisingly, Wolfram is the designer of one of the most frequently used mathematical software packages, viz. *Mathematica*.

sufficient to mention the idea shared by mathematicians, philosophers and ordinary people alike, that, if Martians were to land on Earth and we would not understand the slightest bit – excuse the pun – of what they tell us, still less could we explain to them that ‘two and two equals four’. There is actually a very nice real-life example, viz. the proposal of Hans Freudenthal for a universal language called LINCOS⁷, that should allow us to communicate with whatever other form of intelligent life in the universe.

As far as mathematics is concerned, it is clear that it is considered to be a universal language by many. Needless to say, it is at the same time doubted and called into question by perhaps not that many, but that seems to be more a matter of tradition and having history on your side. After all, what we are talking about here is nothing less than the Platonist versus non-Platonist discussion – do mathematical objects have an existence independent of us and, if so, where? – and Platonists have been around for quite some time, whereas the rise of non-Platonism, including the rise of ethnomathematics, is a rather recent phenomenon.

It would be appropriate, if there was sufficient space to do it, to present at this stage a comparison between mathematics and music, for musical languages have also been proposed as candidates for universality precisely because of the mathematical connection. However, the idea that Western music is to be the prime candidate is contested by many.

⁷ A typical example of a Lincos dialogue is this:

Ha Inq Hb: ?x 2x = 5

Hb Inq Ha: 5/2

Ha Inq Hb: Ben.

In ordinary language this translates into:

A says to B: ‘What is the x, such that 2x = 5?’

B says to A: ‘5/2’

A says to B: ‘Good!’.

To be fair to Freudenthal, this example is basic Lincos. The full treatment is to be found in Freudenthal (1960).

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2.3.3 *Graphical or pictorial languages.* As I mentioned previously, graphical or pictorial languages are believed to be much closer to the world than ordinary languages. Surely the sometimes iconographic relationship between picture and what is being pictured suggests that both have an extremely close and intimate connection (as will become clear when I talk about Wittgenstein).

To illustrate this line of thinking, no doubt one of the most popular representations is the plaqueette that was sent into (deep) space with PIONEER X, designed by Carl Sagan. This picture was meant to provide information to any possible intelligent life form⁸.

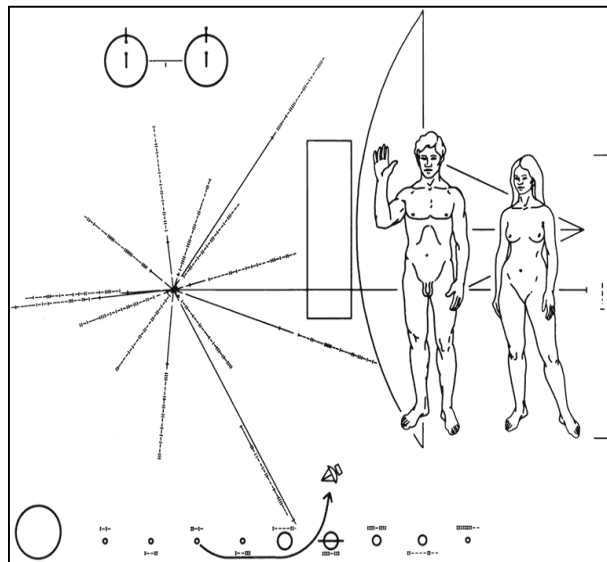


Figure 1. PIONEER-X plaqueette

Imagine being such a life form. First you get this picture to analyse and on top of that you get Hans Freudenthal's LINCOS on the radio. As a quite simple experiment for us, ordinary life forms, try to figure out what I had in mind when I wrote down this 'theory':

⁸ This being said, it has taken the author of this paper quite some time to figure out what all the different elements in this picture were meant to represent.

- (a) xax
- (b) $\alpha a \beta \rightarrow \alpha x a x \beta$
- (c) $\alpha x x \beta \rightarrow \alpha x b x \beta$

Without any further information, the problem is nearly impossible to solve⁹. Nevertheless, the ‘directness’ idea is a forceful idea, how implausible it may seem on further reflection.

This short and compact overview of possible candidates for a universal language seems to show two opposite things: one, that such candidates do indeed exist, two, their intrinsic implausibility. This raises an interesting question: if finding a good and convincing proposal seems so unlikely, why do so many keep looking for it? In other words, what do universal language seekers hope to achieve, what are their intentions?

2.4 Why on earth (or in heaven) do you want a universal language?

It is worthwhile – as will become clear I hope in the small case-study that forms the second part of this paper – to look for a brief moment at the motivation of the designers of such artificial languages. So far I have said little or nothing about their intentions. One might object that the answer is trivial: they all want to invent or construct a language that will improve communication (as the label in the first-order classification indicates). However, there are many different notions of improvement. The standard notion concerns the elimination of confusion and misunderstanding, thus leading, as said above, to the idea of uniqueness and thereby leading the way to the important notion of PERFECTION.

Perfection is a highly ambiguous notion. On the one hand perfection seems to suggest a situation where everything runs smoothly – people speaking the universal language will understand one another perfectly, and in the best of cases, this will be ALL people –, and thus it shows an outspoken progressive view of world and man. On the other hand perfection also suggests transparency, a concept that in its turn is also highly ambiguous. It is not necessarily a good thing that I am transparent to other people, because, once

⁹ ‘a’ stands for equality, ‘b’ for plus and ‘x’ quite simply for 1. The axiom (a) says that ‘ $1 = 1$ ’ and the two rules state that in an expression $\alpha = \beta$, you can always add 1 to both sides and, if in an expression 11 occurs, this can always be replaced by 1+1. Thus $1 = 1 \rightarrow 11 = 11 \rightarrow 111 = 111 \rightarrow 1111 = 1111 \rightarrow 1111 = 11+11$, i.e., $4 = 2 + 2$, as must have been obvious from the start. Thanks to Ard Van Moer who brought this example to my attention.

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power relations are brought into the picture, what will prevent the installation of a PANOPTICON?

This need not even be the end of the story. If such a language were to exist, its transparency would make it possible to ‘optimize’ the language, to adapt it to the particular situation required. What, in those circumstances, prevents the emergence of a form of NEWSPEAK? Note that here too the question of power relations enters into the picture. Perhaps it is true that a language is a dialect equipped with an army.

It must be noted, of course – and Umberto Eco (1995) takes great pains to make this clear – that universality does not IMPLY perfection. They are related notions but a quest for a universal language need not turn into a quest for perfection. The strongest link one can establish is that the uniqueness of the universal language implies uniqueness of meaning and that is as close to perfection one can possibly get. What Eco’s brilliant study does show is that in Western culture the two concepts all too often tend to join forces. Obviously religious aspects play a fundamental part in this coupling.

3. *The case of Otto, the Marxist, and Ludwig, the aristocrat*

Up to this point in this paper I have been mainly sketching some elements of the background that are necessary to understand the likenesses and especially the differences between two philosophers, antagonists on the one hand, members of the same group on the other hand, and both involved in the design of artificial universal languages. I am referring here, as the title elliptically indicates, to Otto Neurath and Ludwig Wittgenstein, and to the Wiener Kreis as the group they both belonged to (although in quite different senses of the word), its philosophical view now known as logical empiricism, logical positivism or neo-positivism¹⁰.

Much has been written about the Wiener Kreis and its members. The book series *The Vienna Circle Collection* is an overwhelming source: the writings of Ernst Mach, Hans Reichenbach, Karl Menger, Moritz Schlick, Otto Neurath, Hans Hahn, Friedrich Waismann, Felix Kaufmann, Victor Kraft, and others are all available. It is therefore possible to sketch a sufficiently detailed picture of this group to see as one might expect the likenesses, but also somewhat less obviously to see the differences. As is so often done, a group is identified with its manifesto if they happen to have one. As it

¹⁰ I will use the term ‘logical empiricism’ as it is not clear at all to me what the relation to positivism could be, especially if we are thinking about Auguste Comte’s form of positivism. There seems to be no link between these two views as far as I can see.

happens, the text *Wissenschaftliche Weltauffassung – Der Wiener Kreis*, published in 1929, does play the role of manifesto. It is a quite curious text, as curious as its genesis. It is dedicated to Moritz Schlick, but was written in his absence by Rudolf Carnap, Otto Neurath and Hans Hahn, presumably because he would not agree with its content¹¹. The most striking feature is no doubt its ethical-political-social commitment. Often logical empiricism is depicted as a purely scientific undertaking and, more specifically, as primarily focused on logic, mathematics, and physics – the UNITY OF SCIENCE idea was to reduce all other sciences to physics anyway, so there is nothing wrong in limiting yourself to physics, as physics will be the only true science –, and as a consequence the philosophers defending this view are not really interested in societal matters, let alone ethical matters. Such is definitely not the case. To quote two passages from the manifesto, it becomes immediately clear that they had an ethical-political agenda as well:

The representatives of the scientific world-conception resolutely stand on the ground of simple human experience. They confidently approach the task of removing metaphysical and theological debris of millennia. Or, as some have it: returning, after a metaphysical interlude, to a unified picture of this world which had, in a sense, been at the basis of magical beliefs, free from theology, in the earliest times. (Neurath & Cohen 1973: 317)

and

We witness the spirit of the scientific world-conception penetrating in growing measure the forms of personal and public life, in education, upbringing, architecture, and the shaping of economic and social life according to rational principles. The scientific world-conception serves life, and life receives it. (Neurath & Cohen 1973: 317–318)

It is quite striking that reference is made to ‘earliest times’. Here we hear the echo of a long-lost past where man and the world surrounding him or her were united and that it is the challenge for philosopher and scientist to restore this situation or to reinstall it as closely as possible to the original, ‘according to rational principles’. Especially Otto Neurath, one of the three authors, tried extremely hard to realize his plans. One of those plans was the development of a universal pictorial language.

¹¹ So it is claimed by Heinrich Neider in his memories about Neurath. See Neurath & Cohen (1973: 49).

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3.1 Otto Neurath and ISOTYPE

It is a strange phenomenon that the graphical language developed by Otto Neurath, the so-called ISOTYPE – in explicit form INTERNATIONAL SYSTEM OF TYPOGRAPHIC AND PICTORIAL EDUCATION – is hardly known¹². The number of papers and books on the topic has to be considered marginal, especially so if the comparison is made, as mentioned before, with the number of publications on the Wiener Kreis whereof Neurath was a member. Although it has to be admitted that a probable cause can be indicated: examples of ISOTYPE were known, but there seemed to exist no (full) text of Neurath explaining the whole enterprise. What was known however is that Neurath had written on the subject¹³. Finally three manuscripts emerged and in Nemeth & Stadler (1996) one of these manuscripts, entitled *Visual Education – Humanisation versus Popularisation* was included.

At first sight there seems to be nothing special about ISOTYPE. The idea that a graphical-visual language might better succeed in transmitting ideas, concepts, theories, and the like, is, as said, an old idea (whether correct or not). However an important element in Neurath's view is that one should avoid the temptation of looking for an isomorphy between ordinary language and the visual language one is searching for. The easiest way to make this distinction clear is to contrast the following two images¹⁴:



Figure 2. 'A person walks through the door'

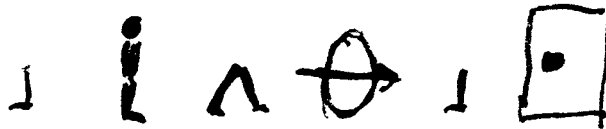


Figure 3. Isomorphic translation

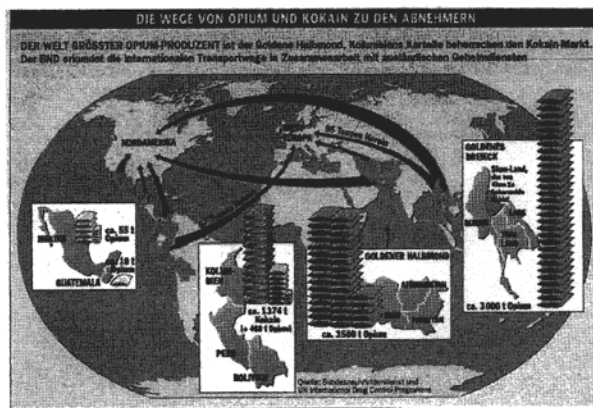
¹² It is, e.g., quite curious that in the extensive and authoritative publications of Tufte on visual representations of information – see Tufte (1983), (1990) and (1997) – only in the third part is ISOTYPE briefly mentioned and the name of Otto Neurath is lacking altogether.

¹³ In Neurath & Cohen (1973), Marie Neurath quotes from one of Otto Neurath's papers on ISOTYPE (pp. 224–248). So at least in 1973 it was known that some texts had to exist.

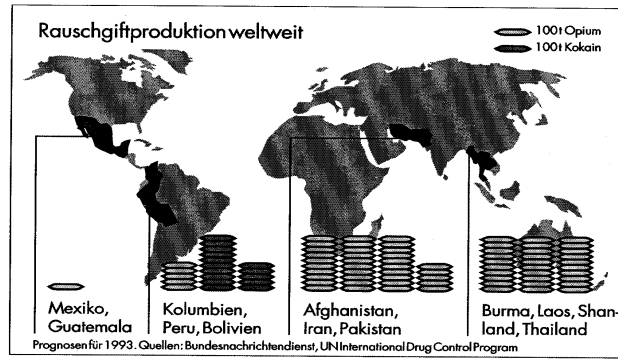
¹⁴ The example is taken from the text of Neurath himself. See Nemeth & Stadler (1996: 330).

The meaning of the image on the left is clear: someone is walking through a door. We do see the elements of the sentence in the picture, i.e., there is a door, there is figure representing a person, etc., but the picture on the right shows what happens if the structure of the sentence *A person walks through the door* is isomorphically translated (up to and including a curious sign for ‘a’). In this case it is almost as if we are solving a riddle or a brain teaser – and do note that it becomes puzzling precisely due to the isomorphy, due to the sameness of form, proving how difficult it is to see the same form in two different representations – whereas the picture on the left almost ‘shows’ its meaning (to anticipate the next paragraph on Wittgenstein).

Surely all of this might be considered rather close to triviality. However, matters become quite interesting if one realizes that ISOTYPE was mainly to be used for societal matters. It was Neurath’s hope that well-informed citizens would reach wiser decisions for the benefit of the general public. Of course for that goal they need not be informed about logic, mathematics or physics, at least not directly, but first of all they need to be informed about societal, political, and economic matters. Taking a scientific perspective this implies that part of your research in order to gather the relevant data will rely on statistics. Now it is notoriously difficult to explain statistics to the non-mathematician, i.e., most of us. Therefore Neurath sought a way out by representing the statistical data graphically or pictorially WITHOUT LOSS OF ANY OF THE ESSENTIAL CHARACTERISTICS. I do insist on ‘essential’ because a great deal of attention is given in ISOTYPE to the elimination of irrelevant components that tend to blur the picture rather than to highlight the essentials. The two following pictures illustrate this point nicely. Above a diagram as ‘ordinarily’ presented, and beneath the result after translation in ISOTYPE:



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Figures 4 & 5. Worldwide drug production, original representation and redesign in Isotype (Jansen 1996: 147–148)

A good indication of the seriousness with which Neurath tried to give concrete form to this project of a universal language is to be found in his attempts to start a museum. A first attempt was the MUSEUM FÜR SIEDLUNG UND STÄDTEBAU¹⁵ (Museum for City Planning), which was followed by a second attempt, the GESELLSCHAFT- UND WIRTSCHAFTSMUSEUM (Museum for Economy and Society). As must be clear, these were not meant to be museums in the sense of an archive of selected parts of cultural memory, such as paintings, sculptures, art products in general, but rather as places for education of the general public, in such a way, as said above, as to allow a full-blown participation of all citizens in the societal process.

From a more general perspective, the most intriguing aspect of Neurath's work is that it is best characterized not so much as a logico-mathematical way of approaching the problem, but rather as a SEMIOTIC approach. Perhaps it would not be a bad idea to describe Neurath's view as SEMIOTIC empiricism, rather than logical empiricism. From this perspective, it has stronger connec-

¹⁵ The name of the museum betrays Neurath's interest in architecture. As it happens, Neurath not only lectured at the Bauhaus and convinced Rudolf Carnap to do likewise, but he also participated as a non-architect – an adaptation of the statutes was required to allow for his presence – in the C.I.A.M. (Congrès International d'Architecture Moderne), one of its founders being Josef Frank, who was the brother of Philipp Frank, a member of the Wiener Kreis.

tions with the work of Charles Morris¹⁶ than with the work of Ludwig Wittgenstein, the topic of the next part of this paper.

3.2 Ludwig Wittgenstein and the picture theory of language

At the beginning of section 3 I wrote that Neurath and Wittgenstein both belonged to the Wiener Kreis although in a different sense. Wittgenstein was never a ‘true’ member but attended a few meetings where he tried to elucidate the *Tractatus Logico-Philosophicus*, a book that did inspire the ‘true’ members in a profound way. As the later Wittgenstein was no longer in touch with the Wiener Kreis (or, should I say, with the individuals that formed the Circle), I will focus on the author of the famous *Tractatus Logico-Philosophicus*, the so-called early Wittgenstein¹⁷. It is quite intriguing to see that this work also makes a proposal for a universal language, although the differences with Neurath could not be more explicit. It is not my intention to present here a summary of the *Tractatus* – that would be madness indeed! –, but to present a selection that is pertinent to the topic of this paper.

Let me start with a general comment: one of the ways to read the *Tractatus* is as the expression of the idea that all languages that are being spoken and written share in fact a common underlying form. This form is basically dictated by (formal) logic. Thus if a book is lying on the table, then whether someone says *Goh, moet je eens kijken, er ligt een boek op de tafel*, or *God-damn it, there's a bloody book on the table!*, or *Ah, voilà, comment est-ce possible, un livre, rien qu'un livre mystérieusement se trouve, qu'il le veut ou non, sur la table, ah, quelle beauté!*, does not matter at all, the underlying logical form is *A book is lying on the table* or in logical form *Lbt*, where b is a

¹⁶ It is therefore, in my view, not surprising that one of the contributions to the *International Encyclopedia of Unified Science* – or, to be more specific, the launching of the Encyclopedia – was written by Charles Morris, one of the core figures in semiotics in the 20th century, entitled *Foundations of the Theory of Signs* (Chicago: University of Chicago Press, 1938). Interestingly enough, Morris sees semiotics both as a subdiscipline of the human sciences and as a general science of all sciences since all sciences need signs to express themselves. To make the picture complete, add to this the fact that Morris was heavily inspired both by logical empiricism and by C. S. Peirce and the semiotic connection becomes inescapable.

¹⁷ There is an interesting discussion going on in Wittgenstein studies about continuity and discontinuity. More precisely, did Wittgenstein change his ideas between the *Tractatus* and his later work, most importantly the *Philosophische Untersuchungen*, in a radical fashion or is there continuity? Those who favour the first view prefer to speak about the first and the second Wittgenstein, those who favour the second view speak of the early and the later Wittgenstein. I side with the latter.

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name for the object book, t a name for the object table, and L a name for the relation 'lying on'.

The most important consequence of this view is that actual languages are extremely confused and ill adapted at what they are supposed to do best, namely convey meaning(s). Of course, one could say that the task of the philosopher is then to do some rewriting, but that noble thing turns out to be quite complex according to Wittgenstein, as he writes explicitly:

4.002 Man possesses the capacity of constructing languages, in which every sense can be expressed, without having an idea how and what each word means – just as one speaks without knowing how the single sounds are produced.

Colloquial language is a part of the human organism and it is not less complicated than it.

From it it is humanly impossible to gather immediately the logic of language. Language disguises the thought; so that from the external form of the clothes one cannot infer the form of the thought they clothe, because the external form of the clothes is constructed with quite another object than to let the form of the body be recognized.

The silent adjustments to understand colloquial languages are enormously complicated. (Wittgenstein 1955)

In other words, just forget about rewriting. This paragraph gives us the key to understanding the differences between Neurath and Wittgenstein. Neurath firmly believed that new languages could be designed that would solve this problem of lost communication and mutual understanding, whereas for Wittgenstein it seems hopeless to even start thinking about it. So what can we do in such a case? This is what he proposes:

6.53 The right method of philosophy would be this. To say nothing except what can be said, i.e. the propositions of natural science [...] and then always, when someone else wished to say something metaphysical, to demonstrate to him that he had given no meaning to certain signs in his propositions. This method would be unsatisfying to the other – he would not have the feeling that we were teaching him philosophy – but it would be the only strictly correct method. (Wittgenstein 1955)

Add to this the idea that if something said, even though it may sound meaningful, nevertheless contains words that are neither names for objects nor relations between them in the real world, then you are talking nonsense (literally!), hence it is better to shut up. Where does that leave us now? The only answer to that question can be: in a state of enlightenment. We know why things are as they are – we have seen the world in the right way –, and thereby we know how we ought to speak – for we have seen the logical structure of the ideal and universal language –, but however because of these insights, we are no longer capable of expressing it – we have to cherish the si-

lence, only to be interrupted by a comment if someone talks nonsense, but nothing more than that –. There you have the philosopher walking among his fellows mortals, enlightened and forced into silence, socially totally uninvolved, because it would imply that he or she would use that same corrupted language and that is out of the question. This is the best possible description I can imagine of the ascetic and it is reflected in the penultimate paragraph of the *Tractatus*:

6.54 My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless, when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it.)

He must surmount these propositions; then he sees the world rightly. (Wittgenstein 1955)

Referring once more to Eco (1995)¹⁸, it is clear that we find ourselves here in the company of those thinkers who were searching for the lost universal and/or perfect language and were perfectly convinced that its accessibility would be limited to the very, very few. Seen from this perspective, it becomes quite intriguing that, on the one hand, some of these thinkers thought that hieroglyphs were the prime candidate for such a language, and, on the other hand, that Wittgenstein writes the following:

4.016 In order to understand the essence of the proposition, consider hieroglyphic writing, which pictures the facts it describes.

And from it came the alphabet without the essence of the representation being lost. (Wittgenstein 1955)

Do note that this was written at a time when the hieroglyphs were already understood as a system that is a combination of images and other expressions and not a language of pure images.

Although I have barely scratched the surface of the wondrous underworld of the *Tractatus*, I think it is clear that we may conclude that Wittgenstein's view is truly opposed to that of Neurath. It is the opposition between the soldier-fighter, who will not give up the battle and is out there doing the best he or she can, accepting failures and refusing to quit, and, on the other side, the wise man or woman who has decided to withdraw in the mountains and from the peak looks down at the misery below and can do nothing else but wel-

¹⁸ Especially chapter 7, "The Perfect Language of Images".

come the next enlightened person and at best they will exchange a smile, cherishing the silence that is the true sound of being¹⁹.

4. Conclusion: a thought about ‘and fortunately fail to find it’

The title of this paper included between brackets the phrase mentioned just above. Apart from the fact that in section 2 I remarked that there seem to be more arguments against than in favor of the (possible) existence of a universal language, I have said nothing so far about the good fortune that up to the present – Esperanto and similar attempts notwithstanding – has saved us from the real existence of a universal language. Rather than to present an extensive defense of this position, let me end this paper in a slightly different fashion.

At about the same time that Wittgenstein was writing his *Tractatus* and desperately trying to get it published, at about the same time that the Wiener Kreis was holding its meetings, at incidentally (more or less) the same time that Karl Popper was writing his *Logik der Forschung* (to become famous as *The Logic of Scientific Discovery*), at that same time a group of philosophers, mathematicians, writers, lawyers, and others, were meeting in Amsterdam and, as it should be, they too had a name for themselves: THE SIGNIFIC CIRCLE. Why is this of any interest? There are several reasons.

One of the central figures in The Signific Circle was Gerrit Mannoury who had a quite intensive contact with Otto Neurath (incidentally, Hans Freudenthal, the inventor of Lincos, who I have also referred to, was also a member of this group). They shared many ideas, both being strongly politically and socially motivated. At first sight it even seems that the programs of both Circles were similar. However, a second glance shows something different.

The Significs had very particular ideas about the relation between language and society. One of the nicest ideas is the concept of language steps (‘taaltrappen’). Roughly it means the following: a language spoken and understood by nearly everyone has to be a flexible and highly adaptive instrument. Hence it makes no sense to strive for specific meanings and interpretations for that would destroy this flexibility. Ordinary language is therefore

¹⁹ My choice of words is inspired by the fact that Wittgenstein participated in World War I, during which time he wrote the major parts of the *Tractatus*. At the front in one of the fiercest battles, although he was really up there in the frontline, he did not participate in the battle itself, but had to relay instructions to the gunners, and so forth. I am not claiming there is an intimate connection here, but the thought is truly tempting.

necessarily ambiguous and vague. However, one can strive for clearer and unique meanings, but there is a price to pay: the number of people who can share this language will decrease (in some cases, rapidly). Mathematicians are supposed to have no problems understanding one another and look how many there are on this globe. A direct implication of this view is that a universal language does not make sense as an undertaking.

Or does it? Unless one is willing – and that apparently seems to be a tough call – to give up the idea that a universal language will necessarily be the best language around, so that universality, stability, and perfection no longer go together hand in hand. What the Significs were already trying to make clear is that universality not only goes together with flexibility, vagueness, and ambiguity, but that this connection is also required. Apparently this was an idea that was too hard to swallow both for Otto Neurath and for Ludwig Wittgenstein. And I am pretty confident, alas, that even today it remains just as hard to swallow.

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