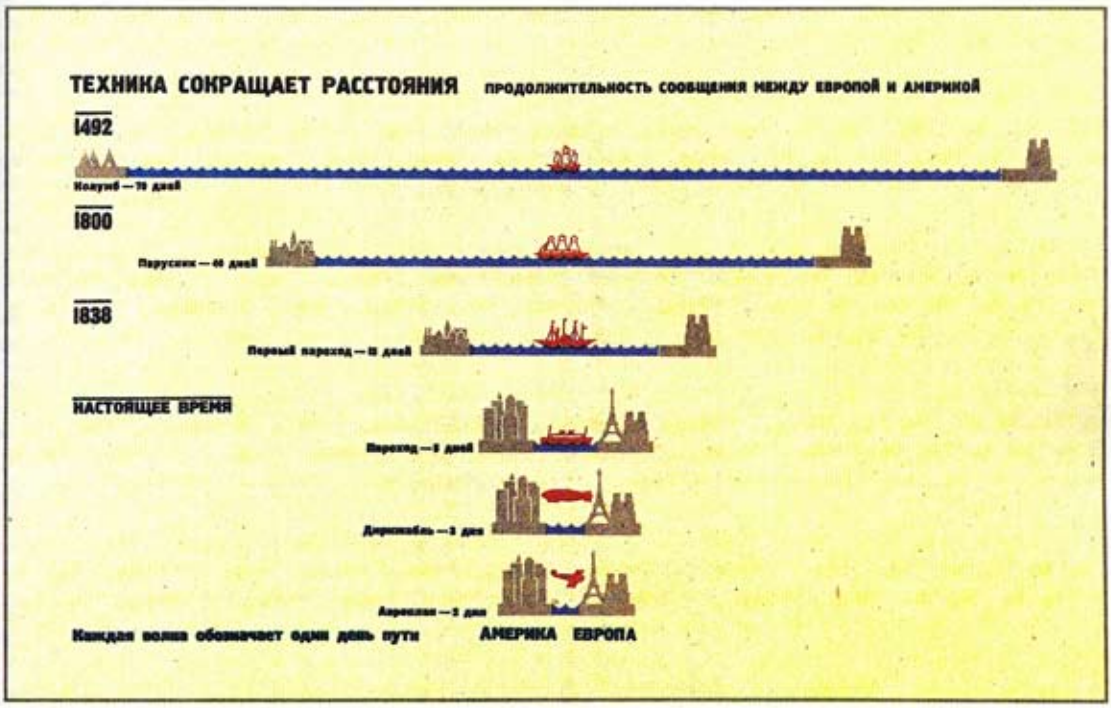

ТЕХНИКА СОКРАЩАЕТ РАССТОЯНИЯ
ПРОДОЛЖИТЕЛЬНОСТЬ СООБЩЕНИЯ МЕЖДУ ЕВРОПОЙ И АМЕРИКОЙ
1492
Каравелла — 70 дней
1800
Парусник — 40 дней
1838
Первый пароход — 15 дней
НАСТОЯЩЕЕ ВРЕМЯ
Переход — 5 дней
Дирижабль — 3 дня
Аэроплан — 2 дня
Каждая волна обозначает один день пути
АМЕРИКА
ЕВРОПА

OTTO NEURATH (1882–1945): A BRIEF BIOGRAPHY

Otto Neurath, the son of a Viennese academic, begins his study into pre-capitalist economies and war economies; from this he develops his ideas on the moneyless economy (or economy in kind)—based on production according to need over the profit motive.



1914–18: Neurath joins the army and his skills as an economist are soon utilised as the planner of supplies for the German army, displaying an organisational skill he would later transfer to many future projects. He is appointed Head of the General War and Army Economics section of the War Ministry in Vienna and at the same time becomes director of the Museum of War Economy in Leipzig. This lays the ground for his later work in Vienna; the aim of the Leipzig museum is to educate on the basis of visual information; to display the whole mechanism of an economy with the use of text, models and statistical tables.



1918–1919: In early November 1918 the German revolution begins with strikes, demonstrations and armed rebellion. After the resignation of Emperor Wilhelm II and King Ludwig of Bavaria, The Bavarian Republic is declared, with the German empire to follow. The war museum in Leipzig is closed down. Having joined the Social Democratic Party, Neurath attempts to push through his plans for a socialised economy.

In January 1919 Neurath travels to Munich to discuss the economy with the president, Kurt Eisner, and to lobby every influential body that will listen to him. In April he is appointed president of the Central Economic Administration and he attempts to institute a programme of socialisation that he believes will take six years to institute. However, the Bavarian Soviet Republic is short-lived and soon falls; Neurath is arrested, tried and imprisoned. He serves a short time of an eighteen-month sentence and returns to a greatly changed Vienna.



1919–34, 'RED VIENNA': In May 1919 the Social Democrats gained control of the Viennese government. Following Max Adler's philosophy of Bildungspolitik (emphasising that education has a vital link to emancipation), a policy of reform affecting everything from housing to education is instituted.

In 1920 Neurath becomes General Secretary of the Research Institute for Social Economy with a remit to support the co-operative housing movement 'in the spirit of social economy'.

In 1921 Neurath also institutes the Co-operative Housing and Allotment Association, an umbrella organisation for all housing co-ops that plan the construction of houses (with the participation of architects including Adolf Loos and Josef Frank). Neurath wrote: 'The happiness of the inhabitants has to be the measure for housing policy'.

In 1924 Neurath proposes the Museum of Economy and Society, an institution for public education and social information. It is in this context that the 'Viennese Method' (later to be known as ISOTYPE) is developed as a system of visualising statistical data which 'facilitates quick recognition and easy recall'.

In May 1925 the Museum of Economy and Society's first graphical displays are produced. In this year the museum also designs displays for an exhibition on health, social care and sport, which are exhibited in Austria House in Düsseldorf. This is the first display to be seen outside Vienna and causes a sensation. Commissions from foreign countries will soon follow, allowing Neurath to set up bureaus in other countries.

In 1927 the permanent exhibition space of Museum of Economy and Society opens in Vienna's City Hall (the space is designed by Josef Frank). The exhibition deals with the world economy, Germany and Austria, the labour movement and population.

In 1928 Neurath invites Gerd Arntz to join the team. The artist proves to be an invaluable addition. The exhibition 'Mother & Child' opens and the book *Die bunte Welt* [The Colourful World], with drawings by Arntz (1929), is published.

In 1929 touring exhibitions to Berlin, Zagreb, Klagenfurt, Mannheim, The Hague and Chicago are organised. By this time the collection represents a series of graphic elements that are reproducible and interchangeable. Neurath envisages a series of social museums across the world; the 'mu-seum of the future' is mobile and flexible—rather than the people going to the museum, the museum goes to the people.

In 1931 the Soviet embassy in Vienna invites Neurath to establish a Museum of Economy and Society in Moscow. The Council of People's Commissars decree: 'All public and co-operative organisations, unions and schools are directed to use picture statistics according to the method of Dr Neurath.'

In 1933 Chancellor Engelbert Dollfuss suspends the powers of the Austrian parliament and rules by emergency decrees that dissolve the powers of the labour unions and the press.

In February 1934, following two days of armed conflict, Dollfuss assumes total control, abolishing Social Democratic and Communist organisations and purging all public institutions, including the Ernst Mach Society (the vehicle of the Vienna Circle). The Museum of Economy and Society is closed down and its offices searched. Neurath, at this time in Moscow, is warned by Marie Reidmeister not to return to Vienna and he makes his way to The Hague, via Prague.



1934–1940: NEURATH IN THE HAGUE: Joined by Reidmeister and Arntz, The Hague becomes Neurath's principle centre of operations from 1934 to 1940. Here he continues his work, establishing the International Foundation for Visual Education in The Hague. Despite the difficult circumstances—the Foundation was receiving very few commissions—Neurath managed to organise two conferences (in Paris and Prague) that launch the Unity of Science Movement. The principle members of the Vienna Circle, with whom Neurath has worked with for the past twenty years, have by now been dispersed (Carnap to Prague, Feigl to the USA and Neurath to Holland) or have died (Hahn and Schlick), the conferences provided a way in which the remaining members could meet and increase their international profile.

Other conferences would follow between 1934 and 39. It was in The Hague that Neurath set to work on the encyclopaedia project, a modern version of Diderot's great endeavour, establishing an international committee that would oversee its production. (The first monograph was published in 1938).

In 1936 the Unity of Science Institute is established as a part of the Mundaneum Institute in The Hague. In the same year Neurath publishes *International Picture Language* which gives a comprehensive description of the method now known as ISOTYPE. At this time he also publishes *Modern Man in the Making*. Neurath travels to the USA to organise an exhibition on the prevention of tuberculosis. 500 versions of the exhibition are produced and shown throughout the USA.

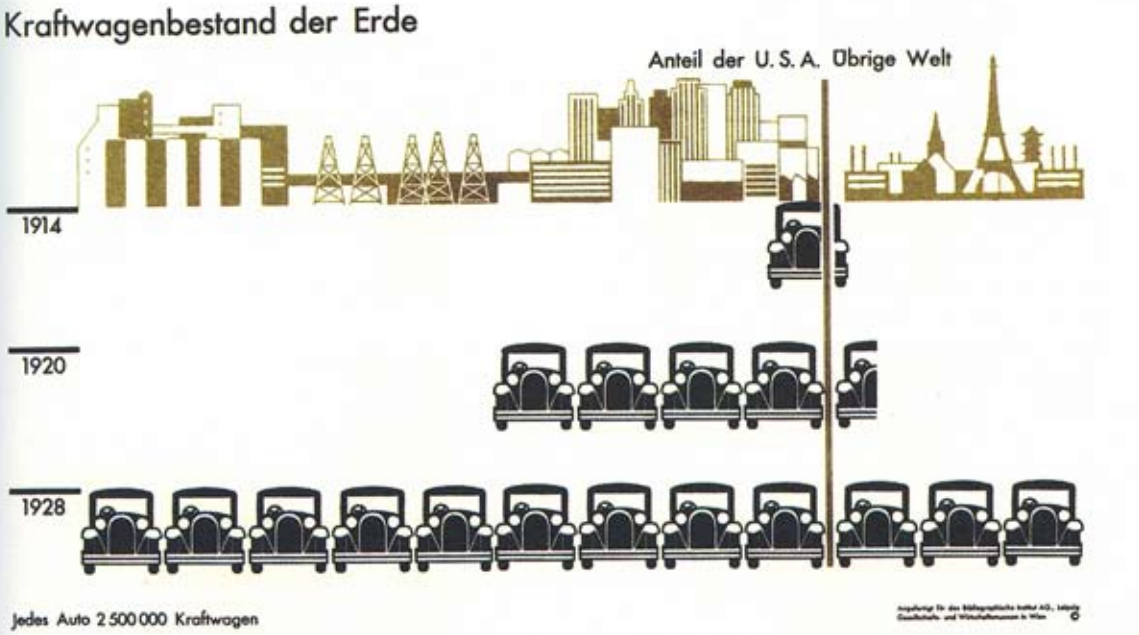
In 1937 Neurath and his team create a large exhibition 'Rund um Rembrandt' [Around Rembrandt], their last work to be exhibited in the Netherlands during Neurath's lifetime.



1940–1945: As the Germans invade in 1940, Neurath and Reidemeister make their way to Scheveningen harbour and board a lifeboat called the *Seaman's Hope*, the boat is intercepted by a British destroyer and the passengers are taken to Dover. Neurath is interned for eight months. On his release he begins teaching in Oxford and he and Reidmeister set up the Isotype Institute, producing exhibitions, film documentaries (with Paul Rotha) and a series of books. Neurath resumes his work on housing projects and the Isotype Institute produce an exhibition called 'Housing and Happiness'.

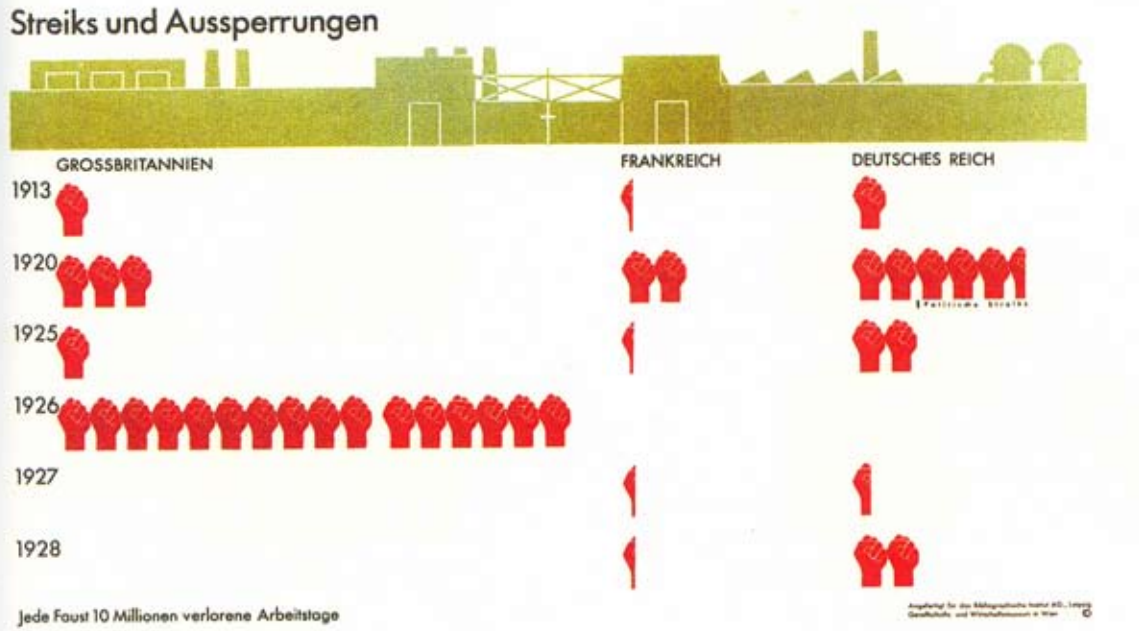
On the 22nd of December 1945 Neurath dies suddenly in Oxford. Marie continues to produce work in a series of publications covering a wide range of subjects.

Compiled by Steve Rushton.
Source: Nancy Cartwright, Jordi Cat, Lola Fleck & Thomas E. Uebel, *Otto Neurath, Philosophy Between Science and Politics* (Cambridge: Cambridge University Press,1996), pp.7–88. Illustrations by Gerd Arntz.



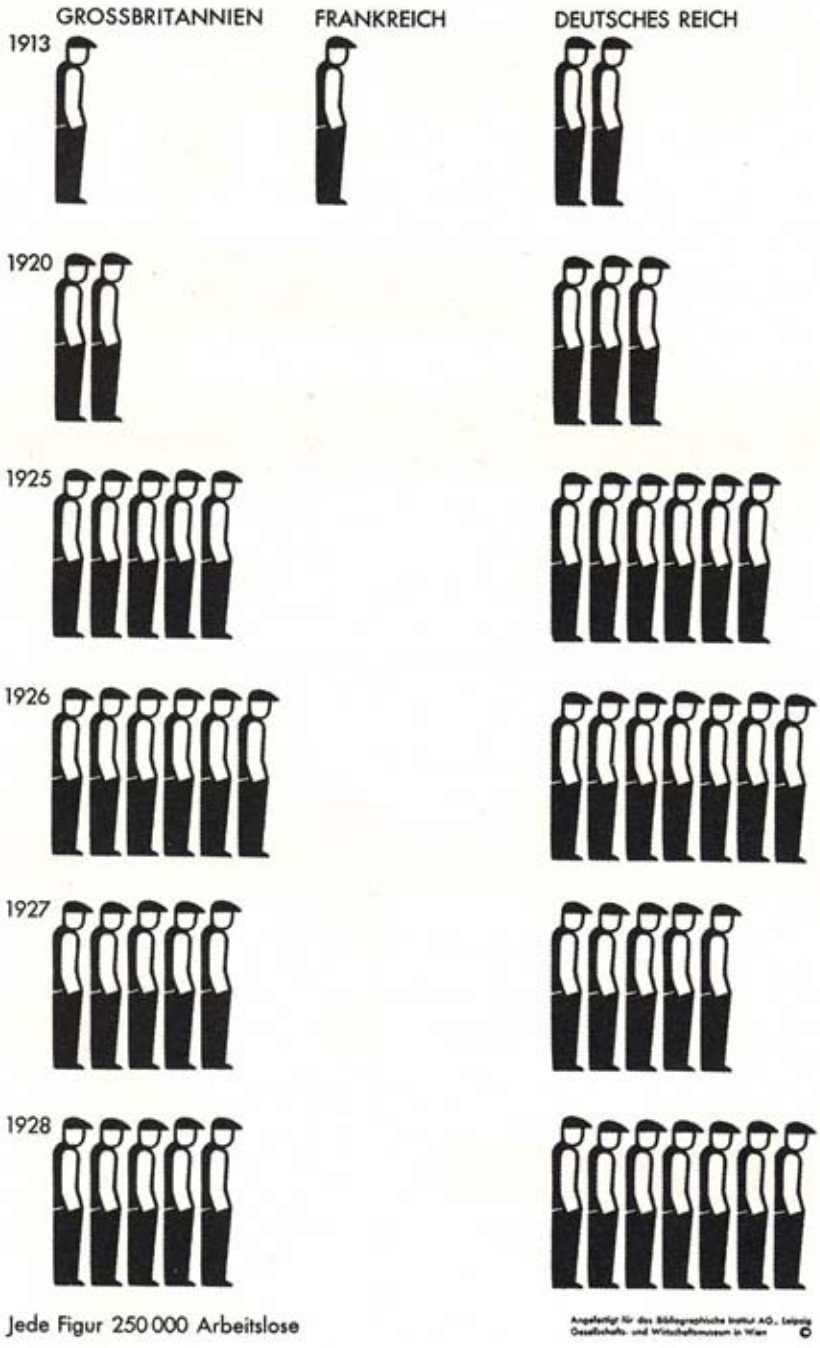
56

Otto Neurath, *Number of Cars on the Earth*, in the section 'Society and Economy' of *Atlas* (1930), p. 56



88

Otto Neurath, *Strikes and Lockouts*, in the section 'Society and Economy' of *Atlas* (1930), p. 88



Gesellschaft und Wirtschaft 87

Otto Neurath, *Unemployed*, from the section 'Society and Economy' in *Atlas* (1930), p. 87

LIKE SAILORS ON THE OPEN SEA

by Steve Rushton

1

It is customary to introduce the work of the utopian philosopher Otto Neurath in a manner similar to this:

> Otto Neurath (1882–1945) was a philosopher of science, sociologist, and a political economist. Neurath was one of the leading figures of the Vienna Circle, a logical positivist and a leading light in the Unity of Science movement. Neurath can also be credited with the invention of a system which by the 1930s was called ISOTYPE (International System of TYpographic Picture Education)—a method of representing quantitative information via easily interpretable icons. ISOTYPE was the precursor of the pictogram—the signs that we see every day in airports and on toilet doors.

Now, none of the above is untrue, it's just that it gives a particular emphasis that excludes some very important aspects of ISOTYPE, and it doesn't give us a true indication of the importance and range of Neurath's thought. Firstly, the problem with the story above is that it situates ISOTYPE at an immovable point in history. In this narrative ISOTYPE becomes an interesting historical artifact, a point in a progressive history toward a more efficient system—the pictogram. The story above is useful because people can easily relate to it, because we all have daily experience of the pictogram, and because it's partly thanks to Neurath that we rarely lose our way in airports or walk into the wrong toilet. But such a narritivisation doesn't give due account of the differences between ISOTYPE and the pictogram, nor does it allow for an understanding of the real contemporary relevance of ISOTYPE.



This picture shows Marie Reidemeister working on two sheets of paper at the early stages of the production of an ISOTYPE sheet. On the left-hand page she has written a series of numbers. This is the raw data, the code. On the right-hand page she makes a series of symbols that translate the statistics into pictures. This is the interface. So the relationship between the data and ISOTYPE is similar to the relationship between the code you would see if you cursored to 'view source' on any web page and what you see on the interface of that web page.

Because ISOTYPE converted digital information into pictures, it provided us with a structure of visualisation that encouraged a very contemporary mode of attention; it is through visual technologies such as ISOTYPE that we learned to 'browse'.[1] It is the structural logic of ISOTYPE as a form of filtering software that engenders a particular technology of looking which we take with us every time we surf the web or flick through a magazine. But, of course, something as slippery as a 'mode of attention' isn't as easy to illustrate as a pictogram, even if its implications are more profound.

ISOTYPE from its inception follows the logic of the code that creates it—it is serial, it forms patterns, it creates templates, it is composed of elements that are interchangeable. It was this principle, for instance, that allowed for the production of 500 versions of the exhibition of tuberculosis to be exhibited in every major town in the USA (1936), and also allowed for the possibility to reconfigure different elements taken from a data-base of images that accumulated over time. For us, the logic of ISOTYPE exceeds its technology, and exceeds the historical circumstances that produced it—it enters into us and changes the way we look at things.

2

> An encyclopedia and not a system is the genuine model of science as a whole.[2]

Because Neurath's activities are so varied we have difficulty giving him a simple job title—'philosopher' seems to fall short of the mark (and it's a title he didn't encourage), as does 'social engineer', or even 'inventor of ISOTYPE', or by extension 'grandfather of the pictogram'. In truth, Neurath is constantly caught between the categories he sought to unify.

However, Neurath's various activities can be brought together by understanding him as a thinker who was committed to the project of the encyclopedia, an unfinished project that began in the enlightenment—notably Leibniz's *Atlas Universalis*, the work of d'Alembert, Diderot and the French Encyclopedians—all of whom used a combination of texts and pictures in order to display an anti-metaphysical, scientific conception of the world. What interested Neurath about the encyclopedia was that it opposed 'system' in that the knowledge represented within the encyclopedia was always provisional (the encyclopedia always anticipates an updated or revised edition). This is in stark contrast to the idea of knowledge as a system in which we have complete knowledge of present facts from which complete predictions of the future could be made.[3] For Neurath, who understood language as a medium rather than a system, there was no exact place for the mediation of exact science.

The encyclopedia project, therefore, requires a particular conception of how language functions; the debate within the Vienna circle centered around those who understood 'Language as Calculus' (LC) and those, including Neurath, who understood 'Language as a Universal Medium' (LUM). The first (LC) tended to understand language as resembling a system that accorded to universal 'laws' and that the laws of language were as immutable as mathematical equations; this idea is opposed by LUM, which allowed for the difference between the meaning and the use of a particular word or sentence (a famous adherent of this second idea would be Wittgenstein). In adopting the notion of language as a universal medium, Neurath set his face against the conception of science propounded by Descartes and Kant—that scientific laws are universal, that they are true in all ages, and are true irrespective of what any particular person has to say about them—as true as 2+2=4. Neurath, in line with his near contemporary A.N. Whitehead, stressed that the 'laws' of science which we understand to be universal are actually themselves the products of scientific discourse—they are produced within the practices of science and philosophy and are therefore provisional, as provisional as the language which constructs them. In short, there is no foundation to knowledge—there is no exact place for exact science.

This emphasis was later adopted by Thomas S. Kuhn in his seminal book *The Structure of Scientific Revolutions* and latterly by Bruno Latour in books such as *Laboratory Life* and *Science in Action*. In this scheme scientific 'laws' are produced at the level of practice, through the production of evidence and its subsequent mediation—all of which begs the question: do we discover scientific truth or do we construct it in the manner of a well told fairy tale?

3

> We are like sailors who have to rebuild their ship on the open sea, without ever being able to dismantle it in dry dock and reconstruct it from the best components.[4]

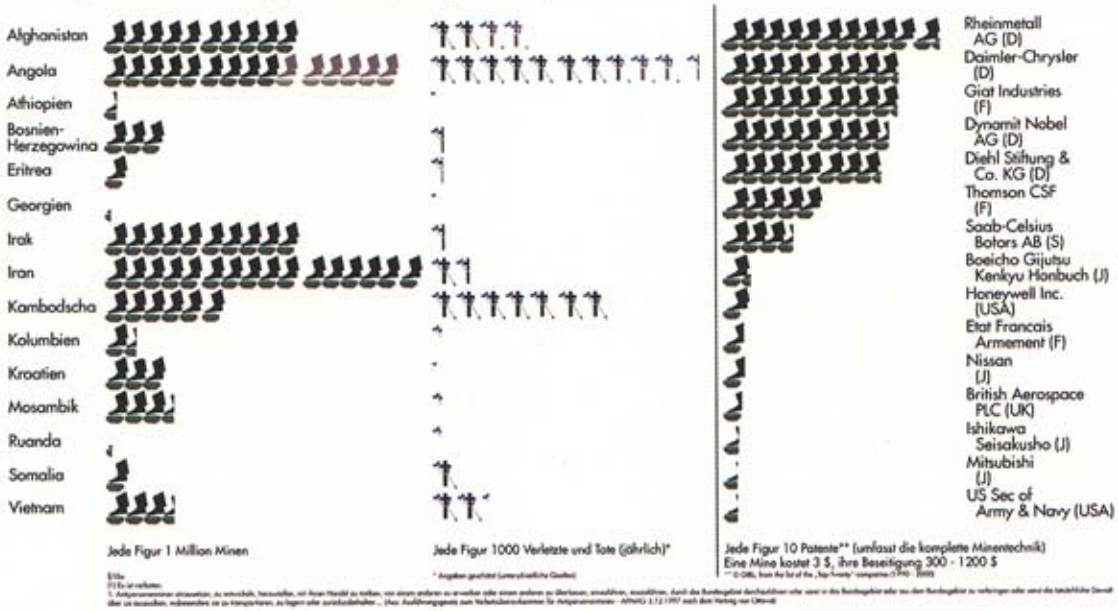
This metaphor was re-written by Neurath in a number of different circumstances between 1913 and 1944. In all cases, whether relating to logical empiricism, the visualisation of statistics or the unity of science, it provides us with a metaphor for how we negotiate our understanding of the world. We are born into systems of knowledge, language and economy that collectively serve to define us, but it is also the case that we can be productive agents in shaping the boat in which we float. If, for the provisionalist Neurath, social orders, scientific accounts and the mediative properties of language are all in flux it is nevertheless still possible to give a comprehensive account of the world, in the sense that we can make the world comprehendible by taking existing elements of the boat and reconfiguring them. He did not advocate a totalising theory (or theory of everything) that would be applicable to all ages or which could predict the future, but rather he advocated a more empirical (as in 'given to experience'), even pragmatic, stance with the production of visual and textual technologies that would do justice to the material conditions that shaped our lives, which allowed for a comprehension of those conditions, and also made possible connections that were previously opaque. We see this vision only ever partially realised; in the work done in Neurath's museum project during the First World War, at the Museum of Society and Economy in Vienna in the 1920s and 1930s,

Minenproduzenten in Deutschland



Alice Creischer & Andreas Siekmann, *Landmine Producers in Germany*
Contemporary actualization of p.28 of *Atlas*, after Neurath/Arntz (in collaboration with the professors and students of the university of Lüneburg)

Verlegte Landminen, Minenopfer, Minenpatente



Alice Creischer & Andreas Siekmann, *Planted Landmines, Landmine Victims, Landmine Patents*
Contemporary actualization of p.25 of *Atlas*, after Neurath/Arntz (in collaboration with the professors and students of the university of Lüneburg)

or in the various manifestations of Neurath's 'museum of the future', where exhibitions traveled to the people and were reproducible, comprising interchangeable elements which allowed for change and contingency. We also see this vision in publications such as *Atlas* (1930), *International Picture Language* (1936), *Modern Man in the Making* (1939), the unfinished *Encyclopedia of Unified Science*. But if the vision of Neurath was only ever partially realised we can nevertheless clearly see a consistency of method, an epistemology that begins in the enlightenment and carries beyond the modernist project into the present day.

4

> The sum-total of human happiness is too small. It should be bigger.[5]

ISOTYPE attempted to make complex information intelligible to the masses in the form of the combination of succinct images and select words. In doing so it sought to reduce complexity through a series of basic units of information that could be commonly understood (even if they are not universally true), it sought to allow for connections between seemingly disparate elements. Neurath the encyclopedian attempted 'to establish contact between disciplines', 'to remedy the plurality of languages', 'to throw bridges between sciences'.[6] Neurath was not alone in seeking out the possibilities of unification and simplification: Ogden's BASIC English, for instance, attempted to reduce the English vocabulary to 800 words (Neurath wrote *International Picture Language* using Basic), and Paul Otlet's Mundaneum attempted to create a repository of the sum of human knowledge along with a system of retrieval and cross referencing. These various projects might stand as monuments to a positivist conception of the world which is no longer viable, or to a utopianism which seems at odds with our current reality. But I would encourage another emphasis when considering these historical objects, an emphasis which gives them a new activity in the present day. They all provide models wherein problems of communication are understood to be software problems, they all provide filtering systems which re-present existing information and allow for new forms of mediation.

If ISOTYPE, Basic English and Otlet's library cataloguing system (which is still used today) can be understood as software they carry with them the pitfalls of software: Software directs the flow of knowledge—what can and cannot be said and what can and can not be asked. For instance, the Frequently Asked Questions on a web site are often the only questions one can ask.

But I would suggest that ISOTYPE invites us to think outside of the existing template, and raises issues which are the current concern of the open source community: what questions should we ask of our world and what technologies should be employed which are appropriate to those questions? These are concerns that ISOTYPE took seriously in order to increase 'the sum-total of human happiness'.

NOTES

1. Fank Hartmann, 'The Quest for an 'Inclusive Form of the Icon', in *After Neurath Symposium*, (The Hague: Stroom, 2006)
2. Neurath cited in Walter Tega, 'Atlas, Cities, Mosaics' in: Nemath and Stadler (eds.), *Encyclopedia and Utopia The Life and Work of Otto Neurath* (Dordrecht: Kluwer Academic Publishers, 1996), p. 65
3. Ibid., p. 65
4. Neurath, 'On Neurath's Boat' in: Cartwright, Cat, Fleck, Uebel (eds.), *Otto Neurath, Philosophy Between Science and Politics*(Cambridge: Cambridge University Press, 1996), p. 48
5. Neurath, *Encyclopaedia and Utopia*
6. Neurath in Tega, p. 64

Steve Rushton recently curated the project *After Neurath*, at Stroom, The Hague, comprising: a symposium, with speakers Frank Hartmann, Robin Kinross, Kristóf Nyíri and Femke Snelting; the exhibition *After Neurath—Like Sailors on the Open Sea* with the artists: Gerd Arntz, Bureau d'études, Alice Creischer & Andreas Siekmann, Stephan Dillemuth, Chad McCail, Oliver Ressler, Thomson & Craighead; and a series of projects by young designers from Koninklijke Academie van Beeldende Kunsten (Type and Media), The Hague and the Jan van Eyck Academy, Maastricht. The project will continue at Stroom with the a project concerning Neurath's relation to architecture, entitled *World Polis*, in late 2007.



as in UN (ONE): Deleuze suggests considering the statement: all bodies fall. What is important, is not that all bodies fall, but rather the fall itself and the singularities of the fall.