The pig in the bath

New materialisms and cultural studies

Michelle Henning

On 24 July 1945 the Austrian logical positivist Otto Neurath, who had been closely involved in the economic and social projects of Red Vienna in the 1920s, visited the borough of Bilston near Wolverhampton, to advise councillors on their new housing scheme. Bilston was an ex-mining and industrial town with an unusually large slum population and overcrowding problem. Over the past century, the methods used to extract coal had destroyed the drainage of the coal seams, causing flooding and the closure of the mines by 1920. After the coal industry, iron production at Bilston went into decline and by 1945 it was dependent on a single steel works. But from 1943, under the direction of the town clerk, A.V. Williams, plans began to be made for Bilston's regeneration, in anticipation of Britain's wider postwar reconstruction.[*]

The report of Neurath's visit was written by Williams. According to Peter Larkham, who has studied the roles of the various people involved in the reconstruction of Bilston, Williams's role was not just an administrative one – he had a great deal of influence in the planning process, and a keen interest in modernism (notably in Lewis Mumford's writings). He involved various eminent experts in town planning: initially the architect and town planner T. Alwyn Lloyd was commissioned to draw up plans for the new housing, but Williams also commissioned the Viennese architect Ella Briggs, who built the Pestalozzihof in Vienna, and in 1946 invited the architect and academic Charles Reilly (known for his communal housing projects centring around a series of oval 'greens') to present his ideas to the Housing and Planning Committee.[1]

On the occasion of Neurath's visit, Williams wrote that the councillors expressed some worries about the removal of people from highly unsanitary conditions into new houses of modern design. There was a fear that the bathroom might be converted into the coal cellar, also that the disinfection officer would very shortly be fully occupied removing bed bugs from the new houses.[2]

The town councillors felt that 'some scheme of public re-education' might be necessary if the tenants were to become 'good tenants in clean, happy and healthy homes' – that is, the rehousing was part of a larger reformist project. Against this, Neurath

> stressed most emphatically that people only put coals in the bathtub for some very good reason, e.g. an inadequate or highly inaccessible fuel storage place, or because the hot water system is so expensive that the hardship involved in using the bath for its proper purpose renders the amenity worthless.

Williams goes on to say:

> Dr Neurath said that he received a report, in Vienna, that one of the tenants was keeping pigs in the bath. He paid a visit to the house. 'Well, Dr. Neurath, last year I kept my pigs in the sty provided by the Town Council but there was no heating and the sty was so cold that all my pigs died; so now I keep them in the bath.' In such a case a small heating plant installed in the pigsty would enable the bath to be used for its proper purpose.[3]

The reference to coal in the bath is figurative as well as literal: coal in the bath is a vivid figure because coal is black and dirty, and (by 1945) not the most modern of fuels. By contrast, the bath is white, modern and functional. The act of keeping coal in the bath produces an inversion: wet becomes dry, clean becomes dirty, white becomes black. Thus coal in the

bath stands for larger anxieties about class and contamination, working as a synecdoche for the perceived filthiness and social perversity of an undeserving poor, the 'great unwashed'. The anxieties expressed about such things in the postwar period would soon be given official voice in the developing discourse of the 'problem family' in public health and social services and among eugenicists. An influential 1944 article by R.C. Wofinden placed great emphasis on squalid living conditions as a means to identify problem families. Recently, Gillian Swanson has pointed to how this pathologized 'domestic failure', as a symptom more significant than ill health or unhappiness, and situated those families identified as socially maladjusted in a negative relation to modernity: they are a problem because of their failure to 'modernize domestic habits', and if their children are happy, it is read as a symptom of 'their adaptation to abnormal – primitive, regressive, anti-modern conditions'.[4] The attitude that ex-slum-dwellers were 'the sort of people who kept coal in the bath' was widespread in Britain both before and after the war, and affected their treatment in shops and everyday life, as well as at the hands of well-meaning reformers and council officials. Added to this is the long tradition of social hygiene within town planning and housing management: rehousing was seen as a means to normalize and reform slum-dwellers and paupers – hence the 'disinfection officer' charged with removing bed bugs.

Responding to the councillors' worries, Neurath does not initially acknowledge that the councillors are concerned about more than just bathing arrangements. But the pig trumps coal, with its greater figurative associations of uncleanliness, and its rural, premodern connotations. Neurath himself makes nothing explicitly of this figure, presenting it as a practical problem of function, and defending both alternative uses of baths as rational uses of facilities whose functions are impaired, through high water-heating bills or lack of appropriate facilities (the pigsty heater). Against the implication that the ex-slum-dwellers are inadequately prepared for modernist rational living, Neurath suggests that they are the functionalists, the rationalists, dealing with faulty technology, with economically impaired heating systems, inadequate coal storage, and badly designed pigsties. Against the tendency to treat modernism and planning as reformist instruments of government, Neurath posits his belief in the right of the tenants to self-determination and in modernism as a means to enable people to realize their own goals (and humanity). The priority is not to police or re-educate the tenants but to make functional the technologies and facilities necessary to give them access to modernist living. Williams also reports that Neurath proposed that the administration of the estate should be handed over to the tenants, and the different aspects of housing and social provision should be joined up in a rational system.

This reported conversation may be read on one level as the meeting of ideologies and discourses that construct their objects differently. The objects of this discourse could be construed as the tenants themselves and modernity (the issue: who has ownership over it?). On this reading, the other objects referred to – bed bugs, baths, coal, pigs and heating systems – would be mere ciphers. But they are not. This is also a discussion of the ordering and arrangement of these objects, of their 'proper' and 'improper' places, of their functioning. The discourse of social hygiene is one of decontamination and elimination: the tenants and their wayward things may contaminate the envisaged efficient and modern housing solution; through education, things will be returned to their proper places, or be excised altogether. Neurath opposes this with a discourse in which things are not dirty or clean, or places improper and proper, but in which everything belongs to a network, each thing interlinked in a system, and made operational through decentralized rational planning.

The mobilization of things

This discussion of pigs and coal tells us something about two differently modern perspectives on the relationships between people and material objects. One of the achievements of recent materialist approaches to cultural theory and cultural studies has been to shift attention to this: to rethink the social in terms of a set of relationships between people, creatures and material objects. This involves returning to, and readdressing, both the philosophies that underpinned modern science and social policy and the philosophical and conceptual foundations of cultural studies itself. If, in its early forms, cultural studies moved away from the study of texts to lived and material practices, it has nevertheless long been dominated by an emphasis on signification, on everyday objects as texts. In cultural materialism, social reality has tended to be viewed as entirely circumscribed by ideology, within which subjectivity and consciousness are formed, and in which the only spaces for opposition and for dissidence are found in textual 'faultlines', as Alan Sinfield calls them – that is, in 'the conflict and contradiction that the social order inevitably produces within itself'.[5]

Writers have responded to the overemphasis on

text and discourse, and the impasses of this version of cultural materialism, in various ways: sometimes through a re-emphasis on subjective agency, experience and identity; sometimes by a turn to affect theory as a means to reintroduce material actuality. New materialist approaches to cultural studies have developed from a number of directions: via engagements with phenomenology, with Walter Benjamin's work on the 'petrified objects' of the late nineteenth century, with Heidegger's theory of the thing, with Deleuze, and with actor-network theory (especially the work of Bruno Latour). These kinds of materialism are very varied and in some ways incompatible with one another.[6] In some cases they involve a return to a positivism close to Neurath's own, and to a pre-structuralist belief in the transparency of language. In other cases, they are premissed on a critique of positivism. Where they abandon the emphasis on history and on language that characterizes earlier forms of cultural studies, they also lose the ability to reflect on their own methods and the means by which they encounter their objects. But at their most significant, they attend to the frictions and lack of fit between physical, actual stuff and signification or ideology, as well as the way ideology is distributed or disseminated through things. They suggest that, at its most successful, ideology cements itself at the level of felt experience, as a lived and incontestable reality. But this is also the ground of its failure, in those instances where the material and experiential refuse to line up and affirm it. This may not be because they are outside ideology or representation – things may carry remnants of older ideologies and older social orders, and as such expose the present as historically contingent. In recent materialist approaches to cultural studies, things are seen as having agency; they are not merely carriers of meaning, but socially shaping. Another way of putting this is that the social order is produced through the mobilization of things, and that things in turn help to produce it, and not always in predictable or humanly intended ways. Both modernism (as a broad cultural movement) and modernity appear in this light as a collection of diverse attempts to shape and manage human consciousness and subjectivity through the remodelling and reinvention of everyday material things, and thereby of experience, perception and habit.

This is evident in Neurath's work. Neurath's brief contribution to Bilston's redevelopment in 1945 may seem – should seem – remarkable now, but this involvement in British postwar town planning was part of a wider set of practices, which in prewar Vienna had been explicitly interlinked. Neurath's role in Red Vienna had been rooted in a socialist commitment to democratization, which meant the democratization of knowledge, as well as of housing and modern amenities. Alhough the Vienna circle is associated by some with a technocratic politics, Neurath prioritized self-government. In a 1942 essay, 'International Planning for Freedom', he argued against giving more credence to technological expertise than to the comfort and preferences of people:

> Assume the scientists tell the English people that their fireplaces waste calories – of course they do so enormously. But the fireplaces as an element of our environment are not 'happiness-neutral' as it were.[7]

Planning should proceed on the basis of scientific understanding, but must take into account human happiness. In keeping with this, Neurath returned to Bilston in November 1945 and set up a 'clinic' where for some weeks he 'met and chatted with many of the inhabitants'.[8] This was the beginning of a process of increasing the involvement of Bilston people in the new development, which was cut short by his sudden death in December.

Isotype

To communicate the ongoing transformation of Vienna under the socialist administration, Neurath had established and ran several museums (most famously the Gesellschaft- und Wirtschaftmuseum in Vienna), devised encyclopaedia, and overseen photography projects, film screenings and travelling exhibitions. Working with a team of people, including the artist Gerd Arntz, and Marie Reidemeister (who later married him), Neurath invented communicative techniques and devices that were to outlive both Red Vienna and himself, and which have had far-reaching impacts.[9] Most significant among these was the Isotype system of visual statistics, a system of symbols of figures and objects that were designed by Arntz and incorporated as charts and posters into different exhibitionary media. Isotypes represented quantitative information in ways that could be read by both literate and semi-literate populations. In the context of Neurath's exhibition work, they were intended not as propaganda, but as ideologically empty statistics. Neurath and his colleagues were concerned not with a didactic one-way education of the working class, but with resurrecting the older sense of the museum as a site of gathering and debate.[10] Isotypes were intended to enable informed discussion and decision-making among the working classes.

For Neurath these practices were part of a wider strategic means (involving museums, exhibitions,

documentary photography, and encyclopedia) to counter what he saw as a fundamentally bourgeois separation of scientific knowledge of things (positivism) from the spheres of the political and the lived. He gives the example of a whale exhibit. Rather than be exhibited in a natural history museum (a discrete and bounded context), a taxidermied whale or a whale skeleton could be the means by which people see their connections and dependencies – to and on other things (soap, corsets) and other people (northern fishermen).[11] In Neurath's vision, a rational modernism combined with scientific Marxism has the capacity to sort through things, to network matters of fact in ways that make them meaningful. Marxism, he argued, could do this because it has the virtue of being a total system, an explanatory framework which can encompass everything – and which can be directly put into practice. Together science, Marxism and modernism offer a way to shake off the weight of Victorian historicism, the obsessive and encyclopedic over-accumulation of knowledge, and to reintegrate knowledge with lived experience. A socialist modernism, in design, exhibitions and other media, would empower working-class people as agents in the construction of their own society, a world of interlinked relationships between humans, animals and raw materials. By ordering the over-accumulated knowledge of the era, it would protect the working class from 'the often disorganized educational endeavour of bourgeois enlightenment, which from the outset sees in merely increasing knowledge something worth striving for as such'.[12]

On the subject of bourgeois thought, Neurath argued,

> The wealth of scientific detail is no longer held together by a unitary approach, and in a certain sense it is left to chance whether a man thinks about some linguistic formations in Chinese or about a medieval text, about African beetles or about wind conditions at the North Pole.[13]

Interestingly, this list is reminiscent of the one with which Bruno Latour introduces his book *We Have Never Been Modern*. Latour writes of the need to overcome the artificial separation of 'knowledge of things' from 'power and politics' by tracing networks of 'nature–culture'.[14] Elsewhere, he states that 'Objects – taken as so many issues – bind all of us in ways that map out a public space profoundly different from what is usually recognized under the label of "the political".'[15] In many ways Neurath's vision seems similar to Latour's notion of things as 'matters of concern' around which diverse people assemble, and both actor-network theory and Neurath's Unified Science

worker

coal

coal-worker

coal produced by machine

coal produced by hand
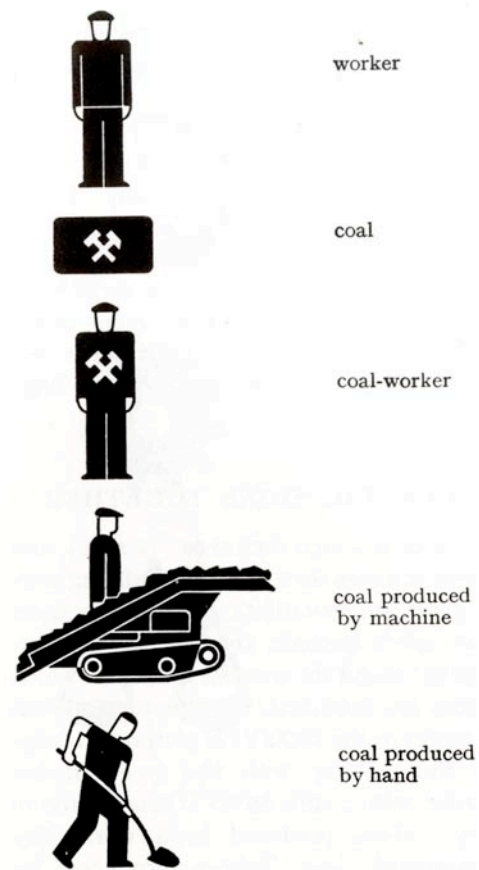
take the view that nothing lies outside a network of relations that encompasses people and creatures, nature and technology. However, Neurath's own positivist materialism, which he termed 'physicalism', differs from Latour's variety of materialism: indeed it is the object of Latour's critique. Latour sees 'nonhumans' as 'actants' with social agency, while he argues that scientific positivism makes things speak while simultaneously treating them as mute matter.[16] Paradoxically, it roots its own authority in the thing – in 'matters of fact', in the laboratory, in 'natural forces' and the 'silent behaviour of objects', while at the same time denying these things agency.

Certainly, for Neurath, everything comes back to 'man', and the world of things presents itself as empirical data. The science of statistics developed as a means to sort through data in the Victorian era. Out of empire came a vast accumulation of facts and the development of an enormous bureaucracy to handle them. The International Statistics Congress of 1858 marked the rise of statistics as the language of science, and the beginning of the separation of 'information' from its muddy roots in the actual. Transformed into data, actuality seems to be stripped of its ideological content, and both statistics and 'scientific' Marxism were put to use in a task Latour sees as characteristically modern: 'Sorting out the kernels of science from

the chaff of ideology.'[17] Neurath's Isotypes are one such sorting system, intended to give abstract facts visible, concrete form.

In 2005, working with Peter Weibel, Latour exhibited a number of Isotype charts at the conclusion of the exhibition Making Things Public at the ZKM Centre for Art and Media in Karlsruhe. In the exhibition and the accompanying publication, Isotypes are represented as quintessentially modernist, having 'clarity, transparency, obviousness of matters of fact', as 'pure objects bathing in the clear light of the modernist gaze'.[18] They were included in the exhibition as a 'counter-argument' to Latour and Weibel's vision of a new, non-modern combination of philosophy of science, politics and aesthetics, in which 'things' are assemblages, disputed states of affairs, and mediation (by 'stuff', by thing-liness) is the necessary condition of representation, not something of which representation ought to be purged.[19] Latour and Weibel use the Isotype system to stand for the larger modern tendency to treat things instrumentally, as objects which can be made to speak through positivism, as 'facts' and evidence. Isotype appears as typically modernist: because it stands for a modernist dream of communication without mediation, interference or noise, of a pure language. For other writers, notably Peter Wollen, who mentions it in his essay 'Cinema, Americanism, the Robot', Isotype, as a standardized system of interchangeable parts, seems to exemplify the ways in which a certain kind of modernism mirrored the car manufacturing system established by Henry Ford, and in doing so perhaps uncritically celebrated uniformity, mechanization and alienation. Isotype is read as an attempt at a functional and ideologically neutral system of interchangeable parts: a kind of visual Fordist Esperanto, representing a modernist privileging of objectivity over thingliness, and of rationalism, positivism and functionalism over metaphysics and the figurative.[20]

Such a reading of Isotype, though plausible, seems to splice it too straightforwardly into existing pictures of modernism. If we see the Isotype system and Neurath's practices as typical or exemplary of Fordist modernism, or as consistent with Neurath's own philosophy of logical positivism, the sense of it as a specific material practice that is part of a larger set of material practices gets lost. Such accounts recognize that Isotypes are intended to be instrumental and transparent, but they tend to treat them as *actually* transparent expressions of a set of ideas. Other materialist accounts would suggest that language, even spoken language, itself is material, the most famous example being Marx and Engels's description of language in *The German Ideol-*

ogy as 'agitated layers of air', which Neurath himself cited in his 1931 essay 'Empirical Sociology'.[21]

When Marx and Engels assert that 'language is as old as consciousness, language *is* practical consciousness' they are not arguing for the transparency of speech as an expression of consciousness, but for the non-existence of consciousness outside or prior to its material inscription. From a historical materialist perspective, language and consciousness are historically produced and transformed, so that in modernity they may gain specific features, and operate in ways quite different to those of pre-modern societies. Also, if we assume, as contemporary materialist cultural studies does, that things have agency, material resistance and affective pull, then the 'picture language' of Isotype must participate in this, and, like other things, it may prove resistant to the easy transmission of ideas and intentions. In other words, a theory of things needs to be able to handle the abstract and apparently immaterial ways in which we inscribe and represent things – symbols and signs and metaphors, hieroglyphs and Isotypes – as well as those things which are evidently thingly and substantial (tables, pebbles and so on). From this perspective, Isotypes do certain kinds of work; they act, and not simply as the expressions of an articulated philosophy. Furthermore, the work that Isotypes do might not always be consistent with the intentions or philosophy of Neurath himself, nor with the broader social and cultural environment from which they emerge.

Material symbols

If we continue to consider Isotype as a 'language' in materialist terms, we might say it is made up of a series of concrete utterances, which can be combined and recombined, can cross media, be endlessly reproduced, and mobilized to constitute different statements. There are a number of social contexts to which we can refer to understand its emergence that are more specific than a generalized modernism, positivism or Fordism. One is the social and housing programmes of 1920s' Vienna. Eve Blau has drawn attention to the similarities between the use of standardized parts in Isotype and the 'extensive and unprecedented' use of standardized parts in Red Vienna's municipal building programme. Blau writes of the standardized windows, doors, balconies and courtyards as the 'typological markers … of the new socialist housing' through which the 'discourse regarding architecture and politics in Vienna' is disseminated. Through 'a carefully conceived language of type' both the built environment of the city and the symbols and charts of Neurath and

his colleagues were able to bypass the partisan press.[22] In both Isotypes and buildings this meant a strong emphasis on legibility: for instance, a roof, whether sloped or flat had to be recognizable and visibly readable as such.

Yet, oddly, Isotypes are not necessarily as legible as older ways of visualizing statistics. Marija Dalbello and Anselm Spoerri have compared the representations of statistics in the Isotype charts with those in the popular almanacs published in the late-nineteenth-century Hapsburg empire.[23] There, statistics were usually visualized in organically unified pictures, often as volumes rather than quantities. Dalbello and Spoerri argue that the standardization of parts in Isotype does not actually contribute much to its legibility, since it is easier and quicker visually to compare volumes (as we do with the older illustrations) than it is to count up little figures. However, Isotypes do have the advantage of mobility: in the Hapsburg almanacs, similar codes could be used from one picture to the next (codes of dress for the different nations, for example), but the same pictures cannot be disassembled and rearranged to produce different interpretations of the same data, nor do they allow comparisons across one set of illustrations to another. The blank spaces around the Isotype figures make this mobility possible. The same figures, representing the same things, can be reproduced across different charts and also across a range of media and social contexts. Eventually Isotypes were used on charts and posters, in films and in children's books, in Soviet schools and British propaganda. They informed the development of a whole range of icon systems still used today, on street signs and architecture, machinery and visual interfaces. And, it has been argued, they introduced a new mode of reading – a 'browsing technique' available equally to the literate and the non-literate.

By making the figures countable, Isotype appears to make itself accountable. On Adorno's account, the automobile industry conceals standardization by parading the same as different through minor ornamental changes. But standardization also works as a guarantee, in industry, of uniform quality, and in Isotype, of objectivity or neutrality. At the same time, Isotypes, by being repeatable, combinable, able to be circulated and mass-reproduced without deterioration, make visible the similarities and connections between matters of fact. Similarity through standardization enables comparisons to be made between different statistical information.

In the buildings, Blau argues, the standardized repeated parts operate as signs communicating the use of each building, its place in the programme and in the history of Vienna. Crucially, she argues, the housing programme took the 'spatial patterns and markers of city and dwelling' of historical Vienna, previously 'resolutely denied the tenants of Vienna's outlying working-class tenements, and redistributed them, giving the workers ownership over the 'cultural symbols of Vienna'.[24] Similarly the practices of Isotype redistribute a cultural symbolism – a visual aesthetic associated with modernism, efficiency and rationality – to the working class. Neurath once argued that functionalism in modernist design had become a matter of appearance rather than anything to do with improved usefulness.[25] Nevertheless Isotypes themselves encode what it is to be modern (and rational, functional, efficient) in a set of visual appearances.

Isotypes are generally read as an attempt to rid communication of mediation, to elaborate a transparent language. Certainly Neurath himself was interested in finding a symbolic language that could present 'facts' across boundaries of literacy and spoken language. (He took an interest in, and wrote in, Ogden's *Basic English*.) In a definition of the Vienna Circle's scientific world-conception' he wrote of

> the search for a neutral system of formulae, for a symbolism free from the slag of historical languages; and also the search for a total system of concepts. Neatness and clarity are striven for, and dark distances and unfathomable depths rejected. In science there are no depths; there is surface everywhere: all experience forms a complex network, which cannot always be surveyed and can often be grasped only in parts. Everything is accessible to man and man is the measure of all things … the scientific conception knows *no unsolvable riddle*.[26]

The rhetoric is highly figurative. Here the rejection of mysticism and obscurantism, of theology and metaphysics, is couched as the elimination of slag (*Schlacken*), dark distances (*dunkle Fernen*), depths and riddles. The figure evoked, and rejected, is the mine – the mine, that is, as it operates as a figure and an institution in early German Romanticism. For the Jena Romantics, the mine (not the industrialized coal mine, but the mine of precious gems and gold) was a repository of living, growing riches, and they were fascinated with stories of the stones and metals growing back when a mine was closed.[27] The mine represented the image of a world in which 'mind and matter are essentially identical'.[28] The Jena Romantics viewed object and consciousness as interdependent, and organic and inorganic nature as animate. In the Romantic world-view of Novalis, for instance, nothing
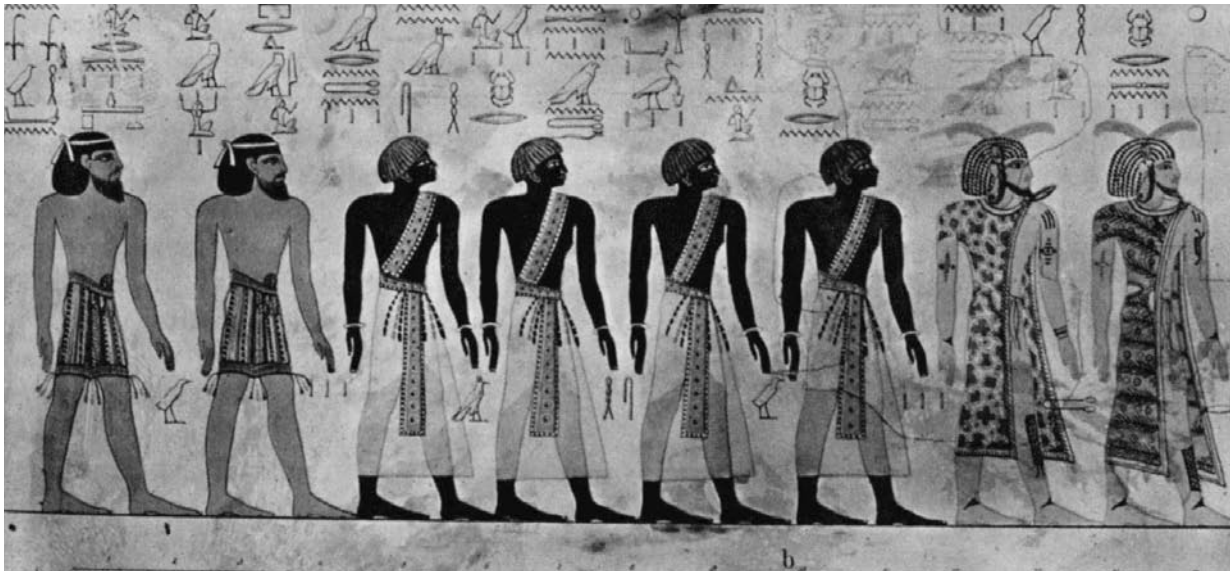
is simply as it appears: nature speaks to us, but it speaks to us in riddles and codes, in hieroglyphs.[29]

Through the 'scientific world conception', even if everything cannot be grasped as a totality, it can all be known. In 1931, two years after the publication of the Vienna Circle manifesto, Neurath acknowledged the primitive, magical roots of this 'scientific attitude':

> The scientific tendency to link everything with everything else, to regard nothing as indifferent, clearly already belonged to the age of magic … unified science is the substitute for magic which also once encompassed the whole of life.[30]

He also emphasized the closeness of the capitalism of his own time to the social organizations and modes of behaviour of so-called 'primitive' societies. But the scientific attitude is taken to differ from magic in its rigour, and from theology in its rejection of obscurantism and its insistence on empirical verification (for Neurath, metaphysics and theology are synonymous).[31] While magical animism sees objects as subjects, positivism treats them as the raw material of data, as evidence. Against the Romantic vision of mysterious forces that link human beings with stones and crystals, Neurath proposed that everything that is not empirically accessible ought to 'vanish from science'.[32] As the vehicle for the transmission of this data, language must be rid of the historical leftovers, the metaphysical 'slag' that renders it ambiguous and mystificatory. The picture language of Isotype appears as the antithesis of a Romantic world-view: in this language, coal miners are not the mystical figures of Romantic fiction but merely workers of coal, and the mine is merely one workplace among others.

Yet, Isotype is not as distanced from a magical, animist world-view as it first appears. In any attempt to transform actuality into facts and information, thingliness refuses to be banished and is felt as an interruption, as friction, as interference and noise. As Kafka wrote, 'Written kisses don't reach their destination, rather they are drunk on the way by the ghosts.'[33] As an attempt to eliminate the ghosts of mediation, Isotype ends up proliferating them and demonstrates that the distance of positivism from Romantic animism is not so great. Aesthetically, Isotypes recall forms that have become associated with directness: prehistoric cave paintings, for instance, which Arntz was reportedly interested in, and silhouettes, a proto-photographic technique by which a shadow might be held, the image of a person directly imprinted. Neurath cites as inspiration Egyptian hieroglyphics and wall paintings – thought at one time to be a direct encoding of things and concepts, unmediated by spoken language. By Neurath's time, it was known that hieroglyphs are related to the spoken languages of Ancient Egypt, and can represent sounds (phonemes), words/concepts (logograms) and classes of words/concepts (determinatives). Nevertheless, mystical associations still clung to the notoriously difficult-to-decipher hieroglyph, and the term 'hieroglyph' has continued to be used to refer to enigmatic representations, and the idea of a visual language not subordinate to the verbal. If Neurath intends that his hieroglyphs will be eminently legible and if, for him, Egypt offers a model of clarity not mystery, he nevertheless shares the assumption of directness.[34] If Isotype was to be unmediated and mobile, able to transcend cultural and linguistic boundaries, it would need to be dissociated from any existing verbal language. And if language is not to be thought in metaphysical terms, there can be no recourse to an abstract system (such as Saussure's *langue*) that exists outside/before its inscription and only in speakers' minds.

The same process, the same set of moves that attempt to rid the picture language of mediation, also reduces language to the utterance (*parole*). To succeed as modern hieroglyphs, Isotype must bypass verbal language altogether. And if it does not separate itself from spoken and written language, if for instance we note that Isotype is dependent for its rules of combination on the German language with its compound nouns (coal + worker = coal worker), then Isotype cannot transcend Babel, and cannot realize the dream of a universal language. Isotype reveals the proximity of positivism to Romantic animism: a world in which stones, fossils and stars 'speak' directly, as natural symbols, not brought to speech by ideology or culture. In their use of visual style to suggest directness, modernity and objectivity, in their ability to transform acts of reading and redistribute cultural capital, in their mobility that is nevertheless always a reinscription, Isotypes are far more than an attempt at a neutral, transparent language purged of metaphysics, or a visual expression of a scientific positivism. If, as Latour suggests, Isotypes represent the 'delineated' and 'discrete' objects of modernism, they do so in the form of material utterances, propositions and speech acts, and as things which speak in a language steeped in the slag of history, and the dark depths of the mine, riddled with metaphor and figuration.

Neurath's practices, from his exhibition work and the Isotype system to his involvement in planning, worked to put things (which withdraw from our awareness) to the foreground, to make them present and to show our dependence on them.[35] But in doing so, these practices also expose things, not just as compliant matter, but working, as actors. Neurath reinstated material language in the form of the hieroglyph. If it seems odd to find traces of Romantic animism persisting in such an unlikely place, a place that seems at first sight to epitomize the modernist and positivist dematerialization of actuality into information and 'pure objects', it is perhaps no more odd than finding a member of the Vienna Circle in Bilston.

Notes

1. Peter Larkham, 'People, Planning and Place: The Roles of Client and Consultants in Reconstructing Post-war Bilston and Dudley', *Town Planning Review*, vol. 77, no. 5, 2006, pp. 557–82. Neurath had been approached by one of the councilors, J.N. Smallshire, who had attended a lecture by him at the International Friendship League in Wolverhampton. Williams later directed the Peterlee Development Corporation. Larkham attributes the failure of the plan at Bilston to the deaths of Neurath and Reilly and the departure of Williams. His research is based on the Minutes of the Development and Reconstruction Committee in Wolverhampton Archives and Local Study Collection and on Reilly's correspondence.
2. A.V. Williams, excerpt from the 'Memorandum of the visit by Dr. Otto Neurath to the Borough of Bilston, July 24, 1945', in Marie Neurath and Robert S. Cohen (eds), *Otto Neurath: Empiricism and Sociology*, D. Reidel, Dordrecht, 1973, p. 75.
3. Ibid., p. 76.
4. Gillian Swanson, 'Serenity, Self-Regard and the Genetic Sequence', *New Formations* 60, Spring 2007, pp. 56–7.
5. Alan Sinfield, *Faultlines: Cultural Materialism and the Politics of Dissident Reading,* University of California Press, Berkeley, 1992, p. 41.
6. The interest in Walter Benjamin's thought, for instance, may well be incompatible with a 'thing theory' rooted in Martin Heidegger's work, of which he was highly critical.
7. Otto Neurath, 'International Planning for Freedom' in Neurath and Cohen, *Otto Neurath*, p. 427.
8. Smallshire cited in Larkham, 'People, Planning and Place', p. 562.
9. Also involved were Erwin Bernath and the architect Josef Frank.
10. On this conception of the museum, see Theodor Ziolkowski, *German Romanticism and its Institutions*, Princeton University Press, Princeton, 1990, pp. 212–13; and Steven Conn's introduction to his *Museums and American Intellectual Life, 1876–1926,* University of Chicago Press, Chicago, 1998.
11. Otto Neurath, 'From Vienna Method to Isotype', in Neurath and Cohen, *Otto Neurath*, pp. 219–20.
12. Otto Neurath, 'Personal Life and Class Struggle', in Neurath and Cohen, *Otto Neurath*, p. 293.
13. Ibid., pp. 294–5.
14. Bruno Latour, *We Have Never Been Modern*, Harvester Wheatsheaf, Hemel Hempstead, 1993, pp. 3, 7.
15. Bruno Latour, 'From Realpolitik to Dingpolitik – or How to Make Things Public', in Bruno Latour and Peter Weibel (eds), *Making Things Public: Atmospheres of Democracy*, MIT Press, Cambridge MA, 2005, p. 5.
16. Latour, *We Have Never Been Modern*, p. 35.
17. Ibid.
18. Latour, 'From Realpolitik to Dingpolitik', p. 13.
19. On their use of Isotypes as a 'counter-argument', see Bruno Latour and Peter Weibel, 'Experimenting with Representation: Iconoclash! and Making Things Public', in Paul Basu and Sharon Macdonald, *Exhibition Experiments,* Blackwell, Oxford, 2007.
20. Peter Wollen, 'Cinema, Americanism, the Robot', in *Raiding the Icebox: Reflections on Twentieth-Century Culture*, Verso, London, 1993.
21. Otto Neurath, 'Empirical Sociology: The Scientific Content of History and Political Economy', in Neurath and Cohen, *Empiricism and Sociology*, p. 351.
22. Eve Blau, *The Architecture of Red Vienna*, MIT Press, Cambridge MA, 1999, pp. 397–400.
23. Marija Dalbello and Anselm Spoerri, 'Statistical Representations from Popular Texts for the Ordinary Citizen 1889–1914', in *Library and Information Science Research* 28, 2006, pp. 83–109.
24. Blau, *The Architecture of Red Vienna*, p. 400.
25. The criticisms of functionalism made by Neurath's colleague, the architect Josef Frank, are perhaps more interesting than Neurath's. He makes the case for ornament as supporting sustained looking, and sees anti-

ornamentalism as a stripped-down aesthetic belonging to a class that had passed through luxury, and forced this aesthetic onto a class that had not yet gained access to luxury and ornamentation, and whose working experience meant a very different relationship with their material surroundings. See Blau, *The Architecture of Red Vienna,* pp. 194–8.

26. Otto Neurath, 'The Vienna Circle of the Scientific Conception of the World', in Neurath and Cohen, *Otto Neurath*, p. 306. This is the Vienna Circle manifesto in which Neurath describes the group's common position as a 'scientific world-conception' both free from and opposed to metaphysics (p. 304).

27. On the connections between Romanticism and the mine, see Ziolkowski, *German Romanticism and its Institutions*, ch. 2; and Esther Leslie, *Synthetic Worlds: Nature, Art and the Chemical Industry,* Reaktion Books, London, 2005, ch. 1.

28. Ziolkowski, *German Romanticism and its Institutions*, p. 30.

29. Leslie, *Synthetic Worlds*, pp. 38–9.

30. Neurath, 'Empirical Sociology', pp. 320 and 329.

31. Neurath's father, the economist Wilhelm Neurath, had written in 1880 of his own intellectual trajectory, moving from a religious (Mosaic) upbringing to become a materialist, aesthete and communist as a young man, heavily influenced by Kant's *Critique of Pure Reason*, as well as by Fichte, Herbart, Schelling and Hegel. By the time of Neurath's birth he had formed a 'pantheistic-theistic conception of the world' and found comfort in 'mysticism as expressed in the German Middle Ages'. Wilhelm Neurath, 'Autobiographical Sketch', in Neurath and Cohen, *Otto Neurath*, pp.2–4.

32. Though this doesn't preclude the identification of invisible forces such as magnetism, electricity and so on, where they can be empirically shown to exist. See John O'Neill and Thomas Uebel, 'Horkheimer and Neurath: Restarting a Disrupted Debate', *European Journal of Philosophy*, vol. 12, no. 1, 2004, pp.75–105. The Neurath quotaion is from 'Empirical Sociology', p. 325.

33. Frank Kafka, *Letters to Milena*, Schocken Books, New York, 1990, p. 223.

34. See Otto Neurath, *From Hieroglyphics to Isotype: A Visual Autobiography*, in Neurath and Cohen, *Otto Neurath*, p. 5. A fuller version is available online at www.fulltable.com/iso/is03.htm.

35. The thingliness of things is notoriously hard to deal with, since our only measure is often our own distance from them – we only deal with things in so far as they are things for a human subject – and this is arguably equally true for positivism, phenomenology and the Romantic theory of reflection. In other words it is not just a problem of science. For more on this in relation to Heidegger's concept of the thing (*Ding*), see Graham Harman, 'Heidegger on Objects and Things', in Latour and Weibel, *Making Things Public*. As with Adorno, Harman defends metaphysics as necessary to any theory of the thing.