The diagram as a bridge between concept and form

Recognising John Voelcker

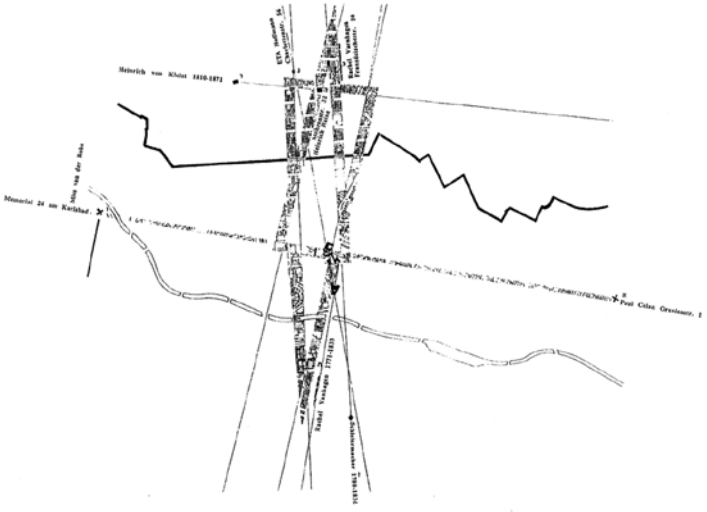
The central misconception concerning diagrams

Fehmi Dogan and Nancy J. Nerssesian's analysis of Daniel Libeskind's Jewish Museum project (**arq** 16.1, pp. 14–28) and Kostas Tsiambaos' study of Otto Neurath and Constantinos Doxiadis' isotype diagrams (**arq** 16.1, pp. 49–58) deal with subjects that are densely packed with history and controversy. The Jewish Museum and the Ground Zero Project are two of the most talked-of architectural projects of the past two decades and Libeskind is well on his way to being the most polarising architect of his era. Though not as famous as the American architect, Neurath and Doxiadis, working in urban planning, museology and media, were involved in a variety of projects that had wide-ranging political and social implications. Despite this dense subject matter, the authors have chosen not to involve them in the discussion of the diagrams. Understandably, Tsiambaos' interest lies squarely in Doxiadis. Nonetheless, it is still surprising that he does not mention the urban and social concerns that drove Neurath's interest in the isotype. The link between Neurath and Doxiadis would seem to run far more widely than a common 'positivist' approach to design and planning. I mention these curious omissions not to move toward a culturalist or historicist position, but with an interest in understanding the creative potential of the diagram.

There are two ideas concerning the diagram that are operating in these articles. The first is the notion of the instrumentality of the diagram, the idea that diagrams are figures used in goal-oriented processes. The second is the notion that the diagram lies somewhere between concept and form, the idea that it functions as a bridge between prefigured ideas and a sought-for formal configuration. Together, they form a sequential logic: diagrams follow concepts and precede a formal solution. This, I believe, is the central misconception that pervades much of the discussion concerning the diagram.

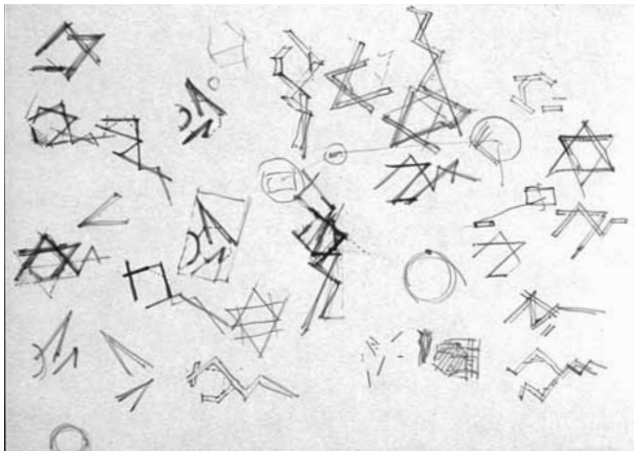
I do agree that diagrams are characterised by their instrumentality. The important point is to understand how this instrumentality is constituted. On the one hand, diagrams must sustain a set of shared codes. The community that shares these codes can be very large, as in the case of maps, or very small, as in the case of artistic drawings. On the other hand, diagrams must sustain the potential for transformation and manipulation. While the first assumes a stable convention that is shared among the users of the diagram, the latter speaks of the open, indeterminate nature of the diagram. At first glance, the two articles seem to deal with diagrams that typify these polar attributes of the diagram. While Neurath's isotope constitutes a highly codified diagram, Libeskind's drawings, as part of perhaps the most conceptual project realised in the past 50 years, epitomise the open nature of the diagram. Libeskind, like many artists and architects of the past century, has exploited the open diagram to creative purposes. In the Jewish Museum, he transformed a codified symbol – the Star of David – into a generative mechanism. Neurath, on the other hand, sought a closed diagram. He wished to rid his figures of all ambiguity and develop a universal mode of communication. This required a one-to-one relation between ideas and form: as Neurath once concluded, 'Men dark, women light, children green, elderly grey'.

It is clear that Libeskind's drawings and the isotype operate at



Daniel Libeskind, Star Matrix. A distorted version of the Star of David superimposed on the map of Berlin

https://doi.org/10.1017/S1359135512000413 Published online by Cambridge University Press



Libeskind's sketch of a Star unfolding into a zigzag

opposite poles of diagrammatic instrumentality. At the same time, I would argue that it is the recognition of the confluence of the open and closed nature of diagrams that facilitates our understanding of the way they are used. Rather than conclude that the isotype is a positivist code, these diagrams need to be unpacked of their formal codes and their received prejudices. Just a glimpse of the way Neurath depicted different ethnicities and nationalities shows the historical nature of the isotype. Furthermore, the isotype need not be defined as an inherently positivist tool. Though the isotype is used by Neurath and Doxiadis as a static and codified diagram, this does not mean that it cannot be used in a creative fashion. One need only think of Froebel's Gifts or Lego to understand that the isotype need not be a unilateral and paternalistic tool. Indeed, Neurath was involved in attempts to use the isotypes as a pedagogical tool. In view of the interactive and participatory nature of today's media and museology and the fundamental crisis of authoritative planning, the transformative potential of the isotype would be more than relevant in gauging the legacies of Neurath and Doxiadis.

If the isotype becomes more interesting when its codes are de-constructed, Libeskind's open diagram appears more palpable when we understand the codes of its operation. Libeskind's diagrams are, after all, part of an architectural process. His highly subjective diagrams have to share a communicative code with his design staff, and, at some point, they must be manipulated into a set of conventional architectural drawings. This is of course not something new for Libeskind. From his Cooper Union thesis, where he collaged together the plans of Modernist projects to create a new architectural configuration, to the Micromegas drawings, after which architectural pieces have been designed, evocative drawings have been transformed into traces of a conventional architectural drawing. When Libeskind took hold of the Star of David, not only was he taking advantage of the obvious codes of this symbol, he also understood that it could be transformed into an architectural plan. As the authors acknowledged, the Jewish Museum was not the first or the last instance when Libeskind used a zigzag form. Libeskind, who calls himself a storyteller, tells different stories with similar zigzags. The story does not precede the form or the space. It would be a misinterpretation to think that the impressive voids of the Museum could only have been imagined after the concepts and the diagrams had been processed. In other words, I would argue that concept and form are conjoined, though probably in unstable fashion, from the very beginning of the project.

This interpretation would seem to align with Dogan and Nersessian's thesis that 'external representations used in design processes are not simply translations of the information content of completed thoughts represented onto external media'. However, my argument is that there is a contradiction in the authors' statement in that if their statement were true, then it would defeat the distinction between internal and external representation. If there is indeed 'an alignment of conceptual and spatial configurations', this would mean that concept and space were indistinguishable in the first place. For Libeskind, as well as many architects, drawing is already a mode of thinking. Likewise, the isotype already partakes in a set of preconceived ideas. A dense array of ideas and practices are already embedded in these diagrams. But these preconceptions are neither fixed nor universal. Like all words and things, diagrams do not have a fixed reference. That is why diagrams are hard to peg down, and that is why they are such fascinating things.

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'Knowing' the diagram

Fehmi Dogan and Nancy J. Nersessian's article 'Conceptual Diagrams in Creative Architectural Practice: The Case of Daniel Libeskind's Jewish Museum' (**arq** 16.1, pp. 14-28) is quite thought provoking. The authors have researched Libeskind's sketches and archival records. They also had contact with Donald Bates, the principal design associate on Libeskind's design team for the building. The building, the result of a design competition that began in 1988, had a tortured path to completion that was concisely documented soon after its completion by James S. Russell in *Architectural Record*, January 1999.

The Museum itself has been controversial from the very beginning and has its share of critics and fans. Undoubtedly, Libeskind intended the building to be disorienting, confusing and difficult. It is the physical exhibit of his well-researched view of the historical relationship between Berlin and Jewish people that has at times been intimate and successful, while at other times difficult and impossible. Libeskind, to his credit, intended to design a building that would capture these conditions and the changes that occurred through time.

Dogan and Nersessian have used Libeskind's sketches to illustrate his thought process in finding a physical resolution to this history. The conceptual diagrams he created in this process are shown in relation to the finished building and to indicate particular aspects of the building. One, however, is led to wonder if there were not other conceptual diagrams or ideas that were rejected. Clearly the diagrams shown were important to the

https://doi.org/10.1017/S1359135512000413 Published online by Cambridge University Press

design, but the design process is seldom as clean or clear as suggested by the article. It should be noted that the authors have indicated that the diagrams are from the competition phase of the project.

The other question that remains in my mind is whether the visitor can or should understand the conceptual diagrams. That is, can one experiencing the building or even one studying the building 'know' the diagram or is an explanation necessary or, even further, are they or should they be the designer's secret? The first impression to me of Libeskind's building is its contrast to the eighteenth-century Baroque building next to it, the Berlin Museum. While they appear as separate buildings, the Jewish Museum is actually an addition to this building, but is only connected underground. The contrast between the calm, symmetrical original building and the agitated Jewish Museum with its slashing windows in the zinc siding is clear. This distinction is to establish the importance of a dialogue between two contrasting conditions that is often repeated within Libeskind's building. The article's authors clearly illustrate for us that the plan and spatial experience are the result of the zigzag line that is the building and a straight line that is perpendicular to the street and interrupted by the zigzag of the building. (I wish the authors had shown the plan of the building to make this clearer.) The straight line as it cuts through the building extends the entire height of the building. It is noted that the zigzag line was an early design decision while the straight line came much later in the process. These lines are critical to the design with one being of substance (the zigzag) and the other of space, a void (the interrupted straight one). It is documented that the zigzag line represents the Berlin Wall, which was in existence until just before the building was completed in 1998, and the straight line the Landwehrkanal, thus tying the scheme to Berlin. The two lines have other meanings as well that relate to the changing path of Jewish life in Berlin and the interruption of that life by Hitler. The superimposition of the two lines creates a tension, a conflict appropriate to the Jewish history that is reinforced throughout the building. The slashing windows at times ignore floor slabs and columns and thus pass as voids past solids, for instance. The necessity to cross the voided straight line to see exhibits places solids in the void in the form of bridges, thus interrupting the void. The straight line is also interrupted when the other line zigs or zags past the straight one. These aspects of the conceptual diagrams are clear as are the symbolic representations mentioned above.

On the other hand, much has been written about the Star of David as inspiration and its manipulation in the conceptual basis for the building. The authors have shown Libeskind's sketches of the Star unfolding in a zigzag fashion and they posited their own diagram using the Star in part to explain Libeskind's design. I do not believe, however, that one observing or even studying the building without an explanation could understand the zigzag line of the building as originating from the Star of David. So it may have been important to Libeskind in his process of conceptualising his design, but it is not apparent in the final building. On the other hand, the zigzag line as a physical manifestation of the building standing in contrast first to the eighteenth-century Baroque building to which it is added, second, to the voided straight line, and even third as a representational reminder of the Berlin Wall where Jews lived on both sides is not only apparent, but is also essential to help document the existence of the Jewish people in Berlin and their struggles and their successes.

Dogan and Nersessian's article is stimulating. It raises several questions regarding diagrams, their use and their interpretation into building design and the actual forms created from them. They are not only useful in understanding the designer's thought processes, but are also helpful in seeing what is not always measurable in the creation of a building.

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Recognising John Voelcker

We find it difficult to reconcile the person portrayed in your article with the man we worked with in the 1960s.

The paper you published on John Voelcker (**arq** 16.1, pp. 59–73) will do little for his reputation. Based largely on his final student project undertaken with two others and accompanied by a truly bizarre selection of photographs, it almost totally ignores Voelcker's thirteen years of rural practice and is larded with misunderstandings, errors and a lack of precision.

What exactly are 'agricultural vernacular building projects'? What is a 'social-minded vernacular'? Why, in 'introducing readers to Voelcker's oeuvre by summarising noteworthy features of a few of his buildings' does the author restrict herself to two completely untypical houses and fail to say anything in the text or the captions about the sheep sales ring and the council offices for which she includes extraordinarily poor illustrations?

Why does she have to associate Voelcker with the LCC herbivore and carnivore debates by the totally irrelevant fact that he did 'plan' a school and housing for the Kent County Council? Actually, the housing was not for KCC. And so on.

Among many later points are the curious references to the 'meaty' 'hard' brick walls of the Lyttelton House indicating its 'Brutalist lineage' and to its 'sharp angular lines [...] in the Modernist tradition'. This suburban courtyard house had no such pretensions – and neither did Voelcker.

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Illustration credit:
Studio Daniel Libeskind, 1, 2

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https://doi.org/10.1017/S1359135512000413 Published online by Cambridge University Press

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