

# The failure of vignelli's map for new york subway system

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The 1972 New York subway map created by Massimo Vignelli is seen as a masterpiece now but a disaster during the 1970s. Vignelli was certain in making a useful map by stressing visual clarity over geographical precisions but ended up creating hatred and confusion. This essay covers the history of New York's complex Subway System, followed by Vignelli's design style and lastly the comparisons of maps over the years. It aims to illustrate how Vignelli's minimal map design was a disembodied relative of the complexed New York cityscape.

The Subway System During the 1970s Was a LabyrinthThe subway system of New York City was at its lowest ebb during the 1970s. Not only was the system complicated because of its unique geographic relationships, but New York was also chaotic, thus gaining herself the title "Fear City" ("13 pictures reveal"). Firstly, New York's unique yet confusing geography and its gridiron street system both had an impact on mapping its subway system. Since 1940, the subway system was formed with 3 separated systems: IRT (Interborough Rapid Transit), BMT (Brooklyn Manhattan Transit) and IND (Independent Rapid Transit Railroad) (Shaw 1).

The system consisted of 468 stations with 26 separate subway lines across 5 boroughs during the 1970s (Jabbour 69). Thus, the mapping of the New York Subway System was complicated. Secondly, taking the subway at New York was fearful and chaotic. During the 1970s, outbreaks of violent crimes, graffiti, overcrowding and frequent mechanical breakdowns were mainstays of New York Subway. Also, the subway were filthy, noisy and dangerous, which was an unappealing sight to the middle-class commuters, needless to

say about the high-class commuters (Reis 99). Thus, people tried to avoid taking the subway as their mode of transportation as they feared to be involved in crimes or to be stuck in overcrowded trains. Refer to Appendix fig. 4 to see how a typical overcrowded subway in New York was like. One major problem that occurred was the spread of graffiti in New York City's Subway. Modern graffiti was popular when it first got introduced in New York during the 1970s which elicited displeased reactions from the people. Graffiti began to take a negative toll on the subway operations as most commuters found it a visible symbol of harassment (see fig. 1), and the inability of their government to take control.

They recognised it as a sign of an ageing system which needs to be repaired. (Refer to Appendix fig. 5 and 6 for more examples of graffiti found in New York's Subway). However, there was a small group of minority that found these mere scribbles added to the subway a new form of urban art. Thus, this issue of graffiti was clear that both the commuters and the subway system they relied on were having a nervous breakdown (Reis 99-100). Fig. 1, A typical New York subway cabin filled with graffiti. ("Hell on wheels") Therefore, Metropolitan Transportation Authority (MTA) approached Unimark International for Massimo Vignelli to redesign the previous map as they were aware of how complicated the system was. Unimark had Bob Noorda partnered up with Vignelli to create a better map that can bring order to this chaotic system (Shaw 67). However, Vignelli failed to do so as people found it confusing. Vignelli's Design Style to Achieving an Orderly System Given the task to redesign the subway map, Massimo Vignelli aimed

to create an abstract yet simple and clear design. Inspired by the iconic 1931's London Tube map created by Harry Beck, he reinterpreted New York's tangled labyrinth of subway lines with a neat diagram. Each station was represented as a dot and was linked to its neighbours by colour coded routes, hence the diagram consists of 26 different colours.

The diagram was drawn with crisped lines and sharp angles of 45 and 90-degrees with a gridded background (Refer to Appendix fig. 7A), just like how the London tube map was represented ("The Subway Map"). He decided to sacrifice the geographical accuracy of the subway system by removing most of the geographical elements for clarity. He thought that it would be easier for commuters to understand a neater diagram of coloured, crisscrossing lines since it worked fine in London where Beck's tube map was complimented and well-liked by their people ("Helpful distortion at NYC"). However, it turned out that the use of simplicity for the subway map did not work out fine in New York. It was no doubt that the diagram map style was more appropriate in London because London was a medieval city with random street patterns and the number of stations provided was 2 times lesser compared to New York's Subway System (Refer to Appendix fig. 7B). The map made order out of the random complexity such that River Thames was the only visual geographic point of reference to the aboveground world. Also, the map was tiny and foldable so it can easily fit into one's pocket, unlike Vignelli's huge map (Jabbour 71). Thus, London's tube map was comprehensible, convenient and easy to read. Nonetheless, Vignelli was confident with his map. He felt that including geography elements were

unnecessary as the only important matter was how to get from point A to B (“ The Subway Map”). In his interview with Gary Hustwit for “ Helvetica”, he shared his thoughts about his map’s design. Vignelli mentioned he should have removed all geographical elements and only include the diagram with a completely blank and white background. Besides, Vignelli came up with a theory where he believed the people who disliked his map are called the “ verbal people”. To him, these people’s ability to understand maps were less sophisticated compared to “ visual people” and they can never visualise a map (“ Helvetica”).

Hence, Vignelli thought by using minimalism in his map will bring order to the complex system but turned out to be disapproved as people found his map difficult to read. Comparison of Maps To Understand the Map’s Flaws Despite Vignelli being satisfied with his minimal concept of the subway map, people saw flaws in his map. Needless to say, it was the complex colour coding, navigational hazards as well as the removal of geographical elements that made people confused. By looking at the improvements made into maps after Vignelli’s map such as the Kickmap designed by Eddie Jabbour and the current MTA map, the reason why Vignelli’s map was inappropriate can be derived. First of all, Vignelli neglecting the geographic aspect of the map caused people to outrage. The map had a beige background colour, making the water surrounding the city coloured beige instead of blue. This usage of unnatural colours for natural occurrences was certainly perplexing.

Furthermore, many stations were placed in wronged positions. For instance, the 50th street and Broadway stop was placed at the west instead of the east. Also, the Central Park appeared in a squarish form three times bigger rather than an elongated rectangle in reality ("The Subway Map"). Looking at how Eddie Jabbour included the geographical elements into the KickMap, it shows how simplifications to the geography helped create a better vision for commuters (Refer to Appendix fig. 7C). For example, Queens Boulevard, a major thoroughfare in Queens, was originally five different roads. Jabbour styled Queens Boulevard as a straight line (fig. 2A) which allowed commuters to see the five roads easily and identify the 7 lines that run along Queens Boulevard until it veers off along Roosevelt Avenue (Jabbour 80-82).

Vignelli on the other hand completely ignored showing it in his map (fig. 2B), causing people to be confused. Thus, Jabbour's way of styling the map's geographic elements was straightforward, unlike Vignelli's vague map. Fig. 2A, The trade-off along Queens Boulevard as depicted by the KickMap (Jabbour 81) Fig. 2B, The trade-off along Queens Boulevard as depicted by the Vignelli map (Jabbour 81) Similarly, if we compare Vignelli's map with George Salomon's 1958 New York subway map (Refer to Appendix fig. 7D), the design layout of Salomon's map was cramped whereas Vignelli's map had negative spaces which allowed easier identification on the geographical mistakes. Secondly, using individual coloured-coded lines like how Beck used in his tube map turned out to be confusing. This was not surprising as the previous map designed by George Salomon in 1958 had a tricolour theme where it only consisted of three colours as they were split according to the

respective operating companies, IRT, BMT and IND (Jabbour 83). Also, similar colours were used such as different shades of blues but the lines did not fall under the same group or system. Thus, having 26 colours in a map with no meanings was an unfamiliar visualisation. The use of colour-coding individual routes by Vignelli is a long-standing controversy. Started with a route-coloured scheme, it later got switched into trunk-coloured and shaded-colour maps. A route is an individual train service which has a single terminal at each end while a trunk is a bundle of routes carried on the same line. Fig. 3 shows excerpts from the three maps, the Vignelli map (fig. 3A), the current MTA map (fig. 3B) and the KickMap (fig. 3C). Vignelli's map was represented as a route-coloured map where each route was represented with a distinctive colour.

The Tauranac-Hertz (current MTA) map (Refer to Appendix fig. 7E) had trunk colours in which each trunk had a distinct colour and all the routes that run along the same trunk will inherit the colour of that particular main trunk. And lastly, the KickMap, a shaded-colour map where each trunk is still represented in a distinctive colour, but each route is in a different shade of that colour (Lloyd, Rodgers and Roberts 3). Thus, not having the trunk lines shown in Vignelli's map led to confusion as people were unable to identify which routes were converged. Fig. 3, The different use of colour coding as depicted by (a) the route-coloured Vignelli map with 26 coloured lines, (b) the trunk-coloured current MTA map with 10 coloured lines, and (c) the shaded-colour KickMap with 7 coloured lines (Jabbour 84). Hence, comparing Vignelli's map with the KickMap and the current MTA map proved the

importance of both geographical elements and colour coding as the neglect of geography and inconsistency in colours will lead to an inaccurate map. Conclusion Vignelli's focus on just minimalism and aesthetics was no doubt a loathe since he neglected the importance of colour coding and geographic precisions. While Vignelli's systematic map was considered a modernist beauty now, it was unfortunately seen as impractical to people during the 1970s, especially when New York was a labyrinth where people had to endure such a chaotic system.

The map was simply too minimal and restrained that it felt disconnected from the subterranean world of trains under the city. Transit maps involve crucial data visualisation so it should be functional to provide clear information to commuters. Besides, it can be said that aesthetics was not appreciated in the past with the case that they were also displeased with graffiti spreading in the subway instead of seeing them as a form of art. Thus, geographic maps were more favourable and appropriated during the 1970s since people only cared about functionality.