

Harry Beck's London Underground

Inspiring others with clear illustrations



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Harry Beck's underground map

Beck revolutionised the map of London's Underground, and inspired many others, **Richard Truscott** is a fan of his work.

Harry Beck designed the London Underground map^{1,2} and inspired similar maps used for transport and other purposes. Harry Beck took something complex and made it simple and understandable, is this not the essence of good technical communication?

Making complex ideas easier to understand

Since Harry Beck's invention of the map many designers have adapted the idea of a map to show an overview of complex procedures or information; making maps useful in technical documentation.

Harry's history

Henry Charles Beck (Harry Beck) was born at Leyton, London in 1902 and died at Southampton in 1974. Harry married Nora Millington (1906-93) in 1933; they had no children.

Harry's father was artistic and so was Harry, who trained as an artist and sculptor. Harry found it difficult to find work in his chosen profession of commercial artist. He did however find work in the Signal Engineers department of London Underground.

Harry's big idea

Harry lived in London's Highgate and was a regular user of the Underground, but because he did not have a railway background, he could see things as a member of the public would. He found the maps of the Underground unsatisfactory and taking a number of influences, he reinterpreted the underground map. *'Looking at an old map of the Underground railways', he said, 'it occurred to me that it might be possible to tidy it up by straightening the lines, experimenting with diagonals and evening out the distance between stations. 77 years later, the map we see today is very similar to his original design.*

In 1931, while working as a contract draughtsman for London Underground, Beck designed the map as a personal project. He offered it to London Underground's Board who rejected his idea. He tried again in 1932, this

¹ Strictly speaking, it is a Diagram not a Map, but because London Underground calls it a map, I have used the term throughout.

² The ownership and Management of the Underground has changed a number of times passing from private, to local and central Government hands. I have used the term London Underground throughout this article to refer to the organisation rather than the legal entity.

time the Board agreed to a trial of a pocket map. The trial took place in 1933 and won huge public acclaim.

Beck received 10 guineas³ (£522 in modern terms) for the pocket map and he went on to produce a poster for which he received five guineas (£266).

It is unclear where Beck's idea came from; certainly, one influence was the style of electrical circuit diagrams and he even produced a 'joke' map for a staff magazine along these lines. In addition, another draughtsman F.H. Stingemore preceded him in producing a geographical map that used different scales for the central and suburban areas but retained the direction of the lines and the distances between stations (see Figure 2).

Why the map works well

The key to the success of the map is that it:

- is an abstraction, only showing information strictly necessary for navigating the Underground. Stripped of geographical information the only feature that remains is the river Thames. Removing the geographical information gives plenty of space for station names and interchanges.
- reduces the complexity of the network by distorting, but not destroying direction and distance. The traveller maintains a sense of

³ Pre decimal money. A guinea is £1 and 1 shilling or £1.05. Originally it was a gold coin.

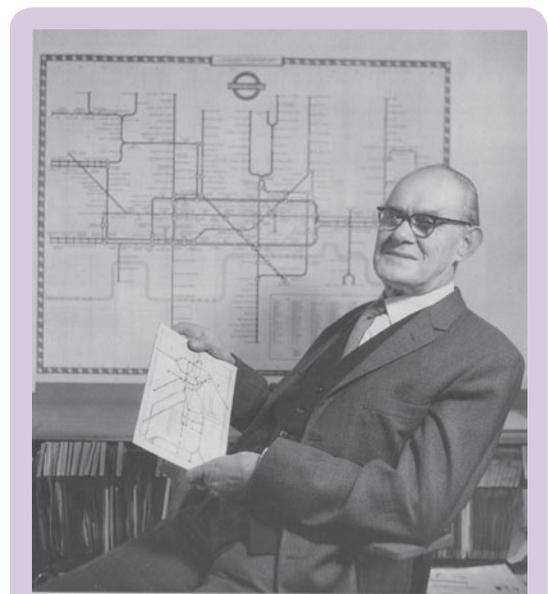


Figure 1. Harry Beck in front of a 1958 version of the map. In his hands, he is holding his original sketch. © 1965 Photograph by Ken Garland

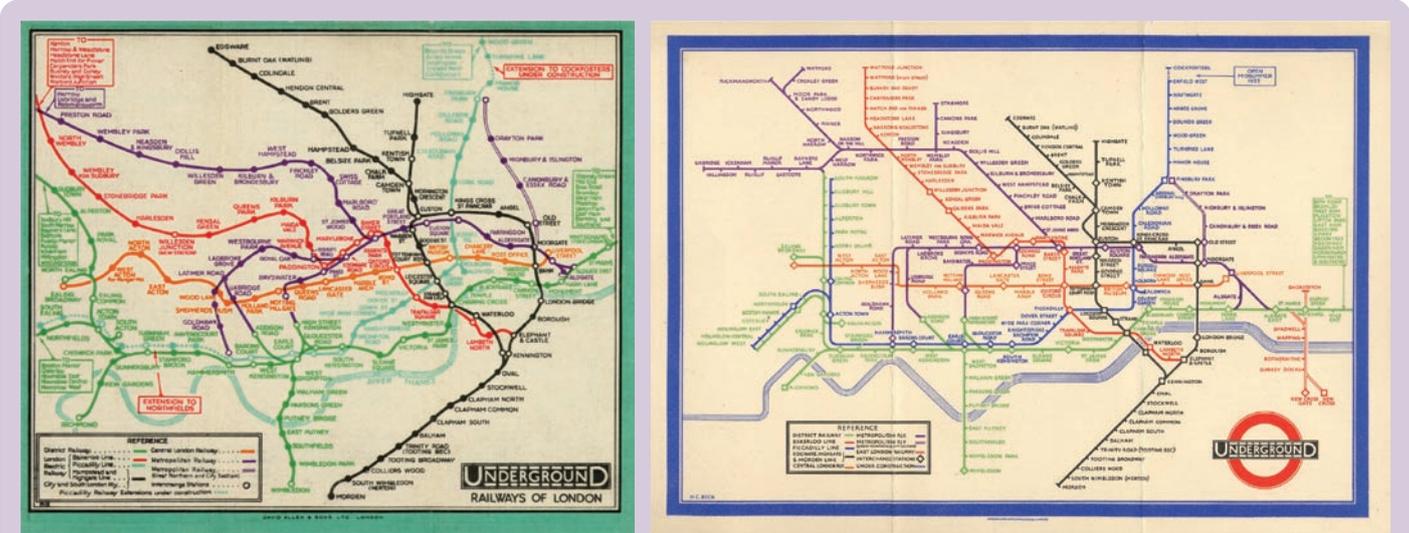


Figure 2. Geographic and Schematic maps. © TfL from the London Transport Museum collection. Left image: F.H. Stingemore, right image: H.C. Beck

direction because Watford appears as North West of the centre and Morden is South West. Stations are spaced evenly along the lines allowing for a clear un-crowded look even though some stations in the central area are only a few hundred metres apart and suburban stations a kilometre or more apart.

- makes the crowded central areas take up more space than the suburbs. It is the central areas that need clarity because it is where most passengers change trains.

There were maps of the underground prior to Beck but they were always geographic (Figure 2 left). Compare this map with Beck’s first schematic map (Figure 2 right); Beck retains the basic shape of the northern end of the Northern Line (shown in black⁴), but distorts the length of the two branches. The same is true of the western end of the Piccadilly and District Lines.

4 Black has always been the colour of the Northern line; other lines have changed their colours over the years.

Problems start to arise

Beck was to find out the truth of Samuel Goldwyn’s quip that ‘A verbal agreement is not worth the paper it’s written on’. At some time, Beck signed over the copyright of the map to London Underground; exactly when has been disputed but Ken Garland says it cannot be before 1937. However, Beck thought he had an agreement that he was the design authority and had control of future changes to the map.

This ad-hoc agreement worked well for a few years until a slightly modified design appeared in 1938. Beck took issue with London Underground who then appeared to accept his design authority. The legend ‘H.C. Beck’ always appeared on the seven versions of the map he produced until the last in 1958.

London Underground’s Publicity Officer; Harold F Hutchinson had a new version of the map produced in 1960 (see Figure 3 left). It was very different from Beck’s; there were no curves and more diagonals.

A battle of letters then started between Beck and London Underground. Beck claimed that

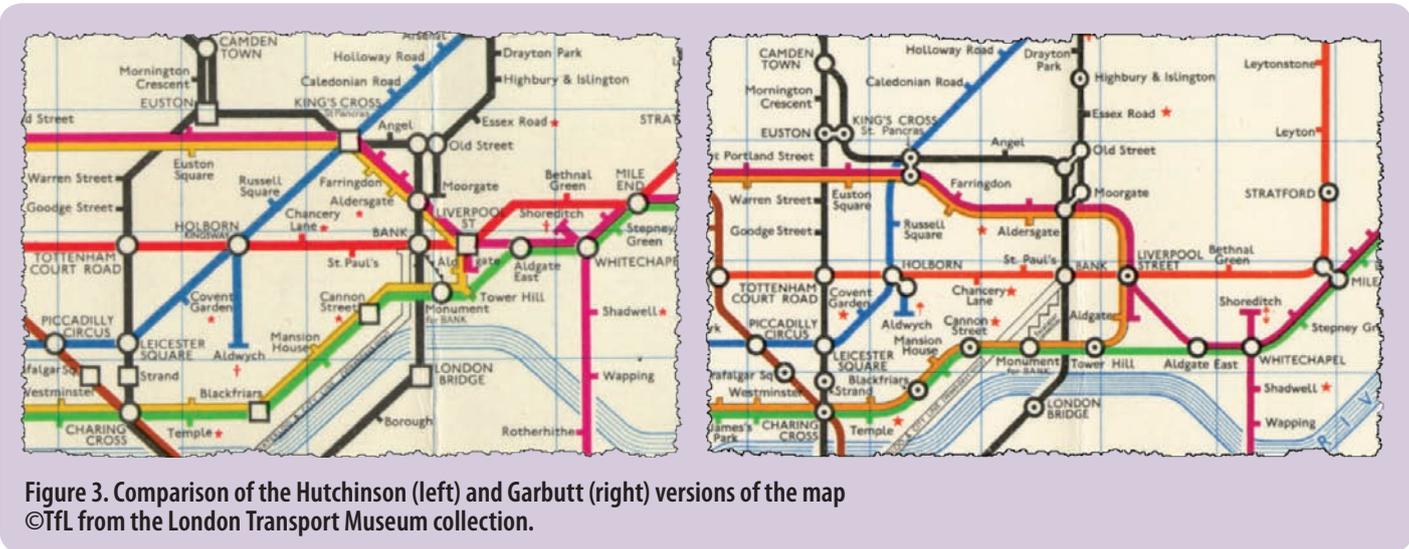


Figure 3. Comparison of the Hutchinson (left) and Garbutt (right) versions of the map ©TfL from the London Transport Museum collection.

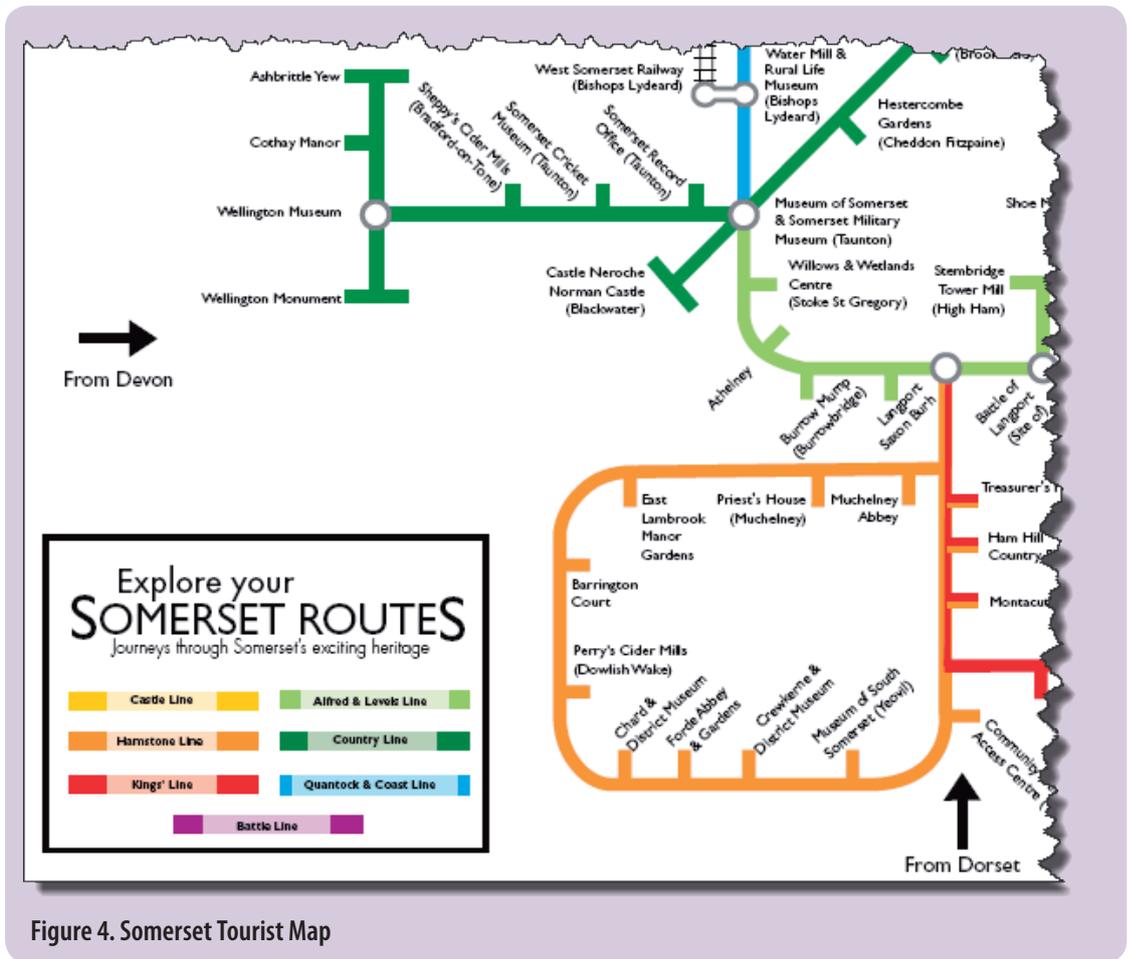


Figure 4. Somerset Tourist Map

he owned the right to change the design by the agreement made with London Underground when he signed over the copyright, London Underground denied Beck's claim. The letters became more strident and threatening and Beck even hinted that he was going to court over the matter; however, he never did take that step.

The Hutchinson design was not a public success as its 'jerky' look was hard to follow (Figure 3 left).

Another London Underground employee Paul E Garbutt realised the Hutchinson map was unsatisfactory and in his spare time (he was Assistant Secretary and New Works Officer) he designed a new version in 1964, that reinstated many of Beck's original ideas (see Figure 3 right). Garbutt put back the curves, straightened, and smoothed the lines. Meanwhile Beck was

still sending London Underground unsolicited designs that allowed for changes to the network such as the Victoria line. Garbutt produced four versions up to 1972; the designer's name does not appear after this date.

Modern versions of the map now attribute the design to Beck with the words 'This diagram is an evolution of the original design conceived in 1931 by Harry Beck'.

Standing the test of time

Harry Beck and London Underground were the first to produce this type of map. It is an idea that many other transport organisation such as the New York Subway, Paris Metro and Madrid Metro, use to show their network. The map has certainly stood the test of time; it is of course still in use, and in a form, that Harry Beck

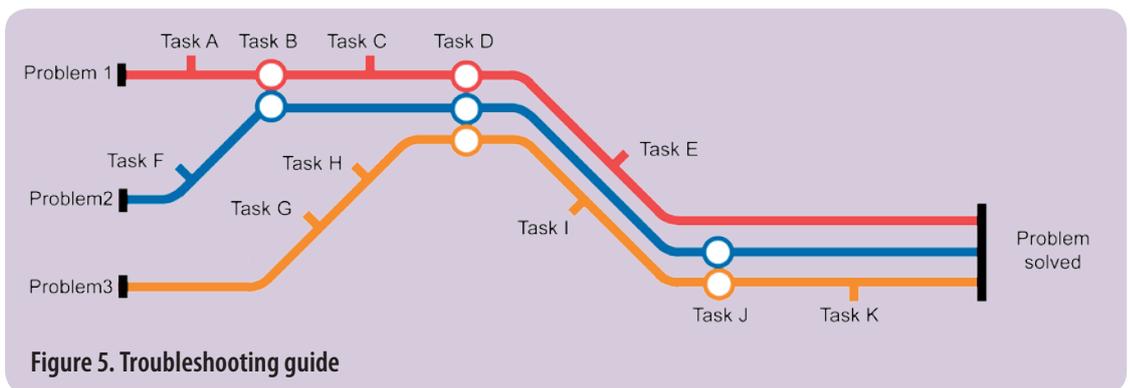
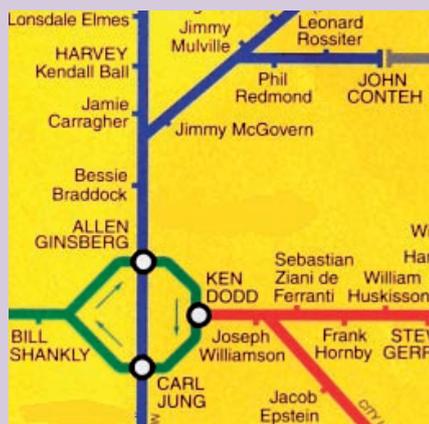


Figure 5. Troubleshooting guide

Competition



Can you identify the UK City from a section of its underground map?

Prize: Tea-towel of the UK City shown above.

How to enter: Please send an email to commissioning.editor@istc.org.uk with the answer.

Winner: All entrants will be placed in a draw. The final date for submissions is 8 July 2011 BST.

Open to all readers.

would recognise. The design has accommodated new lines without major change (Jubilee and Victoria). In addition, it has been adapted for modern uses to show disability and bike access, and other things, by producing single purpose variants. New versions showing all of the London's transport links and fare zones follow the original design.

Some examples of using a map

Somerset County council have an imaginative tourist map based on the Beck model (see Figure 4)

The idea of using a map could be applied to a trouble-shooting guide (see Figure 5).

Why I like Beck's work

I admire Beck's determination and dedication to his idea, many others would have given up after being rejected. Garland tells how Beck filled his house with drafts of maps for London and other cities (Paris for example) and how he was constantly re-thinking his ideas. I also admire Beck's design because it conveys complex information in a simple and clear way.

And finally...

To me, having been born and grown up in the London suburbs, the underground map has always been around. However, until the BBC's culture show and the Design Museum held a design icons competition in 2006, I had given the map very little thought. In finding out more about the map and its designer, I found Harry

References and further reading

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Beck's life and work interesting and hope that you enjoyed reading this article. The idea of using an underground map has sparked many imaginations, for example, art works such as Simon Pattison's 'Great Bear' (an underground map with station names replaced by artists, scientist and writers), and The Bike Station's 'Inner Tube' cycling map of Edinburgh; maybe it will spark your imagination too. **C**

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