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### Margaret Calavert

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Casey Capece

Professor Kate Clair

504 Pioneers of Design

July 6, 2020

### Margaret Calvert: A Road Sign Pioneer

Margaret Calvert is a British typographer and iconographer who worked on and is well-known for the design of British road signs. She was born in South Africa in 1936. She moved to the U.K. with her mother and sister when she was 14 years old. During the time she was growing up and attending university, the world was ever changing. Technology, especially the automobile, was evolving to change and ultimately inspire more travel (Margaret Calvert: Biography).

Calvert attended Chelsea College of Art during the 1950s where she studied illustration and printmaking (Margaret Calvert: Biography). Margaret loved drawing, including “life drawing. She enjoyed talking to other fine artists and learning about the craft and understanding others (Margaret Calvert).



*Calvert has a fine hand shown through her delicate illustrations of the woman and the animals as seen in this excerpt from her sketchbook (Margaret Calvert: Biography). While they are only*

*pen line drawings, Calvert captures her subjects in great detail, and her eye for details carries through her years of exceptional work.*

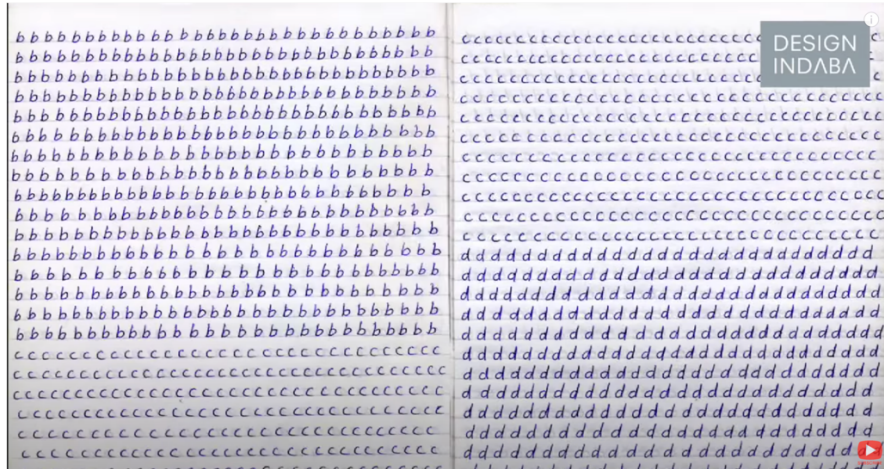
Her illustration studies were led by Brian Robb who brought in a designer once a week to tutor Robb's students in the world of advertising design. For years, Robb brought in Hans Schleger. Calvert had met Hans Schleger, but clearly remembers that he believed typography was already too much to learn as a young adult (Alagiah). While Calvert was in the program, Schleger ended his instruction time, so Robb brought in Jock Kinneir to visit and tutor/mentor his students in graphic design. Kinneir introduced the students to the study of typography (Royal).

Jock Kinneir was born in Hampshire in 1917 and between 1935-1939, Kinneir studied engraving at Chelsea School of Art (Murphy). Right after finishing his studies in 1939, Jock served for England in World War II where he fought as a captain in North Africa, Italy, and Burma (Jock). Shortly after World War II, he obtained a job at Central Office of Information where he was an exhibition designer. One of his notable works during this tenure, was the 'Polar' section display in the Dome of Discovery at the 1951 Festival of Britain (Jock). After four years at the Central Office of Information, in 1950, Kinneir started his position at a design agency called Design Research Unit (DRU) (Royal). DRU was a firm comprised of graphic design, architecture, and industrial design professionals who worked together harmoniously on various projects (Logo). DRU, formed in 1943 by Herbert Read, Misha Black and Milner Gray, designed and developed a lot in Britain – it practically branded England as the nation navigated back from World War II (McGuirk). DRU is now known as Scott Brownrigg. Kinneir joined DRU in 1950 and then decided to go it alone. He left his position at DRU to start his own firm in 1952 (Royal).



*Image of the British Rail Corporate Identity Manual (Brownrigg). This corporate identity book was a comprehensive brand guide showing each element created and designed for the British Rail system from colors, logo treatments, and the Rail font to uniforms and patterns. The typeface, *Rails*, was commissioned by DRU for Kinneir and Calvert to develop*

Kinneir continued to come into Calvert's illustration class one day a week to share what design was. He set up a project for the students that focused on what lettering was and how to do it. This was Calvert's bridge to design (Margaret, 2013). It was an immediate click when she started to study and experiment with typography. Kinneir noticed Calvert's enthusiasm for type and became her mentor to help and push her (Alagiah, 2019). While she was studying illustration, and she was phenomenal at it, she realized that she really wanted to study graphic design (Margaret Calvert: Biography).



*Excerpt from typography workbook (Calvert, 2013). Writing one single letter over and over again, as Calvert had done in her studies, shows competence and persistence. It is clear through even something as simple as this she is exploring the form of the letter through repetition and slight variation of her own penmanship.*

At that time, Chelsea College of Art did not have an actual degree status associated with it and Chelsea did not have a graphic design program. Calvert received her four-year National Diploma in Design in 1957 (Baines, 1999).

In 1957, Kinneir was commissioned to design the signage for Gatwick Airport. This project was not a rebrand, since it had not been done before, so it was a large project. He asked Margaret to assist him on this undertaking (*Margaret Calvert: Woman at Work!*).



*Excerpt from the Gatwick Airport signage book (Alagiah, 2019). Kinneir and Calvert were asked to make signs, but it became more than just some signs; they created a system which needed to be explained through a structured guide. book, a coordinated brand manual, provides the bridge between just some signs and an entire system of curated directional information.*



*Directional Signage at Gatwick Airport (Graphéine, 2018). The use of the black on yellow displays clear, attention grabbing information to those in the airport. The thick lines of the typography accompanied by the heavy weight of the icons make it legible from a physical distance.*

The airport wanted everything color coded differently. Through Calvert and Kinneir’s research, they found that black on yellow was the best combination and that any additional color coding was unnecessary (Design Indaba). They worked on typography weights and proper layout to not just create a sign one-by-one, but to create a standardization that would make all the signs follow suit (Baines, 2003). This has clearly had a lasting impact on signage design in the air travel industry.

“So, it was artworking and going to Gatwick Airport with great big sheets of paper with letters on to make judgements on how far away you could read them, and beginning with designing a typeface, because there weren’t any suitable faces at that time. I think that’s when I started putting my spoke in, because if I saw something which I thought could be

improved, for whatever reason, it was just him and me. He didn't treat me like an assistant at all" – Margaret Calvert (Alagiah, 2019).

After developing the airport signage, Jock Kinneir offered Margaret her first job out of university (*Margaret Calvert: Woman at Work!*). Calvert was still only just an illustrator but Kinneir told her that the job would be more design and that she would be his assistant (Royal).

Shortly after the Gatwick Airport project, Collin Anderson, the Chairman of P&O (Peninsular and Oriental Steam Navigation Company), appointed the duo to create a colorful luggage labeling system for their fleet of freight ships. While Kinneir created the main labels utilizing primary colors, Margaret focused on the adhesive luggage labels – this project is the first that she could actually call her own (Klee, 2016). This was also her first official attempt at hand lettering (Klee, 2016). Passengers and employees of the P&O shipping line commonly spoke different languages, so Margaret focused on creating a system where colors, letters, and numbers are used makes it easier for many to use and decipher. Calvert opted for bright and colorful combinations to catch the eye while also allowing for more options than just using the primary color combinations.

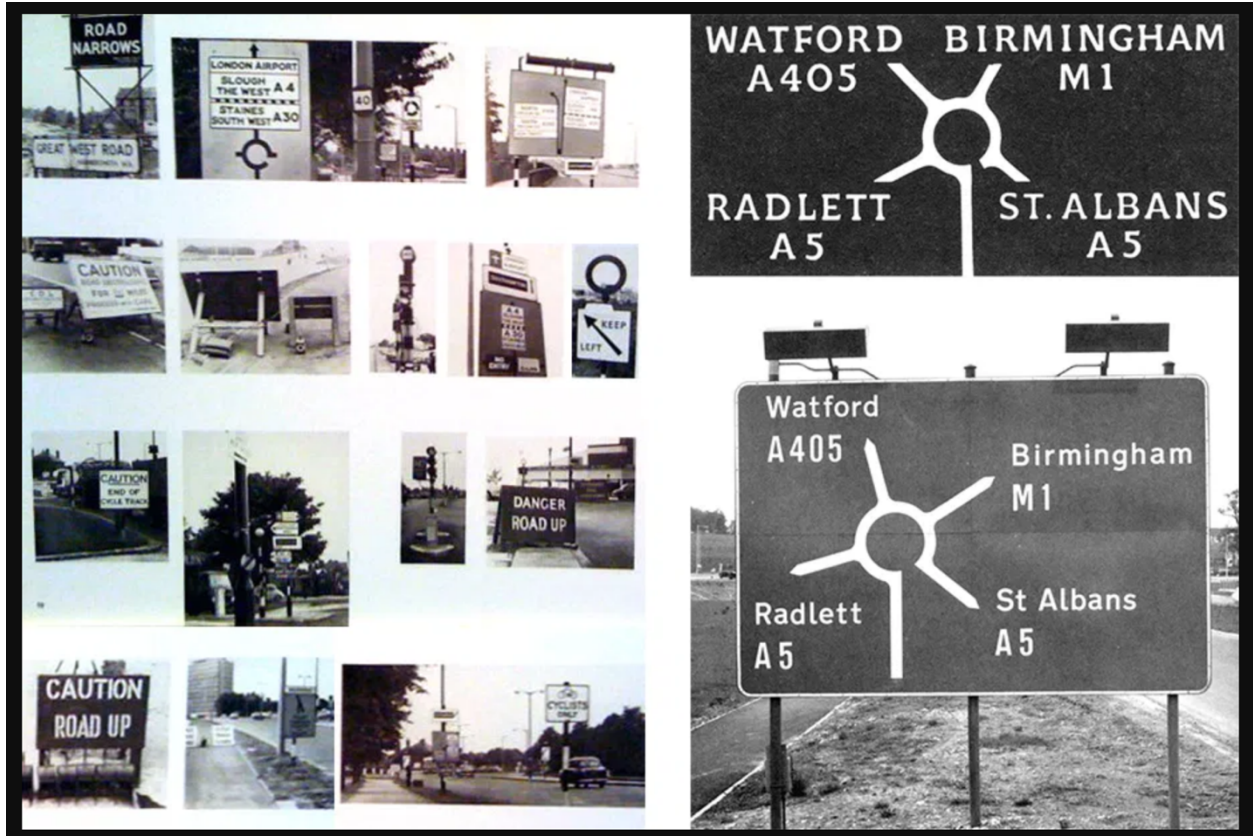




*Adhesive labels for P&O Orient Lines (Design Indaba, 2016). This is Calvert's first official attempt at lettering and including a customized typeface. She created a crisp geometric font that works extremely well with the geometric elements of the overall design.*

### **Making Sense of British Road Signage**

In 1961, Herbert Spencer, creator of *Typographica*, published a photographic article about what the unruly display of roadway signage he saw driving from Marble Arch to Heathrow, a 15.7 mile drive. Spencer, a designer, photographer, and journalist, recorded all of the confusing signage with his notes and his photography. It was a mishmash of shapes, colors, and fonts (Selka, 2012).



*Left and top right: Road Signs from Typographica (Herbert Spencer, 1961). Bottom right: Calvert's proposed sign (Graphéine, 2018). Many of the signs that Spencer documented are of a mixture of sizes and styles. The one common aspect to the signs he documented was the use of all capital letters. In Calvert's revamped proposal it enlarges the white space around the text and transforms the text into lettering that includes both uppercase and lowercase letters making it easier to read.*

This collection of non-uniform signage made it unsafe for drivers, especially as the demand for vehicular transportation was rapidly increasing in this post World War II era. Also speed limits were increasing on major highways, meaning drivers had less time to process the signage. It was key for the new signage to be quick to read and understand.

The increased demand for motor vehicles raised the demand for motorways, and thus, the need for coordinated road signage. The German Autobahn was a marvel of the times and inspired other high-speed roadways. In 1950, the Anderson Committee, headed by Collin Anderson, was formed in London to begin research into developing England's first Motorway. England's road network at this time was comprised of several classifications of roadways. The main roadways were known as *Motorways*, or M-Roads, and the next level of main roads were known as A-roads, and finally the secondary roads were known as roads known as B-roads (Brown). There are many other minor, small town classified roads that are not intended to exist but do; this includes C-roads which are small roads that may not be noted on maps, and U-roads which are unclassified roads are those reserved for rural lanes and residential streets. (Road).

Spencer's documentation proved the need for road sign uniformity was vital to the new motorway that was to be launched in the early 1960's. Once the government appointed Anderson, he and his committee searched through Europe to identify successful ways provinces were handling their signage (Murphy). Luckily, Anderson knew just the team who could tackle this road sign signage debacle. Not only was Anderson familiar with Kinneir and Calvert's work on the luggage labeling system for P&O, but he had also seen the innovative signage they did for Gatwick Airport (Roberts, 117).

Collin Anderson, Chairman of the *Anderson Committee*, reached out to Kinneir and appointed Kinneir and Calvert to design the signage for the new Motorway (Murphy). The driving question was one that Kinneir proposed, "What do I want to know, trying to read a sign at speed?" (Maynard, 32). Their goal for this task was, in the words of Calvert, to "Make maximum sense and minimum cost" (Murphy).

Design is always about understanding who you are designing for and both Kinneir and Calvert ascribed to this practical truism. As much as a designer would like to push the boundaries and *have fun*, knowing and understanding that this road signage was for the public, there was a great deal of responsibility that came with that (Calvert, 2013). While color and uniformity was vital to the project, typography was the key. Anderson asked for the team to utilize the German letterform, like what was used for the Autobahn signage. Kinneir and Calvert negated that and felt that it was too soon after the German Blitzkrieg on Britain to use something straight from Germany that would have a long-lasting impression on the British public (Alagiah, 2019).



*An example of large German lettering from an Autobahn sign (Flipppo, 2016). Notice the clarity of the large white lettering against the royal blue background. The use of arrows makes the signs and directions extremely clear, even for a driver at a high rate of speed.*

However, the German typeface was clean and legible and there was substance to this request for the German letterform being adopted into the British Motorway Signage. Specifically, they were influenced by the typeface Akzidenz Grotesk (Roberts, 117). This typeface was created by Hermann Berthold who created the Berthold Type Foundry. There were

multiple variations and weights of Akzidenz typeface because *Akzidenzen* actually means *commercial printing* in the German language. The Berthold Type Foundry's official typeface of Akzidenz Grotesk was released in 1896. It is still thought of as a modern sans serif typeface (Studiobio).



Akzidenz Grotesk (Studiobio, 2018). *Akzidenz Grotesk is a German-based font that is still seen as a very modern sans-serif font despite its age of over 100 years.*

As Calvert and Kinneir drew inspiration from Akzidenz Grotesk, they developed a letterform for the road signage they were designing; they named it *Transport*. The team wanted to create a type form that utilized both uppercase and lowercase letters as opposed to the block style uppercase-only letters used in all previous British roadway signage (Calvert, 2013). Using all capital letters creates a visual line, or rectangle of text whereas using both uppercase and the lowercase letters, creates a memorable shape. This shape is the first thing that your brain recognizes when it reads so this was the typographic key for easy reading at high rates of speed (Alagiah, 2019).

As Kinneir and Calvert worked on designing the letterforms, they paid particular attention to the curve of letter terminals and the flow from one letter to another. They formulated letter spacing to maintain this flow so that it was not solely a letter, but indeed a word shape characterized by letterforms. Margaret does not like calling it a font or typeface but, “A letterform specifically read by the driver, whilst traveling at speed,” (Alagiah, 2019).



*Closeup of Transport Typeface Sketch. This is Calvert's hand rendering of her and Kinneir's Transport font for the British Motorway. They focused on creating a clean sanserif typeface where the letters flow into one another and notice how Calvert is covering up the finial of the letter 'a'. They note measurements of the letterforms in order to maintain consistency and proper letterspacing, or kerning.*

The signs went through testing before they were installed officially on the Motorway. They were tested out in several locations including Hyde Park, Knightsbridge in an underground

parking lot/car park, and Lancashire. (Roberts, 117). After the success in these locations, the signage was prepared for the Motorway (Roberts, 117). The United Kingdom's first motorway was known as The Preston Bypass which is now part of the M6 which opened on December 5, 1958 (Jock). Upon completion of the motorway, Tg-Osborne, a civil servant, suggested that Calvert and Kinneir expand their signage design work from the motorways to the whole English road system (Victoria). Thinking back while standing on the new Motorway and seeing the signage that they created, Margaret noted that, "It was really pioneering. You really believed in it and wanted to be part of it – not in the sense of glory" (Murphy). It is refreshing that both Kinneir and Calvert were humble in their work especially when this project required design and wayfinding ingenuity and was groundbreaking in the United Kingdom. They made it easier for people to travel and their signage was well perceived and appreciated by their audience.

Shortly after the immediate success of the Motorway and its signage, the British government asked Anderson to head up the expansion of the road signage project to include the rest of Britain's road signage. After Anderson declined, a new committee was formed, known as the Worboys Committee headed by Sir Walter Worboys (Design Museum). The Worboys Committee formulated a detailed report of all the traffic signs in the United Kingdom and presented solutions that Calvert and Kinneir proposed on April 18, 1963. The committee saw that there was no uniformity in the appearance of the current signs; the signs were hard to read at night, they were too small, were only in English, and most importantly, the road signs lacked the legibility to be read at a distance. It was Kinneir and Calvert's duty to address these inconsistencies and unify the rest of the British road signs through consistent text and iconography. Their job was to design new signs and to create detailed guidelines to which all future signs had to adhere. (Warboys, 1963).

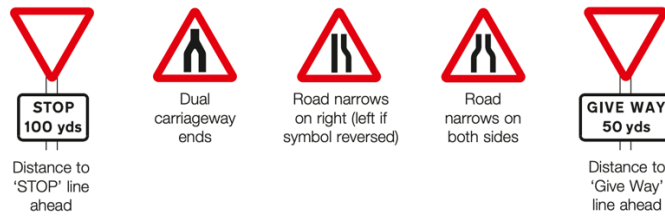
Designing road signs for the rest of the United Kingdom included creating signage for more than just highways. It was everything from temporary signage like construction notifications to residential road name signs. Calvert and Kinnear would present concepts, listen to feedback, or criticism, and re-do the work. One of the largest hurdles was explaining why the redesigned signage would work for Britain. The committee that the duo was working with were comfortable with what they knew and reluctant to make a change that may have seemed arbitrary. Kinnear and Calvert's job was to show the committee that the new roadway signage comprised an entire system that would eventually add clarity and indicate the size of the roads and their trajectories (Alagiah, 2019).

Beyond typography, the team developed shapes clearly designating the different categories of roadways in England along with warning signage and commands through combinations of shapes and color. The shapes and colors provided a quick visual cue for motorists, before they had to decode the text (Murphy). Each shape they used had a clue to what the sign meant. Triangular shaped signs were to warn drivers of something upcoming, such as a pedestrian crossing. Circular signs were to issue commands, such as drive at a specific speed limit. Rectangular signs were to relay general information such as a street name. Then there were specific color combinations such as white lettering on blue or green backgrounds for place names. Primary roads used yellow lettering for road numbers on a green background while secondary routes used black lettering against a white background.



## Warning signs

Mostly triangular



Distance to 'STOP' line ahead

Distance to 'Give Way' line ahead

## Signs giving orders

Signs with red circles are mostly prohibitive. Plates below signs qualify their message.



Entry to 20 mph zone

End of 20 mph zone

Maximum speed

National speed limit applies

School crossing patrol

## Direction signs

Mostly rectangular

Signs on motorways - blue backgrounds

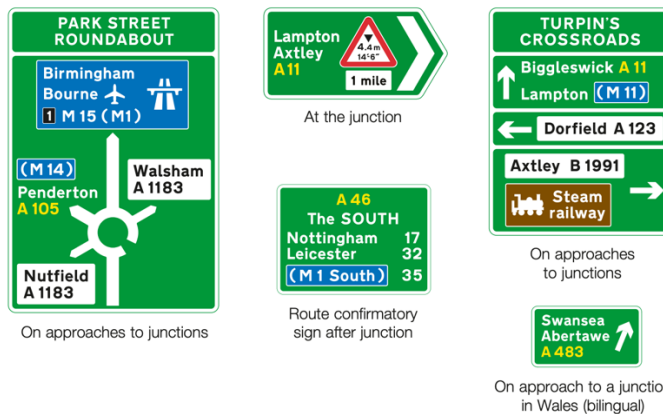


At a junction leading directly into a motorway (junction number may be shown on a black background)

On approaches to junctions (junction number on black background)

Route confirmatory sign after junction

Signs on primary routes - green backgrounds



On approaches to junctions

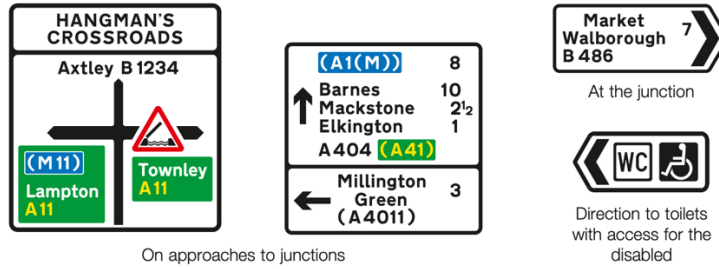
At the junction

Route confirmatory sign after junction

On approaches to junctions

On approach to a junction in Wales (bilingual)

**Signs on non-primary and local routes - black borders**



Green panels indicate that the primary route starts at the junction ahead.  
 Route numbers on a blue background show the direction to a motorway.  
 Route numbers on a green background show the direction to a primary route.

**Other direction signs**



*Know your traffic signs (Department for Transport). These signs show examples of the road sign categorization and give a sampling of the variety and modular aspects of the road sign system designed by Kinneir and Calvert..*

Calvert worked tirelessly on the iconography for the signage, but her most challenging sign and icon to make was the children crossing sign. She ultimately based the figures in this sign on a younger version of herself (Victoria).

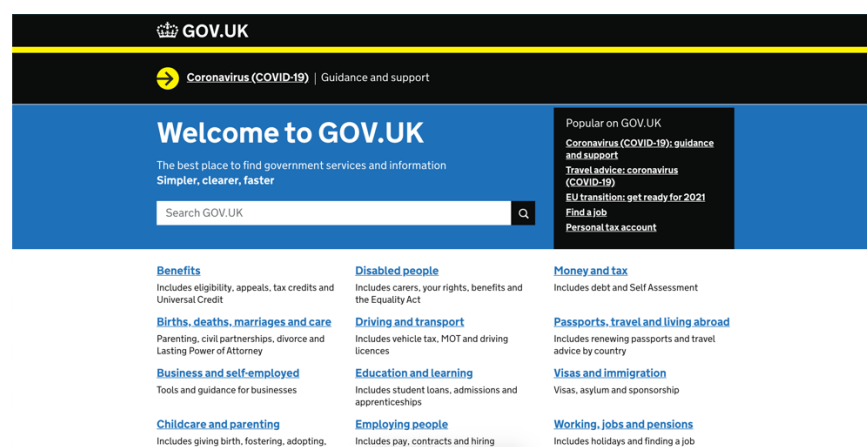


*On the left, the circular sign depicts a command to travel at 50 km/h. The triangular sign on the right depicts a warning ahead of Children Crossing sign.*

The rest of the road network signs were officially launched in 1965 (Murphy, 2015). The signage system that Kinneir and Calvert developed influenced the world on uniformity of highway signage (Fendly, 169).

### Transport Font gets Digitized for the 20th Century

In 2012, nearly 45 years later after the team had launched the British road signs, Calvert worked closely with Henrik Kubel to release an electronic version of the font, *Transport*, called *New Transport*, for computer-based usage. Henrik Kubel is a typeface designer based in London. He is a partner of A2/SW/HK + A2-TYPE (a type foundry) (Kubel). This typeface was used for the gov.uk website and received the *Design of the Year Award* in 2013 (Roberts, 117). The website contains all of the necessary information a UK citizen, or citizen to-be, may need to access from passports to tax payments. It is a complex site with a vast amount of information but is highly organized, making it easy to navigate and find exactly what you need.



*Gov.uk homepage (Gov.uk, 2020). This homepage may look simple boasting only three colors and no photography, but it is a pathway to an expansive collection of information. This site*

*features the font, New Transport which is the digitized version of Margaret's Transport font. It provides a clean digital typeface that allows viewers to easily read and navigate through the site, just like Britain's road signs.*



*The Transport font on the right displays a sans serif font that has slight curves as well as a small margin of space on each letter that will naturally add kerning. On the left, the Rail alphabet from Gatwick Airport is a more as a more geometric typeface that creates sturdier lettering which is great when used for a strong typeface while not in motion. While both typefaces are similar, they work different visually.*



*Transport is reminiscent of the widely known typeface, Helvetica, and they were created only a few years apart from each other. Helvetica was created in 1957 by Swiss designer, Max Miedinger and was also inspired by the German Typeface, Akzidenz-Grotesk (Fussel). The notable difference between Helvetica and Transport is the curves of the letters in Transport and the more angular aspects in Helvetica. However, these are created like-mindedly, around the same time while being countries apart and without the high-speed technology of the 21<sup>st</sup> century.*

Kinneir and Calvert were later approached to create a typeface for the British Rails after their notable work on designing the Transport letterforms from the British Motorway (Beauty). The idea of the Transport font was to be read at speed. The goal for the British Rails System font would be to create a font that reads well when stationary. This would be used on printed train schedules, train sign schedules, the trains themselves, thus clean letterforms and appropriate spacing would be paramount. This was the intent of the Rail Alphabet for the British Rail System. This typeface became a key element in the corporate identity that DRU, Design Research Unit, established for the British Rails in 1964 (Beauty). British Rails, the countrywide rail system is not to be confused with the London Underground, more commonly known as the

*Tube*. The Underground's logo was designed by Edward Johnston, 45 years prior to the birth of the British Rails' double arrow logo.

In 1964, Margaret was promoted to partner at Jock's firm, and the name was expanded to *Kinneir Calvert and Associates* (Royal). Several years later, young designer David Tuhil, who graduated in 1969, joined the firm and they expanded once more to become *Kinneir Calvert Tuhill* in 1970. Nine years later, Jock retired to spend more time with family and the firm ceased operation in 1979 (Jock).

Over the next twenty years, Calvert undertook more projects and made a return to the classroom as a professor. One of her later design projects included developing a slab serif typeface for the Tyne and Wear Metro system located in Newcastle, UK, about 276 miles north of London.



*Manors Station Entrance (Wright). The London Underground logo that was birthed in 1919, bodes a san-serif typeface which I believe has aided in creating a timeless logo design over the century. The Tyne and Wear Metro system also has a similar impact with its slab serif featured font. The clean angles and subtle curves of the letterforms balance the geometric and organic aspects, creating a neat and tidy font to have been the signature font for this rail line for the past 40+ years and will continue through time.*

It was not until 1980 when the font that she developed for Tyne and Wear Metro was adopted for commercial use. It was at that point when it received an official name, “Calvert,” and is now available digitally (Design Indaba).

In 1987, Margaret Calvert was appointed the head of Graphic Design at Royal College of Art (Roberts, 118). Calvert headed up the program that was originally called *Commercial Art* but later renamed to Graphic Design. It had “less to do with advertising and more to do with design and typography and lettering. You had to be able to draw, photography was very important, and, of course, moving image,” (Margaret Calvert: Sign of the times). She added new, valuable instructors and the students thrived in the graphic design program (Royal). In addition to adding to the line of professors, she had the foresight to save the letterpress student studio even as computers became the new wave of technology (Royal). Ironically, her department also was able to gather funds for one computer to be added to their program (Royal). She was the head of this department for 3 years, leaving in 1991 (Design Museum).



As she was entering her 70's and now in her 80's, she tries to engage in enjoyable projects. In 2008, Margaret worked on a painted piece called, *Women at Work* (Brewer). This piece is derived from one of the signs she created as part of the U.K. road signage project from the 1960's, *Men at Work* (Brewer). Calvert actually stole the original road sign right off a street

in London, took it home and painted overtop it. It became a self-portrait of Calvert digging, representing a woman working. (Klee). About 10 years later, Calvert began working with Matthew Rich at Jealous Print Studio, a studio and gallery based in East London, to create screen-printed copies of her original over painted road sign. This became her first print that features a beautiful 16-color screen print process (Brewer).



*Close-up of Calvert and Rich's 16-color print (Jealous Studio). To print something that is 16 colors in this method is astounding. Perhaps it symbolically shows the hard work that women have engaged in over the many years working towards equality. Every scratch and rust spot from the original painted artwork has been included in the screen print as opposed to reducing the colors to a simple two-color print.*

Now Margaret is 84 and she is focusing on larger public projects and has retired from full-time design work. She still continues to collaborate with Henrik Kubel from time to time and he is her source of projects that serve the public (Alagiah, 2019). Calvert was and still is an anomaly, paving her own path. She stayed true to her core values of respecting herself and staying humble even though some of her work has been seen and used by millions of people. She



never married even though it was typical of the mid-century woman to be married and have children. Instead she worked and worked very hard as opposed to “wearing skimpy uniforms” of the women working at Pentagram, and other large agencies (Design Indaba). Calvert is truly a design pioneer in many ways from being a woman who stayed true to her values and defied the British female stereotype and status quo. Her work has impacted her country and will continue to leave a lasting impression on it due to her typography and comprehensive road sign project with Jock Kinneir. She found success through her hard work and skill throughout the course of her life and she is happy.

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