

## UK Disability History Month Broadsheet 2020

Text Only version of Broadsheet with description of illustrations in square brackets.

[Disability History Month Logo top right of page.

A black triangle pointing upwards. A yellow circle in the middle of the triangle says 'disability history month' under the bottom of the triangle are letters 'ACHIEVING EQUALITY' left side 'CELEBRATING OUR LIVES', right side CHALLENGING DISABILISM'.]

*“We need to make every single thing accessible to every single disabled person.”* Stevie Wonder

[Graphic: Shows a Zebra crossing leading to pavement and house. The kerb is dropped and textured. The light on crossing has peeps to cross and green light. On the crossing are Stephen Farfler in his hand driven vehicle, a Victorian woman in a Bath Chair and a Asian man in electric chair. On the pavement is a black woman with a white cane. On the road is written 'IT for All' In the building side is a digital information point. At the end of the building are steps. No ramp. The caption reads 'Access: How Far Have we come? How far have we to go? UKDHM 2020. UKDHM.org]

In our 11<sup>th</sup> year we are focusing on Access and asking the questions ‘How far have we come? How far have we to go?’ UK Disability History Month runs from the online launch on the evening of 18<sup>th</sup> November to 18<sup>th</sup> December 2020.

For disabled people **access** is now a fundamental human right, as is gaining participation on an equal level with others, regardless of our impairments. Disabled people have struggled for many years to change society’s lived physical and information environment.

### Only the Struggles of Disabled People have led to Improvements

There had been national laws, building codes and standards, partially acknowledging the need for access in the previous 120 years. All of these were fought for by disabled people, their organisations and some non-disabled led charities. People with sensory impairments were in the vanguard, arguing for the teaching and use of Braille, Sign Language, gaining concessions in a minority of mainly higher income countries. In 2013 organisations of Blind and Visually Impaired People campaigned and won the Marrakesh Treaty which made easier the production and international transfer of specially-adapted books for people with blindness or visual impairments. This established a set of limitations and exceptions to traditional copyright law. In the last 40 years, People with Learning Difficulties have fought for access to ordinary education. In the 1990s, Direct Action Network (DAN) chained themselves to buses until the date for accessible transport was brought forward. Now Neuro-Diverse People and their organisations are battling for their acceptance and the adjustments they need. The first International Human Rights Treaty to explicitly include **accessibility** as a principle was the UN Convention on the Rights of Persons with Disabilities (UNCRPD), 2008.

### Article 9 UNCRPD Accessibility

“9.1 To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on

an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, inter alia:

- a) Buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces;
- b) Information, communications and other services, including electronic services and emergency services”.

The UNCRPD prohibits discrimination and requires States to take measures to ensure accessibility of the physical environment and information and communications technology. The UNCRPD goes into much greater depth than other human rights treaties in setting out the steps that States should take to prohibit discrimination and achieve equality for all. **The UK ratified in June 2009.**

**Walking aids** - sticks, staffs, crutches and various hand crutches are common throughout human history and cultures. People with a mobility impairment had to adjust themselves to the built and rural environment as it was designed for non-disabled people. They were often subject to stigma, but generally had to just get on with things with their walking aid.

[5 images in a row, left to right: A man in ancient Greek costume seated with a hammer - Haephestus who had a club foot in Greek mythology. Standing over him a woman with shield and spear-Aphrodite. On ground a crutch; an old man with a stick on an amphora talking to a warrior with helmet, shield and spear; Staffs as Walking Aids in Ancient Egypt and Middle Period Egyptian walking with staff. Carved in stone relief with loin cloth; Egyptian Wall relief Man with polio weakened leg and staff doing things with food and drink with woman and child looking on; Pieter Breughel the Elder 'The Cripples' - 5 men with crutches, false legs all covered in fox tails denoting evil who seem to be dancing. Medieval period.]

As in Brueghel's picture there is a note of scepticism, Hieronymus Bosch's engraving (1599) entitled *Cripples and Beggars* shows a variety of walking aids.

[Left: Engraving shows a variety of walking aids.]

It has a subtitle 'Avoid walking and gain a fat income', shades of Benefit Street or the Sun's campaign to stop Benefit scroungers. When investigated, less than 1.5% of benefit claims by disabled people are fraudulent.

Throughout history and still around the world in low income areas, ambulant impaired people have to come up with their own solutions to barriers to mobility.

[photo left (colour): Nigerians outside hut with washing hanging. Three are on the floor, using a hand-made mobility aid consisting of a board to sit on and small wheels. They move by pushing the ground; Photo right (colour): Flood survivors' camp, Bangladesh. Woman in Sari and taller Asian man with red hair and beard walking on wooden under arm crutches.]

## History of mobility devices

Litters and Sudan chairs predate wheelchairs as a means of moving disabled people or high-status people.

[3 images in a row above, left to right: black & white photo North American Plains First Peoples with Litter. Native American on horse with two long cross poles carrying a person behind on a litter; Luttrell Psalter, England 1386 colour image - transporting disabled person on barrow. One man at each end of the barrow. All three people in medieval dress; Colour image of a wounded knight carried in basket 1340, UK. Two people carrying two poles suspended from which is a basket with short feet beneath. In the basket reclining is a wounded knight.]

### Ivar the Boneless<sup>1</sup>

Norse myths tell of one of the leaders of the Viking attacks on England having to be carried into battle as he was physically disabled [probably brittle bones]. Ivar the Boneless, youngest son of Ragnar Lothbrok and Princess Aslaug, was a powerful Viking leader. He was considered to be the wisest, strongest and most skilful of warriors. Despite an inability to walk, he led raiding conquests across Northern Europe and the invasion of England in 865 AD. He was carried on a shield or poles but had great upper body strength... The mind of Ivar was considered a much stronger weapon than those swords and shields carried by other Vikings. The myth is good box office and Ivar is featured as ambulant impaired in the recent smash series 'Vikings'.

[Right: colour photo from 'Vikings' TV series Ivar the Boneless (sitting). Six men in Viking dress, in forest clearing. All but Ivor are standing. They are Ragnar Lothbrok and his sons. Ivar turned out to be the most important and powerful son (Cre: "Vikings" TV Series)]

A wheel barrow used for transporting grain and people is recorded in China C6th BC. Here Confucius (525 BC) is using it to be pushed to talk to children. This was used for transporting people with reduced mobility.

[Image left: Old Chinese man being pushed in a chariot-shaped chair on wheels. The man is talking to children in a landscape.]

Stone inscriptions from Ancient China and Greece suggest that wheelchair-type furniture was used at least since C6th BC.

[2 images: Chinese carved image of man in wheelchair structure, 6th Century; Carving found on Greek Vase, 525 BC.]

In 1595 one of the best-documented early examples was made by an unknown inventor for King Philip of Spain, who in later years suffered from severe gout which made walking difficult. This chair was elaborate in its design with plush upholstery, arm and leg rests and four small wheels which meant that he needed to be pushed around by a servant.

[Image right: Line drawing in ink of a man with a rough round his neck and a hat, leaning back in a reclining chair with foot rest and small wheels on all four legs.]

In 1655, the first self-propelled **wheelchair** was invented by a paraplegic clock-maker of Nuremberg, Germany, Stephan Farfler (1633-1689), who built his own mobility aid at 22 after having broken his back as a child. Using his mechanical expertise, Fafler's wheelchair frame was based on a three-wheel chassis and worked by turning handles attached to a geared front wheel using a system of cranks and cogwheels. **The forerunner of the bicycle.**

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<sup>1</sup> <https://bavipower.com/blogs/bavipower-viking-blog/ivar-ragnarsson-the-cursed-child-and-a-military-genius>

[Image right: Engraving of Steven Farfler, sitting in a structure that looks like a child's box car operating a lever on either side that connect with a cogged wheel to propel him.]

In the high income world in states with funded rehabilitation services, a vast array of wheel chairs are these days available. In the UK, Personal Independence Payment can be used to purchase electric, stair-climbing, rise and fall chairs and adapted vehicles hired from Motability to carry them around. Many have lost this under recent austerity measures.

[4 images in a row. Left to right: colour photo of Bath Chair used to push 'invalids' to take curative waters in the Spa Town 1750. The chair has three wheels, 2 large at rear and a smaller wheel at front. Padded seat with folding rain cover. Attached to the front wheel is a steering bar. The chair is propelled by someone pushing, but steered by the occupant; colour photo of a padded wooden chair with arm rests and foot rest. Two wheels near front, with cogs and gears on each side. It is propelled by occupant pushing two levers. There will be two smaller wheels at back. Georges Couthon, one of the leaders of the French Revolution used a mechanical chair in Paris, 1791-1794; Everest Chair 1932 - first tubular folding wheelchair. Made of lightweight tubular steel and large wheels next to seat with a rim for the occupant to push. At front two foot rests and two smaller wheels to steer by motion of the larger wheels; colour photo of a Wrigley Electric Chair 1963, probably the first in UK. Tubular brown steel structure with back and bottom blue cushions, three wheels. Under the seat are a motor and battery, which power two rear wheels. At front is central steering column which turns the front wheel.]

Much of the urban environment has been made accessible with dropped kerbs, ramps and lifts due to early struggles in 1970s. Only 7% of the disability community need to use wheelchairs though it is often the symbol for disability access.

[Right: White match stick figure on a blue background sitting, with a white semicircle joining leg to back.]

An estimated 1% of the world's population, or just over 75 million people, need a wheelchair. In most developing countries, few of those who need wheelchairs have access, production facilities are insufficient and wheelchairs are often donated without the necessary related services. Providing wheelchairs that are appropriate, well-designed, fitted to the person, can deal with rough terrain, not only enhances mobility but opens up a world of education, work and social life. David Constantine, 30 years ago newly paraplegic, started designing chairs for rough terrain and set up the organisation Motivation to support the local manufacture of wheelchairs.<sup>2</sup>

[Image left: colour photo of David Constantine, Mr Motivation, in rough terrain manual wheelchair.]

Mobility tricycles with hand pedals can be made locally from bicycle parts but cannot navigate rough terrain.

[Image right: Tricycle chair. Colour photo of a woman with child riding on a hand pedalled tricycle chair, with African hut behind. Locally produced and no good for rough terrain.]

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<sup>2</sup> <https://thebristolmag.co.uk/mr-motivation/> and <https://www.motivation.org.uk/our-story>

## Disabling Barriers

UKDHM subscribes to a 'social/human rights model' of disability in which we recognise disabled people are disadvantaged primarily by barriers of environment, attitude and organisational practices. These barriers prevent or hinder us, people with a wide range of impairments, from accessing transport, buildings, educational establishments, hospitals, workplaces, housing, retail and leisure facilities. There have always been disabled people, but only in the last 40 years the need to get rid of barriers has been increasingly recognised, under pressure from us and the legislation we have won.

Prior to this and still in many people's minds, disability is seen as a tragedy that happens to us because of genes, disease, accident or war and we need to be rehabilitated to overcome the impairment in our body or mind or learn to have second class lives, often isolated and segregated. Having an impairment can sometimes be painful, life shortening and disempowering, but having to deal with prejudicial barriers based on negative attitudes from the past, is discrimination that denies us our human rights. When the barriers are in the built environment, transport, information system or elsewhere, it has been a choice to design them in a disabling or enabling way. Therefore, awareness and attitudes are the key to change, backed up by strong legislation.

[Image left: black & white photo of a march of disabled people led by four women in wheelchairs pushed by personal assistants, holding a banner that reads 'British Council of Organisations of Disabled People' (the last two words are much larger and in a different colour).]

## Rights and wrongs of access

[Two rows of 5 images. Top row, left to right: Colour photo of two men struggling to lift a woman in a power chair 9 inches up on to a train carriage; colour photo of two men lifting a woman in a manual wheelchair up a flight of stairs with a third man helpfully looking on; Visual Impairment Awareness Training - two colour cartoon figures both black. The seeing man says 'Go Over there' and points. The Woman with a white cane says 'Where is over there?'; Etiquette cartoon - two young men, one shouting at the other. Caption 'DON'T SHOUT AT A DEAF PERSON HOPING THEY WILL HEAR YOU!'; A computer screen of closely typed text with long sentences and complex words. This could be voiced by the computer and could be partly accessible; A black cross underneath this row, indicating the wrong approach. Bottom row, left to right: Colour photo of two men in manual wheel chairs wheeling themselves on to a train carriage flush with platform; a picture containing paved ramp with hand rail on both sides with a disabled access sign on wall; cover of book Access Technology for Blind and Low Vision Accessibility. Picture of a smart phone interacting with Braille light key board; colour photo of a deaf student using smartphone feature to sign and small window of person signing back; colour photo of an older woman and younger man with learning difficulties, holding up 2 posters saying 'Easy Read' with pictograms and plain text; a green tick underneath this row, indicating the right approach.]

There certainly has been progress, even though the UK legislation is weak and it is left to the individual and their family to enforce it.

We as disabled people are always playing catch up, asking for reasonable adjustments and support to navigate a system largely not designed to include us. This is why the UNCRPD talks about the goal of **universal design**

“ This means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. “Universal design” shall not exclude assistive devices for particular groups of persons with disabilities where this is needed”. This is fundamentally different from reasonable adjustment. **“Reasonable accommodation** means necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms”.

Universal design innovations in Information Technology mean in virtual space many of our barriers can disappear. To be accessible, a technology must be usable in an equal manner by all users without relying on specific senses or abilities. The technology must be compatible with the assistive technologies users may rely on: narrators, scanners, speech recognition, alternate input, enlargement, voice-activated technologies, pictograms and easy read programmes, online sign interpreters, and many other devices disabled people may employ.

**When World Wide Web** was invented in 1994, Tim Berners-Lee kept accessibility at the forefront in the World Wide Web Consortium (W3C). At the beginning, browsers simply displayed text and different accessibility contexts were simpler to adapt to. Soon images, blink tags etc. made their way onto the web, and things got more complicated. The Web Accessibility Initiative (WAI) was founded to take access to the web forward. In 1999, the Web Content Accessibility Guidelines (WCAG) were published as an official W3C recommendation. Making the Web Accessible <https://www.w3.org/WAI/> which is linked to the law directly in the USA, Australia, Canada, New Zealand, China EU and less clearly in UK, Sweden and many other countries WCAG2. <https://www.w3.org/WAI/policies/>

[Image right: diagram with a screen in the middle containing a globe symbol. Around it there's a circle with four bubbles. At the top an eye, at 3 o'clock a finger pushing button, at 6 o'clock a head with brain, at 9 o'clock an ear. The diagram shows the need for universal access.]

**Blind and Visually Impaired IT** used access. Traditional forms of access to information such as print have meant that people who are blind and visually impaired have more difficulty in accessing the same information which people who are sighted take for granted. Increasingly, computers are being viewed as the solution to the problem of access to the printed word. Now they have different ways of accessing these devices. Blind people use assistive technology, including screen readers, refreshable braille displays and digital screen magnification to interact with high-tech products.

**Assistive technology** is any hardware or software used by disabled people to access computers, phones, tablets and printed materials. Different impairments require different technologies.

#### **Examples**

**ZoomText** This software not only provides screen magnification but many other useful features, such as being able to manipulate colour texts and other elements which are displayed for easier viewing. For example, instead of seeing the traditional black text on a white background, the user might set it to display the text as green on a black background. Here's [a demo showing how ZoomText works](#). It is commercially produced and expensive.

**JAWS, Job Access With Speech** was the world's most popular screen reader, developed for computer users whose vision loss prevented them from seeing screen content or navigating with a



mouse. Last year NVDA replaced it as the most popular. Ted Henter is another blind inventor who is demolishing stereotypes. Water-skiing is just his hobby, though he was a world champion. His breakthrough invention is JAWS which provides speech and Braille output for the most popular computer applications on your PC. Blind people can now navigate the Internet, write a document, read an email and create presentations from their office, remote desktop or from home. Henter-Joyce produced JAWS, a screen reader for personal computers using MS-DOS, and later Microsoft Windows, which is sold via a company called Freedom Scientific

[Image right: colour photo of Ted Henter in suit and tie, holding an award from the (AFB) American Foundation for the Blind for inventing JAWS.]

**Non Visual Desktop Access (NVDA)** is a free, open-source, portable screen reader for Microsoft Windows. Michael Curran and James Teh met as children on an Australian music camp for blind people. They shared a strong interest in computers. Several years later they joined forces to help improve the accessibility of computers for blind and visually impaired people.

[Image left: colour photo of Michael Curran and Jame Teh, two young men, founders of NVDA standing, smiling at viewer.]

For blind people to use a computer, they need a screen reader which reads the text on the screen in a synthetic voice or with a braille display. But in many cases screen reading software costs more than the computer itself. In the past this has left computers inaccessible to millions of blind people around the world. This is a critical problem, because without computers, access to education and employment is severely limited, not to mention everyday functions such as online banking, shopping and news.

In April 2006 Michael began to develop a free screen reader called NVDA (NonVisual Desktop Access) for use with computers running on Windows. He invited James, who had recently completed his IT degree, to develop the software with him. They founded the not-for-profit organisation NV Access to support the development of the NVDA screen reader. Before long they were able to work full-time on the project, thanks to a series of corporate grants and individual donations. NVDA has been translated by volunteers into more than 55 languages and been used by people in more than 175 countries. It has also won multiple awards.

<https://youtu.be/Ks7AwV ux00>

The Technology for Blind and visually impaired people is developing all the time. Companies like Microsoft, IBM, Google, Hewlett Packard who produce hardware and software, some years ago decided that the demand for specialist adaptations to their products was too small and so they should go for universal design with access features built into all their products. Commercial pressures and lack of strongly enforced legislation have meant this is not adhered to and so there will continue to be a need for supplementary assistive technology. This is a fast changing field and organisations like the Royal National Institute of Blind People play an important part in making their members aware <https://www.rnib.org.uk/practical-help/technology/resource-hub>.

[Image right: colour photo of Chieko Asakawa, a researcher at IBM Japan who is blind, using IBM Home Page Reader.]

New Artificial Intelligence Technology holds out the hope of much improved access.

[3 images in a row, left to right: The Microsoft Translator conversation web site visible on a laptop screen; Helpicto showing photos, pictograms and single words like black boy eating- 'manger', whole and sliced up apple picture 'pomme', 'Oui' with a thumbs up; a close-up colour photo of a person using a smartphone to read a barcode on a soda can.]

[Microsoft Translator](#) - site provides free resources, tools and how-to guides for live captioning and translation in the classroom to help deaf students.

[Helpicto](#), an application that turns voice commands into images, is enabling children with autism in France to better understand situations and communicate with others.

[Seeing AI](#) and auto [alt-text](#) features are helping narrate the world for people who are blind or have low vision.

There are strong commercial arguments for IT firms to understand accessibility. Not all assistive devices are affordable or available for many disabled people in low and middle income families. The recent lockdown for Covid-19, when 1.5 billion children were sent home, showed those on higher incomes were able to access on line learning, but those from poor circumstances, especially disabled learners were not catered for and have fallen further behind. Free market economics cannot solve such problems, only states and international agencies working in the interests of everyone can.

[Image left: advert white text on blue background, titled '8 Stats Shaping the Delivery of Today's Web & Mobile Apps' -

88% of online consumers less likely to return to a site after a bad experience; 62% of people expect a consistent experience across mobile and desktop; 5X more users abandon a task if a site isn't optimised for mobile; 53% of mobile site visitors abandon page if it takes 3+ seconds to load; 62% of mobile users uninstall an app that doesn't work well ; £950B is disposable spending power of disabled people; £1.35 T of lost business revenue stems from software annually; 92% of web applications have security weaknesses or flaws that can be exploited. Plan it  
'plainittesting.com/21-digital-stats.]

### Access for Neuro Diverse People

A growing group of disabled people are Neuro-Diverse including those on the Autistic Spectrum. The need to moderate sensory overload and provide calming spaces is only recently being recognised as those who identify as neuro-diverse and their families.

[Below: Two adjacent comic-book style drawings from Activate Your Voice For Autism titled HEAR OUR SPECTRUM OF VOICES, with letters in colours of the rainbow. First image: two girls trying to communicate one black, one white - bubble 'Hello'. Black girl holding paddle says 'can't communicate.' her bubbles 'You use sign language too?' 'Hello', 'It's so nice to meet you', 'How are You?'. Bubble - "How will everyone know how much I know and have to offer if I can't always tell them? There is so much more to communication than being able to speak. Be patient and listen, not just to spoken words, but to all words, all forms of communication"; second image: Boy holding a paddle 'Not aware of things'. Two girls behind him, one whispering to the other behind her hand and saying "He is autistic, you know stuck in his own world." Other says " He never looks at people when he's talking." Bubble from Boy - " Assume I hear everything. I take in so much more



than you think. Years from now, you'll be shocked to find out just how much of everyday life I remember and how much I was taking in about what went on around me."]

<https://geekclubbooks.com/spectrum-voices->

### Locked in Children

Another group of disabled people who are denied their rights are those with cerebral palsy (CP) or other conditions that prevent them speaking or operating keyboards without adaptations. Jonathan Bryan now 14, wrote *Eye Can Write: A Memoir of A Child's Silent Soul Emerging* when he was 12. Jonathan's CP condition made him unable to make voluntary movement or speech. He was locked inside his own mind, aware of the outside world but unable to fully communicate with it until he found a way of using his eyes to laboriously choose individual letters to make his thoughts known. For 3 years Jonathan Bryan attended his local special school with the label "Profound and Multiple Learning Disabilities" (PMLD), where he was taught very basic letters and numbers with little or no progression. When he was 7 years old, and at the start of year 3, his mother took him out of special school for a few hours a day to teach him to read and write. They started whole word reading and basic phonics and progressed on to spelling out words and writing sentences. By the age of 9 Jonathan was using a spelling board to write everything that he wanted to say. He left special school to join his peers at his local primary school <https://eyecantalk.net/>

[Image left: colour photo of Jonathan leaning back, in chair eye gazing at a letter board up on the wall.]

Following his recovery from a serious illness when he was 10, Jonathan felt he had been given extra time to make a difference in education for children who are non-verbal like him. As he was recovering he set up the Teach Us Too campaign in June 2016, which was covered in national media <https://www.youtube.com/watch?v=WKlmlzqe6mQ>.

### Schools and access for disabled children and young people

On paper all our schools are meant to promote inclusion, eliminate disability discrimination, make reasonable adjustments and provide the necessary support for disabled pupils to access learning and the social life of their school (Equality Act 2010 and Article 24 UNCRPD). In addition all publicly funded schools in England are also meant to promote Disability Equality in all they do :- a) prevent discrimination and harassment (e.g impairment based bullying); b) advance equality of opportunity between persons who share a disability and persons who do not share it; (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.(Section 149 Equality Act). When the SEND amendment Act (2001) came in all school's Responsible Bodies were under a duty to have an Access plan, to consult on it, implement, review, revise and fund it. This duty was re-enacted in the Equality Act (Section 88, Schedule 10)

[Image left: Crippen Cartoons image, asking why have blind and visually impaired people been left off the coronavirus vulnerable list? The cartoon shows a shop assistant saying "just follow the instructions dear" to a young blind person with a white cane, dark glasses and pink hair. On the ground are arrows. On the wall a printed notice 'Please follow the arrows that are 2 meters apart' Higher up on wall a notice saying 'FRESCO' the name of supermarket.]

An accessibility plan is to, over a prescribed period (3 years) —

- Increase access to the curriculum for Disabled pupils;

- Improve the physical environment of the school to increase access for Disabled pupils; and
- Make written information more accessible to Disabled pupils by providing information in a range of different ways.

In 2019 the Alliance for Inclusive Education commissioned a study into the effectiveness of this statutory requirement<sup>3</sup>. *Accessibility Plans (AP) as Effective Tools for Inclusion in Schools: Are They Working?* They talked to 300 parents and pupils and 100 teachers, questioned schools and local authorities. They found AP were hidden away, were not generally implemented, not consulted upon, did not tackle the curriculum, changing attitudes and practice in pedagogy. OFSTED are meant to inspect these plans, but they do not. There is no end date when schools have to be fully accessible, unlike all other public sector buildings. The Government's ideology of marketizing schools and developing through league tables an education factory system leaves less and less room for inclusion and accessibility and little incentive to prioritise training and develop inclusive pedagogy. This is exacerbated by a large increase in enrolment in special schools, as mainstream schools become less habitable for disabled children. This is a national disgrace and one of the many reasons why the Government was heavily criticised by the United Nations saying they presided over "grave and systematic violations" of the rights of disabled people.

### Change to Enhance Access

There are two types of change around access. Innovations from disabled people and their allies to enhance their quality of life by developing assistive technology and methods of access which often have led to benefits for all; secondly campaigns led by disabled people and supported by allies including policy makers to change the rules, regulations, laws and enforcement of disability access.

### Examples of Innovations

**1644** *Chirologia, or the natural language of the hand. Composed of the speaking motions, and discoursing gestures thereof*, by a medical doctor John Bulwer. Allows hearing people to understand deaf people.

Prior to this they were assumed 'mentally defective' or 'dumb'.

**1760** In France, the first sign languages were developed in the C18th. Old French Sign Language was used in Paris' Deaf community, before l'Abbé Charles Michel de l'Épée started his Deaf school. But he synthesized with French grammar and it evolved into the French Sign Language that could be learned and interpreted by Deaf and Non-deaf people. See <https://www.ucl.ac.uk/british-sign-language-history/>

[Image right: A coloured engraving of hands showing the finger patterns of standard manual alphabet.]

**1808** The first typewriter is built in Italy by Pellegrino Turri to help a blind friend write legibly.

[Image right: A close up of the first typewriter with keys like a piano on a wooden frame with letter keys and pullies.]

**1824** Braille, universally accepted system of writing used by and for blind people and consisting of a [code](#) of 63 characters, each made up of one to six raised dots arranged in a six-position matrix or cell. These Braille characters are embossed in lines on paper and read by passing the fingers lightly over the manuscript.

<sup>3</sup> <https://www.allfie.org.uk/wp-content/uploads/2020/01/AccessibilityPlans-report-EMBARGOED.pdf>

[Image left: a photo of two hands, finger tips down on raised dots in lined patterns of Braille in a book.]

[Louis Braille](#), who was blinded at the age of three, invented the system in 1824 while a student at the Institution Nationale des Jeunes Aveugles (National Institute for Blind Children), Paris.

[Image right: graphic representation of dot pattern of Braille alphabet.]

**1886** Herman Hollerith, who had a cognitive processing impairment, implemented the idea of using punch cards to transport data from the 1890 census. He later founded the Tabulating Machine Company. In 1924, it became known as IBM.

**1916** Harvey Fletcher built the Western Electric Model 2A hearing aid at Bells Labs.

**1948** John Bardeen, William Shockley and Walter Brattain at Bell Labs invented the transistor, creating more reliable, smaller, cheaper, hearing aids. They won the 1956 Nobel Prize for Physics.

**1964** A deaf orthodontist sent a teletype machine to a deaf scientist, beginning the TTY (Teletypewriter) revolution.

**1972** Vinton Cerf, who had a hearing impairment and was married to a deaf woman, developed host level protocols for ARPANET. He communicated with his wife through the computer using text, the precursor to e-mail, which has changed everyone's lives.

## Movements

[Image left: graphic with match stick person in wheelchair breaking a chain above it which says 'Free Our People'. Below the chair it says ADAPT. The black image and writing is on a mottled pink and yellow background].

**ADAPT** The Atlantis Community was started in Denver, Colorado, in 1975, when Reverend Wade Blank, a non-disabled former nursing home recreational director, assisted several severely disabled nursing home residents to move out and start their own community. In 1978 protests were held in Denver by members of the Atlantis Community and Blank, against the wheelchair inaccessibility of public buses in that city. These protests included the nation's first demonstration for wheelchair-accessible public buses. At that protest, members of the Atlantis Community (called the Gang of Nineteen) chanted "We will ride" and blocked buses with their wheelchairs, staying in the streets throughout the night. In 1983, the Gang of Nineteen started ADAPT after several years of similar local bus protests. Originally, ADAPT's name was an acronym that stood for **Americans Disabled for Accessible Public Transit**, since the group's initial issue was to get wheelchair-accessible lifts on buses. Throughout the 1980s, the campaign for bus lifts expanded to cities nationwide. ADAPTs became well known for their tactic of immobilizing buses to draw attention to the need for lifts. Wheelchair users would stop a bus and others would get out of their chairs and crawl up the steps of an inaccessible bus to dramatize the issue. Interstate bus services like Greyhound were also targeted.

[Image left: black & white photo of four protestors in wheelchairs blocking a bus (2 women - 1 black – and 2 men). Placards read 'Lifts not Lies', 'Buses for Everyone', 'Freedom Rider', 'It's illegal and a dog of a policy'.]

After protests and lawsuits, ADAPT finally saw bus lifts required by law as part of the [Americans with Disabilities Act](#) in 1990. The group began looking for the next logical step in disability rights advocacy, while ensuring follow-through of transportation provisions in the ADA. That year the group changed its name to **Americans Disabled Attendant Programs Today**.

**Disability Discrimination Act 1995 in UK** This was blocked by the Tory Government 16 times before it went through and even then 'it was more like a leaky sieve than a piece of civil rights legislation' according to Lord Lester. There was a huge campaign by the Disability Movement and the incoming Labour Government of 1997 committed to major tightening up. It required major amendment in the 2001 SEND Act and the 2005 Equality Amendment Act and was replaced by the 2010 Equality Act which broadens its scope but weakened existing disability rights. Even then only new buses and trains had to be accessible after 2017, not existing vehicles. London acquired accessible buses after a big struggle in 1997, 20 years earlier than legislation. Enforcement has been left to individuals in the courts. A lot of direct Action was also taken by disabled protestors to speed things up.

### **DAN and the Fight for Disability Rights**

[Image left: on a red banner in gold lettering. In Caps. 'NOTHING ABOUT US WITHOUT US'. Underneath, a motive of two rows of gold hexagons.]

The Direct Action Movement started in 1992 after an anti-Telethon Demonstration. Like-minded disabled people got fed up waiting for Parliament to introduce legislation to ensure civil rights in the UK. Government preferred to rely on the good will of business. Disabled People pointed out the systematic discrimination against them which needed 'comprehensive and enforceable civil rights legislation'. Fighting for accessible transport and then to get disabled people out of institutions.

Demonstrations DAN 1 <http://www.youtube.com/watch?v=ngkx8ASyWaY> DAN 2 <http://blogs.myspace.com/index.cfm?fuseaction=blog.view&friendId=273532537&blogId=480103791>

**Doug Pauley**, a wheelchair user in Leeds, won a historic victory against First Group Buses for denying him access to the wheelchair bay.

[Image left: a colour photo of Doug Pauley sitting in front of a body of water with land behind. He has a bald shaved head, is smiling, and is wearing a blue top. ]

The case had to go to the Supreme Court brought with disability discrimination specialists [Unity Law](#). It was ruled that a 'first come first served' policy on buses is in breach of the Equalities Act. Denial of access to the wheelchair space is one of the commonest barriers wheelchair and scooter users face when travelling by bus. Although 64% of buses in England are now physically wheelchair accessible, in terms of ramps and bays, all too often other passengers use the bay to store pushchairs or luggage.

[Image: a colour photo of a group of disabled people and supporters. A variety of people in wheelchairs at the front - black, white, old, young - holding a banner which reads 'Transport for All accessible transport - no excuses'. Behind these are another 60 people holding placards saying- 'Right to ride', 'Access our Right'. Several with a clenched fist salute denoting struggle.]

<https://www.transportforall.org.uk/> campaigns for accessible transport in London.

**Despite all the legislation the price of Access is eternal vigilance and action**

Disabled people around the world have been hardest hit by Covid-19 with over 60% of deaths in UK being disabled people. Our needs to be protected from risk have been largely ignored and many are again questioning our right to life. Yet the World has committed to the Sustainable Development Goals by 2030. Without our full inclusion these will not be reached and humanity will be on a steep decline to oblivion. Access is a fundamental right not an optional extra. Disabled people, our knowledge and experience is a crucial part of building back better.

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