A COMMON WORLD

Standardisation in Traffic and How It Changed Our Lives

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All great things are only a number of small things that have been carefully collected together. This is no different for traffic. It is amazing to think about how big and complex our traffic system is, yet it still works, and excellently. One of the small things that contribute to the success of our traffic system is the standardisation of traffic.

What is a standard? A standard is a uniformity, a pattern we follow. There are three types of standards: *de jure* standards are those prescribed by law and therefore legally binding; *de facto* standards are not mandatory but have a dominant status; and, voluntary standards are recommendations only and people are free to choose from. Things change over time; a voluntary standard can achieve majority status and then be made into law. Over the years we have reached numerous standards in traffic, sometimes intentionally, sometimes accidentally. These standards cover every corner of traffic engineering, from rule of the road to traffic lights, from road width to car sizes. However, the standardisation process is a road without end: we are still driving forward!

**Rule of the Road**

The rule of the road, also known as ‘left or right’, concerns the simple question: which side of the road should we drive on? It seems trivial but without it our traffic system will basically run into chaos. Figure it.

Many people would believe that from a mechanical point of view, one rule is better than the other, and this differs between the northern and southern hemispheres. Scientists, however, have found that the side of the road you drive on has little to do with the performance of your car. Everything is basically symmetric.

There are retro-constructed ‘histories’, mainly found in English literature, which may explain how left- and right-driving rules came into being. UK and US are used as the representatives of each rule. In feudal times in UK, warriors abounded. They carried their swords with them while walking on the street. As most men were right-handed, they wore their swords on the left side of their waists so their right hands could easily reach the grip. In order to keep the sword away from their opponent and to better defend oneself, when two warriors came across on the street, they would pass each other on their right hand side. Thus they walked on the left hand side of the road.

In the US, however, farms abounded. And big ones they were. During harvest seasons, carts had to be drawn by multiple horses, which ran parallel to each other. The farmer would sit on the leftmost horse so his right hand could hold the whip and easily control the other horses. Now, imagine, the road is narrow and you see another multi-horse-drawn cart running towards you. Seated on the left, you would prefer the other cart to pass you on the left so that you can be sure to keep clear and avoid collision. Thus you stick to the right hand side of the road.

Figure 1. Spot the difference: symmetry between left- and right-driving
Two thirds of the world, both in population and in the number of countries/regions, drive on the right hand side of the road. These include continental Europe, the Middle East, mainland China, and most countries in the Americas. Almost all the left-driving countries are part of the Commonwealth or used to be a British colony, e.g. South Africa, India and Australia. Japan is, however, an interesting exception. Record has it that Japan built its first railway under British assistance. For easy remembrance, though, compare samurai with warrior! Other exceptions include Thailand and Macau, both with left-driving neighbours. Suriname also drives on the left.

The opposite of right is left, or wrong. The next time you meet an Englishman, feel free to make the ridicule: “Hey, you drive on the wrong side of the road, don’t you?” Be prepared though, of the reply: “But you sit on the wrong side of the car.”

Hong Kong, a former British colony, still retains its rule of driving on the left. Many cars are registered with two number plates, one for Hong Kong and the other for the bordering mainland China, where right driving rules apply. In Shenzhen, the Chinese city next to Hong Kong, it is not uncommon to see cars with a driver’s seat on the curb side! Is it dangerous? Do these drivers have a high probability of being involved in traffic accidents? No such statistics exists. So it isn’t that difficult to drive with a ‘wrong’ car.

Sweden switched from driving on the left hand side of the road to the right all within one day. Known back then as Dagen H (H Day), the day is now mostly referred to as Högertrafikomläggningen (right-hand traffic diversion). On Sunday 3 September 1967, at around 5AM, all traffic had to come to a complete stop and then carefully change to the right hand side of the road. Intersections and one-way roads proved to be most tricky. Lots of money was spent on reconfiguring bus doors.

The importance of having a rule of the road, no matter left or right, lies in its necessity. Without it, traffic will certainly fail. I am sure that everyone has been in the following scenario, some more often than others: you are walking, suddenly you realise someone coming in the opposite direction is right in your way, you make a step to the left, that person mirrors you, you make a step to the right, that person mirrors you again… Funny, hè?

While the right-driving rule and right-cycling rule has been well established, right-walking rule is still non-existent. So, to save my dear readers ten seconds per year and from unlikely romances, I propose to all of you: step to your right and pass each other by.

The side of the road, or the side of the bathroom. The most frustrating thing when urgently looking for a toilet is to get confused by the sign on the door: is this for me or the other sex? Standard pictograms certainly help but often times you see just words. M-W, men-women, male-female, ladies-gents, dames-heren, these are easy ones. But how about uomini-donne? If that doesn’t fail you, try muži-ženy.

Language is the highly standardized medium of our communication. In a way it is accurate and efficient. However, more often than not, we are lost in translation. There are so many natural languages in our world (some put the number to around 6000). No one would ever claim to understand even half of them. The lack of a common language, i.e. a standard (have you heard of Esperanto?), does sometimes make things awkward. Remember though, when everything fails, you still have one thing: body language.
Drivers can still drive and survive in a foreign country, even without speaking a single word of the local language. Thanks to the standardised traffic rules and signs, which comprise a language by themselves. Red is stop, green is go. A number in a red circle probably means the speed limit. Hey, let’s have a coffee at the gas station. Oh, we are only 34 kilometres away from Warszawa. What! Right turn not allowed!?

Be careful not to underestimate the contribution made by traffic standardisation. It helps; it also enables. Without standardised traffic signals, colour blind people wouldn’t dare to drive. This has more to do with the positioning of the colours. Unable to distinguish red from green, those drivers rely on the position of the light. Have you ever seen a traffic light with green on top?

Do keep in mind that the world is far from perfect. Speed limit can be given in km/h or mph (but thanks God this is uniform at least within one country). Place names are also not consistent across language borders. The written form is actually much more standardised than the spoken form. Brussel, Bruxelles, or Brussels, they are all different but not too different to be mutually recognisable, thanks to our human brain where fuzzy logic comes as natural as 1+1=2. The spoken form is usually more hassle. You may not follow a foreign person’s pronunciation of Utrecht or Groningen, but for sure you do when he tries to write them down. Bilingual communities would normally display texts in both languages. Sneek or Suits, whichever you spot on, you know you are on your way. This becomes rather difficult when you have more than three official languages, not only for the authority to place all names on one board but also for the driver to quickly choose which to look for. For a united Europe, the best is to use pictograms as much as possible, and to limit the use of text unless it is commonly understood, such as ‘STOP’. As for place names, an international trend is to call them as the locals do.

Messages should be designed and delivered in order to be understood. Traffic signs and information aim to make trips smooth and more efficient for travellers. In reality, some of them are annoying rather than helpful. Have you ever heard an announcement that nobody understands? Seen a ticket machine with instructions impossible to follow? Traffic signs with text too big? Too small? Distorted typefaces? Or signs that are just too confusing?

In Belgium, a traffic sign was put up on the road for one day and then withdrawn, just because it was too confusing for the driver. The sign consists of seven smaller signs; it basically says (from top to bottom, as located on the board): in Belgium, when it is raining, hail ing or snowing, you are not allowed to overtake if your vehicle weighs more than 7.5t and you are driving on an ‘autosnelweg’, an ‘autoweg’ or a dual carriageway. Experts say that drivers will only be able to read the top two signs, which they will interpret as ‘in Belgium, it is always wet’.

Since I am already on the standard language of traffic signal and signs, a question for you guys: does anybody speak C++?

Size Matters
Most people understand technical standards as a set of rules on the shape, size, and weight of things. Indeed! Printing paper, light bulbs, your bicycle wheel and tyre, they all have a number. So things can be exchangeable and easily replaced when necessary. The situation is anything but ideal. Think about the different wire connectors that are attached to your computer, the different chargers for different mobile phones, the different power sockets between UK and continental Europe. Things are still too different!
Luckily less so in traffic.
Moreover, standards concern the way we do things. Communication standards, in terms of frequency and channel (radio, radar, wireless), create a common platform for different parties. So that cooperation and share of information can be made. So that future intelligent transport systems can be designed and developed. Industrial standards also help companies and organisations realise mutual gains by making mutually consistent market decisions. In the end, consumers also benefit.
Most of the national and global standards in traffic and transport concern the technical and operational components. The fare structure of public transport, however, shows more diversity than others. It is annoying when the fare for a metro journey is dependent on my origin-destination stations and can only be calculated after I specify them. That’s why we introduced zoning system (e.g. London). In New York, all metro trips cost the same, no matter how long or short. Easy for the mind, this certainly has some impact on people’s travel behaviour. Short trips on the metro, for example, are indirectly discouraged. Even in the ways that fares are paid, no de facto standard exists. Smart cards, magnetic stripe paper cards, printed tickets, handwritten tickets, you see them all. In Hong Kong, you can pay for all public transport with the Octopus card, plus at car parks, supermarkets, vending machines, pay phones and photo booths. Negotiation has even been made to enable paying taxi with the card. Its success is however not shared by other places around the world. In some cases you need more than three different tickets to finish your journey. The idea of a universal card is great, the technology is more than ready, but the implementation is sometimes just a mess.
An existing standard is not always useful or correct, especially in the IT sector. Standards regularly get reviewed, revised, and updated. However, some consistency should be maintained throughout. It also takes time for the new standard to be adapted to. A brilliant idea to deglobalise the world is to enforce differential standards, so that petrol in Germany would be unusable on French trucks, roads in Italy are too narrow for American cars, a DVD bought in Australia does not play in Africa, and everybody speaks his own language and no lingua franca.

The Way to Go
The standard way to end your article is with an outlook on the future. However, I venture to believe that I have inspired my readers enough on what we shall do, both in traffic and in general life. To this end, I shall rather look back and conclude the article with my list of the most annoying things in 2009, which I consider as the great examples of destandardisation and decivilisation (exaggeration well intended):
• any stair step with a riser height less than 10 cm;
• maps without compass directions while north not facing up;
• any water faucet where turning anticlockwise does not open;
• Windows Vista beginning to make the standard;
• authors who do not end their articles standardly (thus including me :-).

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