

GENDER DIFFERENCES IN DRIVING

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Part 1

Good morning. And you're probably wondering why I chose this topic to talk about because I'm certainly not an expert on academic research into driving behaviour. I'm a language teacher. But you have probably had enough of people talking to you about learning vocabulary and pronunciation, that kind of thing, which are some of my areas of interest. But I chose this topic partly because, as John says, I do a lot of driving, I spend at least one and half hours every day driving to and from work. And I see a lot of bad driving when I'm on the road. And I also kind of recognise that when I drive I can sometimes be a little bit aggressive myself when I'm not normally an aggressive person. And you probably know people whose behaviour seems to change as soon as they get behind the wheel of a car.

So, that's one reason why I chose this topic. Another reason why I chose the topic is that I wanted to find a topic which would show you how difficult it is to find the right kind of statistics, to make a particular point. To show you that statistics can be misleading, and that you need to make sure that whatever statistics you use that they are actually making the point you want to make.

Ok, so, the first thing I'm going to talk about is the research question, I'm going to examine this research question, are women better drivers than men? and reformulate it into a better question for research. And after that, I'm going to discuss some statistical evidence, which either supports or doesn't support this particular assertion and other factors that you need to consider. So, it's not just gender whether you are man or woman that affects whether you are a good driver or not. There are other things that we need to consider. And then I'm going to discuss the differences in the way men and women drive. And after that, I'm going to try and account for these differences, give reasons for these differences, and finally I'm going to summarise and give some conclusions.

So, if we start with this question, 'Are women better drivers than men?'. So how would we find the answer to this question, how would we research it, well we could interview people - or give them a questionnaire, and we would ask them their opinion. But what kind of result would that give? Let me just ask you. If you think women are better drivers than men can you put your hand up? And if you think men are better drivers than women can you put your hand up? Well, not surprisingly, the men think- in general, the men think that they are better drivers than women, and women think they are better drivers. You know, that's not surprising. So you don't get a very interesting result, it's very subjective. The result is based on your own personal experience, your limited personal experience.

You might, for example, if you ask a wife whose husband is a very careful driver whether women are better than men, she might say no, men are just as good at driving as women, because her husband happens to be a careful driver. So, she's only sort of responding on the basis of her personal experience. So, really this question is not a very good question for academic research, what do we mean by 'better'? Ok? We need to reformulate the question. We need to make it a question which we can actually research in a more objective way. We need some kind of measure, how do we measure driving ability.

Part 2

Well, there are different things we could look at. We could look at this question here, do more women pass driving tests than men? If more women pass driving tests than men then we could say they are better drivers. We could look at car accidents. If you are involved in a car accident, that would suggest you are a bad driver, for example. So, what are the other figures regarding the involvement of men and women in car accidents. And we could look at driving offences - by offences I mean crimes that you commit when you are driving. Driving too fast, driving when you have been drinking alcohol, that kind of thing. Are men convicted of more driving offences than women?

Ok, so let's start with driving test pass rates. So, these are statistics for the year 2003-2004 in the United Kingdom. You can see here that if you are a man and you take a driving test you have a 46% chance, probability of passing your test. Whereas if you are a woman, you have a 40% probability of passing your test so it seems that men are better at passing driving tests than women.

Some other interesting statistics. You can see that the statistics for 17year-olds are much higher than for all ages, so the younger you are the more likely you are to pass your driving test. And conversely the older you are the less likely you are to pass your driving test. Another interesting point is that when you get to the age of 50 you are just as likely to pass your test whether you are a man or a woman. So these differences in the pass rate disappear between men and women when you get to the age of 50. On average it takes a woman 2.12 tests to pass, so most women take about two tests, they fail the first time and pass it the second time on average. Men take 1.87 tests to pass. Men take about 1 year from when they start to learn to when they pass the test. Whereas women take about 14 and-a-half months. Another interesting point that I have found that is not really related to this, but I found it interesting. That is, if you take your driving test in different parts of the country you have different chances of passing it. You are more likely to pass your driving test if you take a driving test in a small town in the countryside, than if you take the test in a city. That's perhaps not surprising because, you know, cities are difficult places to drive in I think. People drive in a less predictable way in cities in my opinion.

Just to give you one statistic here. The other thing is that if you go to Scotland you are more likely to pass your driving test. So for Reading, if you take your driving test in Reading you have a 39% probability of passing it, whereas if you go to a place in Scotland called Inverary you have a 80% chance of passing it. So my advice to you is if you have to take a test in England and want the best chance of passing it - go to Scotland and take your test there. You have to pay a lot of

money travelling there, but you have a better chance of passing your test. So that seems to suggest that men are better at passing driving tests than women but what does that tell us? Driving tests take about 40 minutes, it's 40 minutes at the beginning of your driving career. So it doesn't really give the whole story. It only tests your behaviour in very unusual conditions. We all know that people drive very differently when they are taking their driving test compared to the way they drive, say, 5 years later. People get into bad habits. So perhaps driving test pass rates doesn't really help us to find the answer to this question.

Part 3

Another thing you could look at would be casualties in car accidents. Here you can see a very different kind of story. If you look at these statistics you can see that, these are figures for 2002, a lot more men than women, I mean about 75% of people who are killed in accidents in 2002 were men, and only 25% women. If you look at this figure here, where it says 'all severities' that refers to all types of accidents whether it's just a small accident and, you know, you break your arm or you get a bruise on your head or something like that, or somebody is killed. So this refers to all kinds of accidents where somebody's injured in some way. And the difference here is much smaller. So that would suggest that speed is a factor because, I think, the faster you are driving the more likely you are to be killed in a car accident rather than just being injured. So this would seem to suggest that women are safer drivers than men and they have fewer accidents.

The next thing you can look at, as I said before, is motoring offences. Again these are crimes that people commit and are convicted for. Again the percentages for males are even higher. 97% of people who are convicted of dangerous driving are men. Only 3% are women that's incredible, it's kind of unbelievable I find. For people who are convicted for driving after they have been drinking alcohol or taking drugs, again the statistics are very high, 90% in 2001, 89% in 2002. So again far more men than women are convicted of driving offences. Another interesting set of figures is for people under the age of 21. So bearing in mind that you can only pass your driving test when you are 17, so between the ages of 17 and 21 there is only 4 years in your driving career but the percentage of people convicted of dangerous driving or of causing death or bodily harm for under 21's is very high in relation to the number of drivers in that age group.

So what do these different figures tell us? Men are better at passing driving tests than women. More men are killed in driving accidents than women, far more men than women are convicted of driving offences. I think there are other variables that we need to consider to put these statistics in perspective. The first thing we need to consider is age. As we saw before on the previous slide a large proportion of those people convicted of driving offences are under the age of 21. Sorry, in that slide before it didn't distinguish between male and female drivers, it was just looking at drivers who are under the age of 21. So is age a factor that we have to consider? The other thing that we need to consider is whether there are similar numbers of men and women drivers because if there are a lot more male drivers than women drivers then it wouldn't be surprising that more men are involved in car accidents or convicted of driving offences. In fact 18 million men in the U.K. have driving licences and only about 14 and a half million women have driving licences. So there are more male drivers than women drivers but not

a large proportion more male drivers than women drivers. Certainly not enough to account for all those traffic offences and all those deaths.

Part 4

And the other thing that we need to consider is, do men and women use cars for similar purposes? Do they use cars to drive to work, to do the shopping, to go and see the friends, that kind of thing. Do they drive the same distances? That might have an affect on the figures.

OK. This graph here shows the number of road deaths by age group for 2001 for men and women, and you can see here that between the age of about 17, when you can start driving, and about 40, a very very high proportion of deaths are young men. And then it goes down, so as you get, as a man gets older you are less likely to be killed in a car accident. So it seems that as a man gets older he starts driving more carefully.

For women, the number of deaths is about the same for all age groups. It doesn't vary very much. So it seems that women tend to start out as fairly careful drivers and they stay as careful drivers throughout the rest of their life. But what this graph does show is that young male drivers are much more likely to be killed in car accidents.

The other thing that you can look at is what people use cars for. So here in this graph here the blue bars refer to men, the red bars refer to women. I'm sorry you probably can't read these very very clearly but I'm just explaining to you. The first section here refers to commuting and business, using your car for work. And you could see that, you know, men make a lot more trips on business or for work, driving to and from work, than women. This one here is 'shopping' and not surprisingly women use the car more for shopping than for men. This is 'visit friends', that's about the same, and this one here it says 'escort education and other escort'. I think what this means generally is taking the kids to school. And you can see that more women, women spend more time taking children to school than the men do. But that's not a big difference.

So I don't think that there are very large differences in the way men and women use cars but there are, there is quite a big difference in the distance that men and women drive. For the period 1999 to 2001, in one year the average man drives about 15,000 kilometres a year, whereas the average woman drove about 10,000 kilometres a year. So men drive about 50% further than women, they, they do about 50 percent more driving than women each year. And if men do more driving than women, then it's not surprising that they are more likely to be involved in accidents.

And this is probably the most useful graph. This is probably the graph which really shows the difference between men and women as far as safety is concerned, because this shows the number of drivers involved in fatal crashes, fatal here means that somebody dies as a result of it, so it's a very serious crash, per 100 million miles, so this graph takes into account how many miles have been travelled per accident. And again you can see here you can see here that in fact, in general, people are, the roads are safer. In 1997, these are the statistics for

1997, and for men there are about 5 deaths per million miles, whereas in 1995 there are only 3. For women in 1997 there are 3 deaths per million miles, and in 1995 there are just under 2. So what this graph shows is that in general people are less likely to be killed in a car accident, our roads are safer for drivers, but again the difference between men and women is clear. You can see that - this graph I think shows that the women are, in general, are more careful drivers than men .

Part 5

Ok, so I am going to move onto the next section of my talk here and I am going to try and explain what kind of differences there are in the way that men and women drive. A study by Waylen and McKenna showed that men are much more likely to have accidents on bends in the road, and they are much more likely to have accidents at night time, in the dark, and they are much more likely to have accidents when they are overtaking, when they are passing another car. Whereas women are more likely to have accidents at junctions, at crossroads or T-junctions. Men are much more likely to be involved in accidents which are caused by high speed, that's not surprising. We saw before that many more men than women are killed in car accidents so we're not surprised that speed is the factor.

Whereas women are more likely to be involved in accidents resulting from what they call 'perceptual judgement errors'. What that means is when women are in situations where they have to evaluate how fast a car is driving or what distance away a car is, they make mistakes in judging distance and speed. And that is often important when you are at a junction and you have to decide whether it is safe enough for you to come out. So women tend to be involved in those little accidents when you've got, often in a town or a city, where cars are coming out, and they are coming out and the cars hit one another, and there's a dent and nobody is killed or even injured. Whereas men are much more likely to be involved in those kind of accidents that you might see on the motorway for example, when a car is overtaking, does something risky and had an accident at very high speed, which often leads to deaths

Studies by the World Health Organisation, that's the W.H.O. reports in 1999 and 2002 identify 3 patterns of differentiated behaviour in driving. So 3 kind of groups of factors which are different between men and women. The first one is aggression. There's a lot of evidence that men are more aggressive than women particularly in boys and young males. And if you study animals in different species, aggression is more marked in males than in females. One kind of indicator of aggression is pressing your horn, so when you are frustrated and you hoot the horn 'I want to get past - what are you doing?' That's a kind of indicator of aggression. In a study by Dobson Grosse they found that males pressed their horns 3 times more quickly than women when, for example, the driver in front didn't move at green traffic lights. So you are at a traffic light, the traffic light turns to green, the car in front does nothing so what do you do - press your horn. Men press their horn 3 times more quickly than women do in that situation, and that's an indicator that they are more aggressive.

Another study by Parry of *Attitudes and Behaviour of motorists* based round interviews and questionnaires found that the highest scores for aggression were in male drivers and young male drivers 17-35. So aggression is definitely a factor.

Speeding and violation of traffic laws. We saw before t the statistics which showed that about 88% of all driving offences are committed by men. Men are much more likely to break the speed limit and break other traffic rules. And the fact that men are involved in the most serious accidents leading to death and serious injury rather than less serious ones suggests that speed is a significant factor. Another study in Israel amongst university students found that women have a stronger sense of social obligation to obey the traffic rules. So women tend to view the traffic laws, the rules, as important, clear and reasonable. And women would generally obey the traffic rules, follow the traffic rules even when there is no chance that a policeman will catch them breaking it. But men tend to be more selective in the laws that they obey. So men look at the laws and they say that's a reasonable law but this is a stupid law. This road has a 30m.p.h. speed limit but there are no cars on it, there's no danger at all, why should I stick to 30 miles per hour here I will drive at 50. So the point they made is that men choose which laws they think are good laws, and which laws they don't think are reasonable. Whereas women tend to obey all the laws.

Part 6

Sensation seeking and risk taking. By sensation seeking, what I mean here is that sometimes people do things for excitement. If you go to Alton Towers, a funfair or something like that, and you ride on the roller coaster, you know when you go down and when you go ah-!, and you know you are screaming, why do you do that? It gives you kind of sense of excitement. And men are more likely to want to feel a sense of excitement when driving than women.

So, those are some of the differences between the way that men drive and women drive. But what accounts for these differences, why are there these differences in driver behaviour? When we are trying to explain human behaviour, we often look at sort of what we call 'nature' and 'nurture.' So, we are trying to sort of decide you know is it that you are born that way. It's to do with your genes. Or is it because of the way you develop in society that leads you to behave in certain ways.

And one area that researchers have looked at is biological factors. Many researcher have found the positive correlation between sensation-seeking, seeking excitement, taking risks, and levels of hormones, particularly the male hormone, testosterone. A hormone is a chemical, which is carried in the blood supply, and these hormones affect your development, your growth, and your gender, your sex, ok? So, the higher the level of testosterone, the more likely a man is to engage in sensation-seeking, risky behaviour, ok?

And other studies looked at neurotransmitters, and those are chemicals such as dopamine, and serotonin, these are chemicals which carry messages throughout the body. If you touch something, then the neurotransmitters carry the sensation of touching from your, from the nerve cells in your fingers to your brain. And

they also found that high levels of certain neurotransmitters are, correlated with sensation seeking, and risky behaviour. So, there's a kind of biological or chemical explanation behind the way male drivers behave.

Another theory is that of evolutionary psychology. And, according to this theory, the brain is a kind of physical system that works a bit like a computer. And that in our brain, we have circuits, like electrical circuits, which have developed, throughout thousands of years, through natural selection, to solve problems that our ancestors faced during evolutionary history. So the idea is that the way that we behave is determined partly by the way we behaved thousands of years ago. And that inside our twenty first century skull, the skull is the bone, the outside part of the bone which covers your brain. We have a Stone Age mind, we have a way of thinking, which is determined by how we behaved thousands of years ago.

So, modern types of behaviour are determined by these circuits in the brain, which are adapted to things like hunting and gathering. So, two or three thousand years ago, what men did was they go out with their bow and arrow, their spear, and they hunted for animals and they came home with animals to their families, and they fed their families. Women tended to stay at home in groups, looked after the children, and so that - women for example have, it's kind of expected that women have better language skills than men, they are better at kind of communicating than men. One explanation for that is because, you know, thousands of years ago, they spent a lot of time together in families, with the children talking to one another, so they were better at communicating.

And men, as hunters and gatherers had to take risk,s in order to catch animals. They took risk with their lives you know they are might be trying to catch a tiger, you know, a tiger could kill them but if they don't kill the tiger they can't get food for the family, that kind of thing. And that men perhaps are better at evaluating speed, the speed of an animal moving, distance, how far away the animal is when they are hunting. So, they were better at judging distance and speed than women, which means that men possibly are better at parking a car than the women, ok. That's one kind of explanation for that.

Part 7

We've already said, I've already said before that young men tend to drive very fast. And they are more likely to be sort of killed in car accidents, as a result of driving very fast. I'm going to ask you a question, what do you think about this? If you have a young male driver, who's got a car - is that young male driver more likely to drive faster or slower if he has a female passenger? So, what do you think? Faster? You're wrong. If a young male driver has a female passenger, research has shown that he is more likely to drive slower more carefully. And people would argue, according to the evolutionary psychology theory, the reason for that is the protective instinct is very strong, so that as a man it's more important for you to protect your female driver, than it is for you to impress her by driving very fast, ok.

Another interesting idea which is related to the evolutionary psychology theory is the idea of territory. In the past, different animal species, men had land which was their land, their territory, ok? And it was important for you to protect your

land, your territory. And if other animals or other people came onto your land you would fight them and try and get rid of them, so protecting your land, your territory is very important. And the idea is that your car is a little bit like your territory, your land, ok? Bear in mind I think that for some young male drivers, who are living at home with their parents the car is the only kind of personal space that belongs to them, that they have. So the car, is their territory. So I think that could partly explain why young male drivers are aggressive when they are driving. If another car comes too close to your car you get aggressive and angry about it. That explanation is based on this evolutionary psychology theory.

OK. So, what are my conclusions? The first thing is that the statistics show that women have fewer serious car accidents than men. They have a lot of minor car accidents but they are much less likely to be involved in a serious car accident and they are much less likely to be convicted of a driving offence. So I think we can say that women are safer drivers than men.

Another thing to come out of the research is that the differences between men and women is much more significant in the 17-25 age group. And that as you get older, the differences in the way men and women drive become less. However men do more driving than women and this may also account for some of the differences but not all. I mean one problem could be that if men are driving longer distances they are possibly getting tired after driving a long way. They may fall asleep whilst they are driving that kind of thing, so that may be one factor that affects the statistic. And finally there are biological, social and psychological explanations for these differences.