The effect of gender on safe and sustainable mobility

By
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It is known that 3 out of 4 road deaths are men. But do we know that this figure is the same in every country in the world, for all age groups, for pedestrians as well as motorists, or even that 96% of those killed under the age of 18 are boys? How can these figures be explained? Beyond biological explanations, Marie-Axelle Granié highlights the importance of gender roles, suggests routes for change and reveals the mistakes to avoid.

Gender differences in road accidents

One of the big gender gaps in terms of mobility is in road accidents. Worldwide, 73% of those killed in road accidents are men. This is the biggest gender difference in unintentional injuries globally. This means that 3 in 4 people killed on the road are men. This difference occurs in all regions covered by the World Health Organization, regardless of the country's income level and across all age groups. It's obviously also found in Europe, where 76% of road fatalities are men. There has been no change in the last ten or twenty years, this gender difference is constant and common to all European countries.
0-14 y/o
15-17 y/o
18-24 y/o
25-34 y/o
35-44 y/o
45-54 y/o
55-64 y/o
65-74 y/o
75+ y/o
Obviously, this gender gap exists in France too. If we look at the numbers on these graphs, we see that while the rate of accidents evolves depending on age, this proportion of men and women involved in road accidents remains virtually the same among all age groups. If we look at drivers in particular, we see that 84% of drivers killed between 18 and 24 are men. So we have a gender gap of 3/4 - 1/4 in general, but on particular modes of travel the difference is even greater between the sexes.

For example, when it comes to under 18s using motorized two-wheelers, 96% of fatal accidents are among men. This difference is also found among pedestrians, with a widening gap from the age of 18, but until the age of 64, it's always men who are more often killed on the road than women. And if we look at the figures from the age of 65, this gap decreases because of the different life expectancy of each gender. Basically, in this age group, there are way more pedestrian women than pedestrian men.

These gender differences in road accidents are explained by a gender difference in risky driving behaviors, and more generally in all modes of travel. What the literature shows is that men commit more driving offences, take more risks, especially in terms of speed and alcohol, than women. So the question is: how to explain these gender differences in risky behaviors?

**How to explain these differences in risk-taking behaviour?**

The first possible explanation is a biological one. Males and females both produce hormones but they produce male and female hormones differently.
Males produce more androgens – male hormones – than females. The literature shows that the level of testosterone – which is one of these male hormones – leads to more thrill-seeking and risk-taking behaviors. Thrill-seeking means engaging in experiences that will elicit strong emotions. The literature shows a direct link between testosterone production and risk-taking, and as males produce more testosterone, they take more risks.
The second explanation concerns the evolution of the species. Humans, like any species, seeks to reproduce and maintain its genetic heritage. For this, it will gradually select biological and psychological characteristics that will help it achieve this reproductive goal. Males will try to find the best female partner, but will find themselves competing with each other to find her. The female, for her part, will seek the best male partner, that is to say the one with the best genetic heritage and most likely to protect her offspring. Risk-taking and aggression may be perceived in this sense as indicators of a strong genetic heritage and of a high status in the social hierarchy. Risk-taking would thus be a means of competition between males to obtain the female.

The third explanation considers the social and cultural construction of these gender differences. This explanation requires distinguishing sex and gender. Sex is understood as the biological, physiological, phenotypic aspects that are related to genetic sex. Basically, sex is what leads individuals, from an XX or an XY, to develop a number of different physical attributes: height, weight, voice range, hair growth, etc. Gender is how society will interpret, magnify or temper these biological differences, in order to induce men and women to have different behaviors.
Basically, from biological sex, society assigns expectations and roles to each of these sexes. We expect certain types of personality traits and characteristics from men, and other personality traits and characteristics from women. These expectations will ultimately define what masculinity and femininity are in a given society. These social expectations will be interpreted, manifested, taken into account by individuals; but individuals may also refuse to conform to them, or choose to conform to the social expectations of masculinity and femininity at the same time. So gender is both a social construct, but also a psychological construct, i.e. an individual positioning according to the social expectations related to the sex assigned at birth. The individual will choose to be more or less masculine, or more or less feminine.

These social expectations will cause what we call differentiated socialization. This means that parents, from the child’s birth, will have expectations of what the child’s behavior should be according to his or her sex. Not only will they have expectations, but they will also ensure, consciously or not, that the child conforms to them: they will expect a boy to behave in a masculine way, and a girl to behave in a feminine way.

**Masculinity and femininity in risk-taking**
These social expectations occur and can be observed more specifically in terms of risk-taking.

Parents will perceive risk-taking in boys as something innate – for them, a boy naturally develops risky behaviors. Not only do they think it's innate, but they will make sure to encourage or even initiate it in boys, because risk-taking is a marker of this masculinity. Meanwhile, they will consider risk-taking in girls as a problem to anticipate, and as this risk-taking in girls isn't innate, they will teach girls to be risk-averse and educate them to avoid dangerous behaviors, for example by warning them in case of danger, or by assisting them in situations they consider perilous.

The social environment will therefore ensure that individuals, from their early childhood, conform to these social expectations that designate risk-taking as a social expectation related to masculinity. Differentiating sex and gender here allows us to explain the discrepancies we observe in risky behaviors by the effect these social expectations have and how individuals conform to them. What we've been able to show in our research is that, regardless of people's biological sex, whether they're considered or they consider themselves as a man or a woman, if they manifest male behaviors - for example in terms of competition and domination - they will engage in risk-taking behavior and commit more offenses as a driver or as a biker, for example.

The influence of gender on road behavior
On the perception among
We also found that the more a person manifests masculinity, whether a man or a woman, the more they will find it acceptable to take risks, even as a pedestrian. Conversely, the more a person identifies with and manifests feminine characteristics - again, whether they’re a man or a woman - the more they will demonstrate positive behaviors, being careful of others when driving, and the less they will find it acceptable to take risks when at the wheel.

This relationship between masculinity, femininity and risk-taking has been observed from early childhood in our research. A study was done on children aged 3 to 5 years old, which showed that the more masculine a child acts, the more they tend to engage in risky behaviors, with a decrease in girls between the ages of 3 and 5 as their masculine behavior dissipates. It has also been shown that in adolescence, individuals who identify with feminine attributes tend to view rules as being moral, that is to say that they will conform to the rule at all times, in any place, even in the absence of external control to enforce compliance, because they think the rule is there to protect them but also to protect others from their own actions.

These effects of masculinity and femininity on risky behaviors have also been demonstrated in other areas, such as antisocial behavior, risky sexual behavior, and risk-taking in sports for example. But the question we asked was whether there were specificities in this relationship between masculinity and risk-taking with regards to driving, due to the existence of strong stereotypes about the driving skills of men and women. Basically, we asked ourselves the following question: is the belief that “all women are bad drivers” still strongly engrained in France today, and does it have any effects on people’s behaviors?

For this we set up two surveys: a first one with adolescents between 11 and 16 years old, and a second one with a larger sample ranging from age 12 to over 50. Our results show that from the age of 11 (or even before, but we haven’t yet been able to verify this), individuals consider that men are naturally competent drivers, and that this natural skill allows them to take risks. Basically, risk-taking is a sign of competence. At the same time, they think that women are naturally incompetent drivers and that their compliance with the rules, their risk-aversion, is due to this incompetence. In other words, the caution women display at the wheel is due to their incompetence. Being careful is a sign of incompetence.

So what these two studies show is that the male driver is considered to be the prototypical driver while the female driver is his opposite. The scientific literature shows that these stereotypes associated with driving have an effect on how women behave at the wheel. What the literature shows is that if we activate these stereotypes, if we highlight them, if we tell a woman “we want to understand why you don’t drive as well as a man,” she feels threatened by this kind of stereotype and is so eager to disprove it, to show that she isn’t like that, that she ends up driving less well than she otherwise would.

**Effects of gender on driving test success**

We’ve been able to show directly that a belief in these driving stereotypes affects women’s performance when taking their driving test. In France, we find a 10-point difference in the success rate of men and women when passing their driving test, with women performing less well than men. And our research has shown, particularly on a sample of over 3,000 learner drivers, that women who actually believe that men are naturally competent and that women are naturally incompetent have a lower sense of driving competence, are less confident that they will get their driving license, and indeed fail more often when taking the test. So there is a need to fight against these beliefs about men and women’s driving skills, to restore a little equality between both genders in passing their driving test.

**Gender differences: a major obstacle to safe and sustainable driving**

So if I summarize what the scientific literature can show on these issues, it’s that sex and gender do have an effect on safe and sustainable mobility. Gender roles and stereotypes will affect the mobility of men and women in terms of their travel motives and modes, but also of their behaviors while travelling. We still have strong social beliefs about how risk-taking is something that is expected of men, and that driving competence is something that is expected of men. And for them to prove that they are men, to prove that they belong to the male group, and attract women, it’s also an important element. Indeed, the literature shows that it does attract women. Men will manifest risk-taking behaviors, in particular when driving, and especially during adolescence. Taking risks when driving allows men to show they’re men, and it’s something all men can do: it doesn’t require any particular intellectual or physical skillset, and is therefore a good way to prove your masculinity. Ultimately, these stereotypes about masculinity mean that men end up with two risk factors with regard to risky behaviors: a biological factor and a psychosocial factor, both of which will strengthen each other and lead to more risky behaviors by men, especially on the road.

**What next?**

So the question we can ask ourselves from here is: what can we do to fight against this? The first idea, naturally, is to say: we must fight against these stereotypes about women drivers, we must increase their sense of competence so that more pass their driving test. But the literature shows that this sense of competence has negative effects on driving behavior, because the more people feel competent as drivers, the more they tend to take risks. So if we increase women’s sense of competence as drivers, we risk increasing their own risk-taking when at the wheel and I don’t think that’s where we want to go.

The second course of action would be to work on masculinity and expectations of masculinity among boys. Basically, this means allowing boys to express their masculinity and virility elsewhere than through risky driving behaviors. Teaching them that having the courage to say “no” when someone says “I dare you” is itself a form of risk-taking. And more generally, I think we need to make boys aware - as studies show that it’s mainly boys who are vulnerable to this - that there’s a big difference between what they think is expected of them in terms of risk-taking and driving behavior, and what is actually expected of them. Basically, boys imagine that they are expected to take risks because it’s part of what is expected of them in terms of masculinity. There is a big difference between what they imagine is expected of them and what is actually expected of them, and I think we need to make boys aware of this difference, so they don’t engage in behaviors that ultimately don’t respond to any social expectation.
The third avenue, which seems to me the most promising, is that, instead of increasing the sense of invincibility in women, we should increase the sense of vulnerability in men. At the end of the day, we're all equally vulnerable to road accidents and dangerous behavior, and the assumption that boys, because they're boys, are invincible is what initially causes these gender differences in terms of risky behaviors. So getting children, but also especially parents, to become aware of how boys are vulnerable could lead them to change their education and risk-taking, trying to protect them as much as they try to protect girls, explaining what dangerous behavior is, explaining how to resist and how to manage these dangerous behaviors.

The second positive effect of increasing this awareness of vulnerability is that it makes us realize that we are vulnerable, and that everyone else around us is also vulnerable. And thereby to change the way rules are perceived to make them more moral, integrating the idea that complying with a rule means protecting ourselves but also protecting others. We can see, especially at the moment with the pandemic, that this moral perception of rules is really something we should reinforce with regards to all rules concerning public health.

References


Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

En savoir plus x
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