Transportation Research Part F 20 (2013) 170–181

Contents lists available at ScienceDirect

Transportation Research Part F

journal homepage: www.elsevier.com/locate/trf

Attitudes, norms and driving behaviour: A comparison of young drivers in South Africa and Sweden

Marion Sinclair *

Department of Civil Engineering, Stellenbosch University, South Africa

ARTICLE INFO

Article history:
Received 16 August 2012
Received in revised form 21 June 2013
Accepted 8 July 2013

Keywords:
Driver attitude
Social norms
Driving standards
Self-reported traffic violations
Young drivers

ABSTRACT

Culture is increasingly recognised among traffic psychologists to be a factor influencing driving behaviour. This study examines whether a cultural background characterised by rapid social change and high levels of violence and aggression, as in the South African context, has any discernible influences on driving standards or the behaviour of individual drivers. The experiences and attitudes of young drivers in South Africa are compared with a group of young drivers from Sweden, a country whose society has exhibited high levels of stability and where road user behaviour is renowned for its restraint and compliance with regulations.

The two cohorts provide information about their exposure to traffic injuries, their attitudes to other drivers and to a range of traffic offences, and to the types of behaviour they personally engage in. Among the South African respondents the notion of a declining standard of driving emerges very clearly, and specific new norms of driving are identified. Such norms are explained to be a consequence of new social values or challenges inherent within contemporary South African society.

1. Introduction

South Africa is often portrayed as a model of hope for the continent – a country in which democracy and reconciliation have been wrought and sustained in the face of extraordinary odds. In many ways South Africa has achieved a great deal since its first democratic elections in 1994 – it has a developed a relatively stable economy, robust democratic structures and healthy social policies. However in the field of road safety South Africa lags behind many other developing countries. Road deaths commonly exceed those of other African countries, and at an estimated 32 deaths per 100,000 population (WHO, 2013) this is among the highest on the globe.

South Africa has a social history that is founded on systematic discrimination and racial division. The liberation struggle was characterised by violence and mistrust, and while political violence has abated the country carries a legacy of aggression that finds expression in high levels of crime and interpersonal violence (Cawthra & Kraak, 1999). Violence is, in fact, the leading cause of premature mortality among young adults across the country, exceeding that of HIV-Aids and Tuberculosis (Matzopoulos, Mathews, Bowman, & Myers, 2007).

Closely following violence as a cause of death is traffic injury. The WHO reports a total of 14,920 traffic related deaths for South Africa in 2007. This can partly be explained by the leap in the number of vehicles on South African roads over the early years of the 2000s as access to borrowed capital expanded. However, this period also saw a notable decline in standards of driving behaviour, with low levels of compliance with traffic laws, illegal manoeuvres and driving aggression becoming common features.

* Corresponding author. Address: Private Bag X1, Matieland, 7600, Stellenbosch. Tel.: +27 21 8083838.
E-mail address: msinclair@sun.ac.za

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http://dx.doi.org/10.1016/j.trf.2013.07.001

South Africa is a country in which respect for the rule of law in the post-apartheid era has been a significant challenge for authorities. Apartheid found manifestation and justification specifically through the development and adoption of laws, many of which were designed to perpetuate racial injustices and codify repression. Apartheid created a finely woven network of rules which determined the rights of the individual in both public and private spheres. The responsibility for enforcing such laws fell to the police who were widely despised and feared, and who are widely viewed today as untrustworthy and corrupt.

In spite of national efforts to induce cultural harmony and a unified cultural identity, the dehumanisation of past policies and the economic challenges of the present have resulted in the emergence of a culture of violence which influences both the actual and perceived levels of safety within South African society (Hamber, 2000:5). This study examines whether such a culture can influence and find expression in the attitudes and behaviour of drivers on the country's roads. It investigates the relative influence of attitudes, norms and contemporary representations around road safety and risk taking to explore how these constructs may work together to affect driving standards.

The study has an international basis in that it compares attitudes of young drivers in South Africa with those in Sweden, a country with one of the lowest rates of traffic related death in the world. (In the WHO, 2013 Global Status Report on Road Safety Sweden has a traffic death rate of 3 per 100,000 population.) Sweden not only has a markedly different level of traffic-related deaths but is a society well known for its "relative calm and slowness to change" (Hadenius, 1999).

Apart from the fact that Sweden has historically had a largely homogeneous population, a key reason for such stability was that Sweden remained neutral during both world wars, and was able to proceed with industrialization in a relatively uninterrupted fashion. In fact, Sweden had the highest economic growth rate in the Western world from 1870 until 1950 (Rojas, 1998), enabling it to transform itself from a country that had been characterised by extreme poverty and inequality to one which exhibits the lowest level of inequality among Western nations (Milner, 1990).

Sweden has an advanced social welfare system, a government dominated for many decades by the Swedish Social Democratic party, and a long history of respect for law and public authority (Kelman, 1981:614). In his evaluation of Swedish attitudes towards government, Kumlin and Rothstein (2005) concluded that Swedish citizens had a high level of trust in most authorities and believed corruption to be insignificant.

2. Theoretical framework

Most models or driver behaviour consider three elements: the individual driver, the driving environment and the vehicle. Indeed, all the standard models of traffic collisions are founded on this trinity. Traditionally, there has been little acknowledgment of the role of the social context – or the culture – against which the behaviour (or consequential collision) occurs. Zaidel (1992) identified this as a crucial gap. He understood that the relationship between the behaviour of the individual driver and that of the wider community of drivers was a vital one, and that the cultural norms and values of the community itself were important considerations. Models of human behaviour more generally accept that external, structural factors impact on behaviour. Bronfenbrenners' Ecological Systems Theory, for example, explains the behaviour of the individual in terms of multiple levels of environmental influence, including those embedded within a wider community (Bronfenbrenner & Bronfenbrenner, 1979).

As far as theories of driver behaviour are concerned, inroads are being made in expanding attention away from the individual to considering the influence of others: Risser's Diamond model (Risser, 2000) which broadens explanation of driving behaviour by considering social influences; Connolly and Åberg's Contagion of speeding theory (Connolly & Åberg, 1993); and Arthur's Theory of imitative behaviour (Arthur, 2011) have introduced valuable context to the field. They understand that credible models of driver behaviour need to look beyond individual driving quality to incorporate the role of the social complex within which each driver exists.

South Africa and Sweden have different practices regarding legislation, law enforcement and driver education that are not examined in detail in this paper. Our assumption is that these features, together with other social and political pressures, combine to create very different driving environments in the two countries. The intention of the research was not to assess whether one was more likely than another to result in collisions or conflicts, but simply to explore whether different contexts could, in fact, be linked to different types of driving behaviour. As such, the primary intention of this study was to investigate whether a social complex characterised by rapid social change and acute levels of violence and aggression, as found in South Africa, has any discernible influences on how individual drivers experience the driving of others and the decisions that they, as individual drivers, make. We were interested in understanding whether the group recognised poor driving standards to be a factor, and how they explained or justified the emergence of those standards – whether the challenges inherent in South African society might explain poor road user behaviour.

3. Methodology

3.1. Research instrument

The context of the research is one in which driving standards have been observed – anecdotally – to have deteriorated over time, however little empirical evidence of this decline exists apart from a growing rate of fatalities (which is itself a

consequence of multiple factors, of which declining standards may well be one). Media reports and opinions from insurance companies typified in the following extract are common:

> *"With road rage on the increase in South Africa due to an increase in traffic congestion, an increase in road works and* ***rapidly declining driving standards****, the country's recent 'load shedding' crises which has rendered traffic lights useless, has not helped. . .."* (www.insurance-guide.co.za/../ig-outsurance-to-the-rescue-in-sa-load 28-06-2011).

While the National Road Traffic Management Corporation publishes annual figures relating to traffic offences, enforcement efforts are inconsistent and poorly reported, and not all traffic offences are subject to targeted enforcement. As such, changes year on year are inadequately captured. The research project thus attempts to understand how individual drivers rate the driving within their country at a specific point in time, but also affords them opportunity to reflect on whether they themselves have become aware of changes in driving standards (see Figs. 1–5).

A survey was developed for students at the University of Stellenbosch (South Africa) and the University of Lund (Sweden). Survey questions were based initially on the Manchester Driver Behaviour Questionnaire (DBQ) derived originally by Reason, Manstead, Stradling, Baxter, and Campbell (1990), and focused largely on the identification and quantification of driving errors and violations. These allowed an understanding of intent, specifically by looking at whether such errors/violations were deliberate or not. Through a series of three pilot studies with groups of young drivers, using the DBQ and its amended versions as a basis, a final survey tool was developed.

The original tool was expanded to incorporate a measurement of understanding of local traffic legislation and the local scale of traffic mortality, so that the knowledge and comprehension of road safety could be established in both groups. Ques-

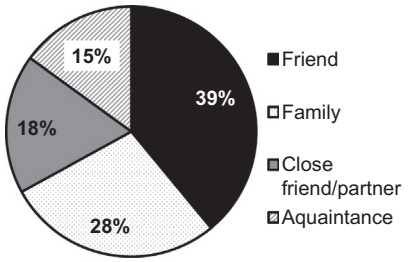

Fig. 1. Relationship between respondent and traffic victim – South Africa.

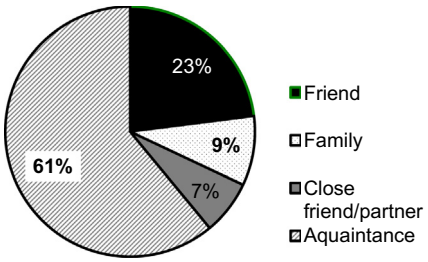

Fig. 2. Relationship between respondent and traffic victim – Sweden.

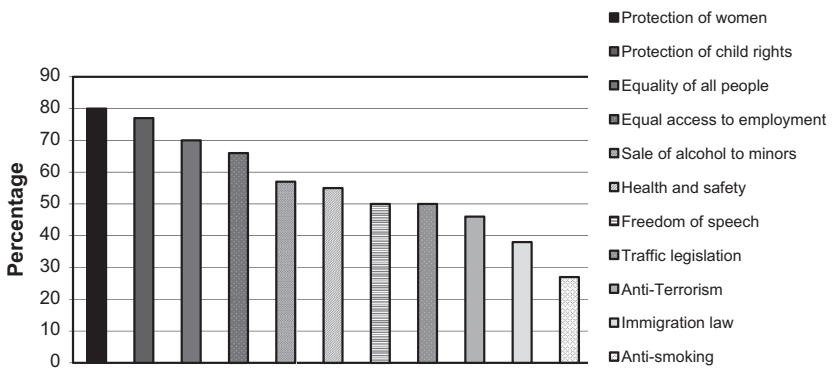

Fig. 3. Legal Priorities, South African respondents.

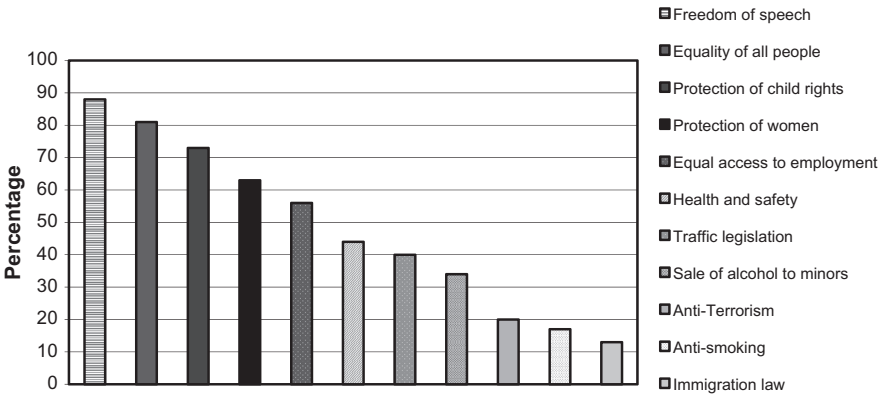

Fig. 4. Legal Priorities, Swedish respondents.

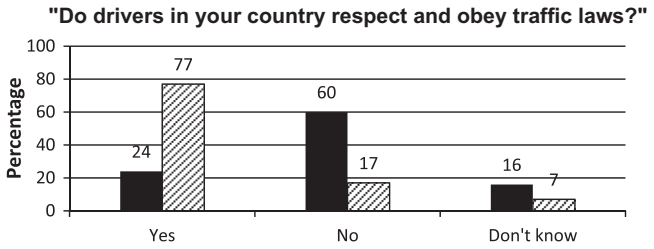

Fig. 5. Comparative respect for traffic laws.

tions relating to personal exposure to traffic injury were added, as were questions designed to capture the relative significance attributed by each individual to different aspects of traffic legislation. The standard list of questions was amended to reflect local circumstances – for example, a question was added that related to using the hard-shoulder of the road for passing which is a common custom in South Africa.

The final set of questions enabled respondents to begin to articulate for themselves a sense of an underlying culture of driving that might exist in each country. Crucially, two open-ended sections were incorporated which afforded respondents the opportunity to air their opinions and to explore their own perceptions about the link between culture and driving behaviour. In this way the survey allowed respondents to reflect on their attitudes towards driving and the law, to measure their own driving behaviour and compare it with other drivers and – in the section of open ended questions – to synthesise their evaluation of driving standards with a concept of driving culture. Using a combination of quantitative and qualitative questions, the survey thus enabled us to better understand how external social influences may influence an individual driver's behaviour.

The survey was administered electronically to young drivers registered as students within the Universities of Stellenbosch and Lund. We were aware in the selection of communities that our choice of young drivers may potentially involve complex issues around limited driving experience, appetite for risk-taking and other features of driving that have been shown to increase the vulnerability of drivers in this age group. However, assuming such features to be largely constant between the two groups we were interested to see what differences might emerge with regards to their self-reported behaviour, their attitudes, values and norms, and their awareness of the influence of the social context. It is also acknowledged that students at Stellenbosch and Lund Universities are not necessarily representative of young people in their countries, and further analysis is needed to test the generalizability of these findings at national levels.

In the South African sample, 2982 students were invited to respond, chosen randomly from the university's student email addresses. A total of 988 responses were received. A similar process resulted in a somewhat smaller number of students being invited from the University of Lund – 871 students were randomly selected to participate and 221 students returned the Swedish survey. Responses were anonymous and the system kept information only on which respondents did not submit returns. The students were all made aware that their responses could not be linked back to them directly. In spite of this it was impossible to design out incidences of self-deception. It is inevitable that within the survey responses, as with most attitudinal surveys, some answers have been given which may reflect the individuals' beliefs but which factually are suspect.

Although the response rates of 33% and 25% respectively for SA and Sweden are relatively low (but no unusually so for an unsolicited electronic survey) the number of responses was fairly high. Even so we set our significance level at 1% to rule out the possibility of spurious significant results.

3.2. Demographics

In the South African sample males–female ratio was 49:51. This is a direct reflection of the gender balance of the University. Of these respondents, 28% had held their licence for less than 2 years, 52% had been licensed between 2 and 5 years, and 9% had been licensed for more than 5 years. The average age of the respondents was 20 years, and the mode was 19 years.

In the Swedish sample 64% were males, and 36% females. The faculty has significantly more male students enrolled than females, at a ratio of 3:1. The fact that 36% responses were from females suggests that they are over-represented in the responses. The average age of the Swedish respondents was 23 years, with the mode at 21 years. As such the Swedish respondents were slightly older than the South African sample.

3.3. Statistical analysis

Results are reported as frequencies with percentages, and where appropriate, graphically represented through histograms or pie charts. For comparison between the two countries, cross tabulation with the Chi-square test was used for categorical responses (e.g. gender or yes/no responses). For those questions with Likert scale responses, one-way ANOVA was used to investigate possible differences. A 1% significance level was used as guideline for determining significant differences. Detailed results for reference are provided in Appendix A.

4. Results

In this section results from each of the question are reported as well as some comparisons between the two countries. Interestingly, gender was one aspect of the analysis that raised few results of note. This was particularly surprising in view of the large body of research which documents gender-based differences in driver attitudes, risk-appetite and involvement in traffic violations and collisions (e.g. DeJoy, 1992; Farrow & Brissing, 1990; Tavris, Kuhn, & Layde, 2001; Turner & McClure, 2003; Özkan & Lajunen, 2006). In comparisons between male and female respondents within each sample, and between respondents of SA and Swedish origin, the responses indicated no clear differences for any question based on gender apart from three exceptions. In the first, South African females were less inclined to rate their own driving behaviour as excellent than males ([**1**] $p \leqslant 0.01$); in the second, males in both South Africa and Sweden were more inclined than females in the self-reporting driver behaviour to speed 'because it feels good' ([**2**] $p \leqslant 0.01$), and thirdly, females in both countries were more likely than males to worry about personal involvement in collisions ([**3**] $p \leqslant 0.01$). These trends are not unexpected given the vast body of literature that exists around gender differences in attitudes toward driving. In every other question the levels of difference in response were statistically insignificant, and so gender is not discussed as an element in the sections that follow.

4.1. Comparison of country cohort's exposure to traffic collisions

Part of the survey was designed to elicit information about the personal experience of traffic collision and injury, and how that translated to feelings of vulnerability on the road and responsibility for other road users' safety.

In response to the question "*Do you personally know anyone who was killed or seriously injured in a traffic collision*", a significantly higher positive response was reported by the South African respondents. Of these, 79% confirmed that they personally knew someone who had been killed or injured in a traffic collision, compared with 40% in the Swedish group. Of the South Africans who had responded positively to this question, 57% reported the injury to have been fatal, as compared with 14% of the Swedish students.

For the South African sample, 46% of victims were family members or close friends/partners, and only 15% were identified as 'acquaintances'. In the Swedish sample, 61% of victims were described as acquaintances and only 16% were either family members or close friends or partners. The South African exposure to road traffic casualties is clearly more immediate.

Turning to the issue of whether exposure to traffic collisions had any bearing on the level of perceived risk, subsequent questions in the survey related to their evaluation of the likelihood of a) being personally injured on a collision and b) being responsible for injuring another person in a traffic collision. Of the South Africans, 53% indicated that being injured or killed was something that concerned them, compared with 29% of Swedish respondents ([**4**] $p < 0.01$). Similarity, 46% of South African's worried about being responsible for killing or injuring another person, compared with 22% of Swedish respondents ([**5**] $p \leqslant 0.01$).

4.2. Views on the value of traffic legislation

The survey sought to measure how the respondents valued traffic law relative to a range of other types of legislation. Respondents were asked to rank the importance on a Likert scale, from 'Low significance' on one extreme, to 'Essential' on another. The graphs below indicate the relative ranking of the types of law, based on how many respondents in each case believed the category of law to be essential.

What is interesting about these results is the degree of congruence between the two groups. 'Protection of child rights' and 'Equality of all people' featured in the top three for both groups, and the three least important categories were also commonly shared; these being 'Anti-terrorism legislation, 'Anti-smoking legislation' and 'Immigration legislation'. The relative importance of traffic legislation in both of the samples is very similar. In the South African sample traffic legislation tied seventh place out of a total of 11 categories, and in the Swedish it was also seventh in importance. The results suggest that value systems among both sets of respondents are similar – including the relative regard for traffic legislation.

In considering the relative importance of a number of *specific* areas of traffic legislation – including speed limits in residential areas and on highways, laws limiting alcohol consumption of drivers, seatbelt laws, laws restricting use of mobile phones while driving, and laws dictating physical condition of cars – the responses from both groups was again remarkably consistent. A notable exception was a difference between the significance attributed to laws governing alcohol consumption by drivers – only 67% of South African drivers believed these to be essential, compared with 88% of Swedish respondents ([**6**] $p < 0.00$).

4.3. Driver attitudes

A number of questions were included that sought to elicit attitudes towards specific road safety issues. This paper concentrates on three of these issues: quality of driving (in the host country and of their own driving), drink driving and speeding.

i. Standards of driving

Respondents were asked to rate the standard of driving in their country and also whether drivers in their countries respected and obeyed traffic laws.

As can be seen in Fig. 6, only 24% of South African respondents believed that that their fellow drivers obey and respect traffic laws, against 77% of Swedish respondents ([**7**] $p < 0.01$). Some 60% of the South African sample confirmed that, in their view, other drivers neither respected nor obeyed traffic laws.

When asked about their personal driving ability, however, an interesting anomaly emerged. For the South African sample, 99% identified themselves as either 'excellent' or 'good' drivers. Not one respondent chose 'average' as an option. This contrasted markedly with the Swedish respondents, whose responses reflected a greater degree of modesty. Here, 65% chose 'excellent' or 'good', 34% selected 'average' and 3% chose 'below average' or 'poor' ([**8**] $p < 0.01$).

The respondents were asked to give their opinions of the nature of drivers in their countries, and in this area of questioning some significant differences are identifiable. South African respondents indicated clearly that fellow drivers are characterised by aggression, inattention, impatience and risk-taking behaviour. In remarkable contrast, Swedish respondents selected descriptions such as tolerant, law-abiding, attentive and safety-conscious.

ii. Attitudes towards alcohol and driving

South African fatalities statistics indicate that an alarmingly high number of drivers involved in fatal crashes have Blood Alcohol Concentration levels in excess of the legal limit. In spite of fairly widespread education around alcohol and driving, drink-driving continues to be a major problem. The survey attempted to explore the respondents' attitudes towards drink driving by asking a number of questions around alcohol use and the likelihood that respondents would stop their friends from driving drunk. The survey also asked respondents to rate the danger of a number of driving behaviours which included driving under the influence of alcohol.

In response to the question "How often do you drive a car after consuming two or more alcoholic drinks?" the South African responses indicated a significantly higher likelihood of this than the Swedish, of whom 97% answered 'never'. In contrast, 43% of South African respondents would regularly, often or sometimes drive after consuming alcohol ([**9**] $p < 0.01$).

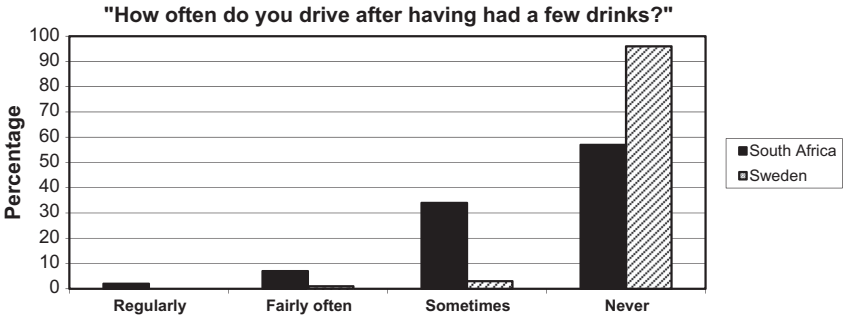

Fig. 6. Attitude regarding alcohol and driving – personal driving habits.

The graph below illustrates some significant differences in tolerance levels between South African and Swedish students regarding allowing their friends to drive while under the influence of alcohol. Here respondents were asked about the likelihood of their intervening in the event of their friends driving drunk.

Of the Swedish respondents, 57% indicated that they would always stop their friends, and a further 23% indicated that it was never a problem as their friends simply didn't drive after drinking. In contrast, only 24% of South African respondents would always stop their friends, and the majority – 38% – would only intervene if the friend was clearly drunk ([**10**] $p < 0.01$).The tipping point for intervention appears lower among the South African respondents than among the Swedish (see Fig. 7).

This is in spite of the fact that both sample groups evidenced very similar views on the severity of the drink-driving offence (see Fig. 8). Responses from both groups suggested that they clearly understood the risks associated with drink driving, with 85% of South Africans and 94% of Swedish respondents indicating that they believed drink driving to be an extremely serious offence (see Figs. 9–11).

iii. Speeding

Excess speed continues to be cited as a major contributory factor in the majority of fatal collisions in South Africa (Gainewe & Masangu, 2010). Speed is recognised internationally as a key problem and where speed enforcement has been

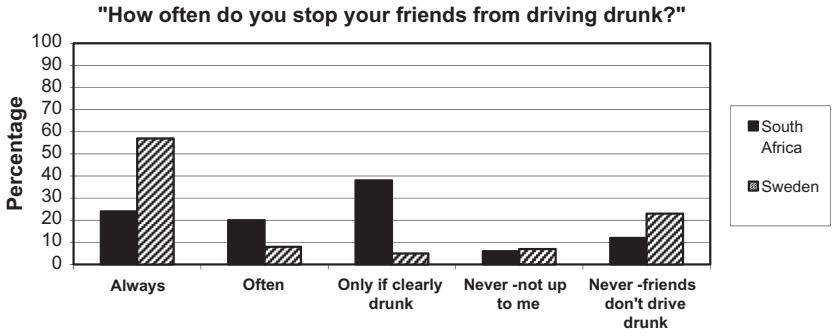

Fig. 7. Attitude regarding alcohol and driving – likelihood of intervening.

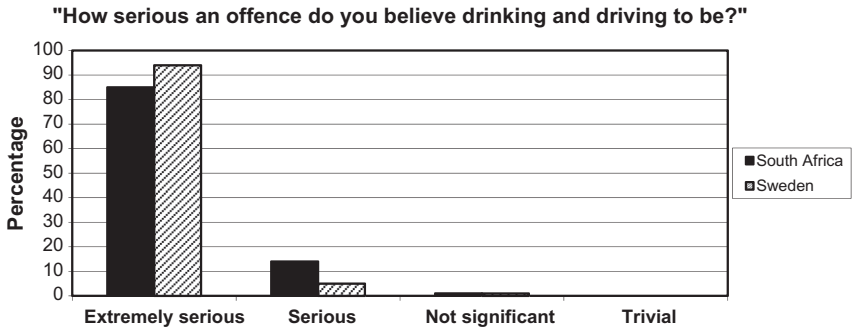

Fig. 8. Attitude regarding alcohol and driving – general sense of severity of ofence.

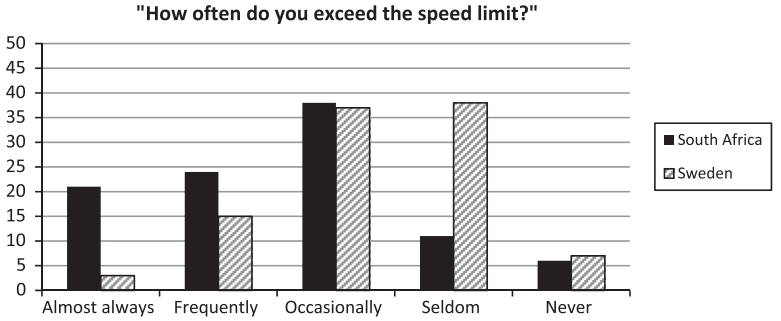

Fig. 9. Attitudes to speeding.

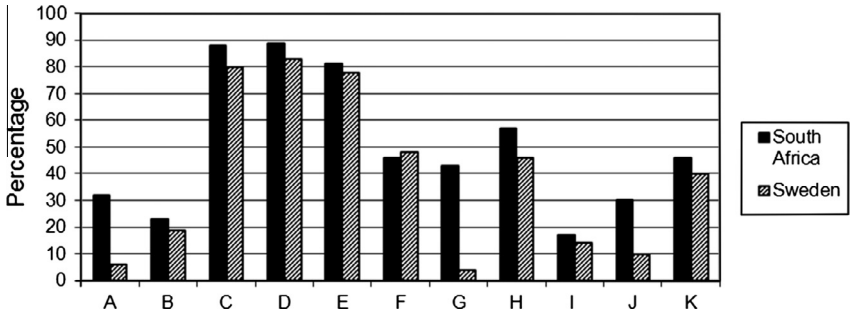

Fig. 10. Self-reported risky behaviour.

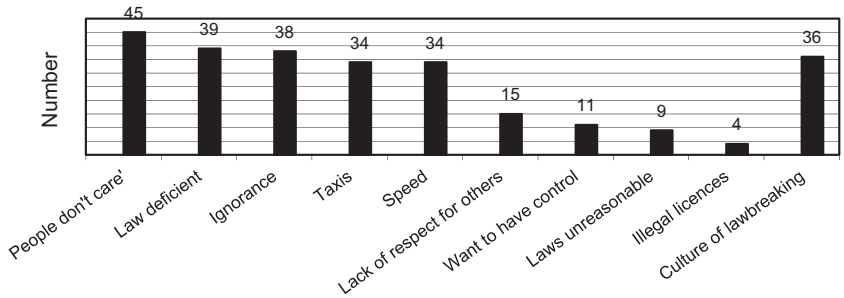

Fig. 11. Road safety concerns raised by South African respondents.

applied effectively collision and death rates have declined appreciably (Thomas, Srinivasan, Decina, & Staplin, 2008). We were interested in understanding how the respondents rated speeding as a problem for their country as a whole, and how they personally engaged in speeding as a driver.

In theory at least, both South Africans and Swedish respondents reflected similar attitudes to speeding. The majority of respondents in both cohorts (90% South Africans, 99% Swedish) believed that speed limits play a key role in safety, particularly in residential areas, and that individual drivers should comply with them ([**11**] $p < 0.01$). Attitudes towards the value of speed *enforcement*, however, varied slightly between the two countries. In the South African group 83% of respondents noted that speeding should be seen as a serious offence, while 64% of Swedish respondents shared this attitude.

What was interesting to see was how often the two groups reported exceeding the speed limit. A significant majority of South African respondents confirmed that they 'almost always, frequently or occasionally' exceeded the limit (83%) while only 55% of Swedish respondents fell into these categories ([**12**] $p < 0.01$). The results suggest a prevalence of speeding among the South African respondents that is at odds with the severity with which they appear to view the offence of speeding.

A second question relating to speeding was whether the respondent – as passenger – would ask their driver friend to slow down if they felt they were driving too fast. Here, as with a previous question related to alcohol, the results showed that the South Africans were far less likely to intervene – only 6% of respondents in this sample noted that they would intervene if the driver was exceeding the limit on a highway, with 12% indicating that they would ask the driver to slow down if the car was driving at excessive speed through a residential area. The results from the Swedish group were notably higher at 21% and 30% respectively ([**13**] $p < 0.01$).

4.4. Self-reported risky driving behaviour

Moving to questions related to the frequency with which individual respondents engaged in different types of risky driving practices, it was clear that while both groups of respondents admitted to a range of infringements, the South African respondents – for all categories but one – indicated a higher inclination to infringe.

In some cases the difference was very high – not stopping at traffic lights at night, for example, was reported by 30% of South Africans compared with 10% of Swedish respondents. Driving after consuming alcohol reflected an even greater difference – 42% of South Africans admitted to this against 4% of Swedish. The anomaly was for the infringement "Exceeding the speed limit because it feels good" – here both groups indicated fairly high levels of infringement but the Swedish respondents were slightly more inclined towards this (at 48%) than the South Africans (at 46%).

In general the pattern of behaviour between the South African and Swedish students is comparable (with the aforementioned exceptions), but the level of reporting of risky driving behaviour by the South Africans was at a marginally higher level

than of the Swedish students. Given that the results given were often based on the response to a single question, and also the fact that – for the Swedish respondents – English may have been a second or third language, it is important that we look primarily at the patterns of response, rather than at individual responses or anomalies. This, unfortunately, is the limitation that this form of data collection can present. To validate some of the comments and draw deeper down into some of the results, we asked a number of open-ended questions. The responses of these are discussed below.

4.5. Open-ended comments

The survey allowed respondents to include comments about changing standards of driving, to identify what they believed to be the main source of traffic collisions in each of their countries and to comment on the influence of other people's behaviour or attitudes on their own driving. 434 students (44%) of the South African sample offered comments, compared with 21 (9.5%) from the Swedish sample. Apart from the difference in the number of respondents showing an interest in the subject by volunteering their own opinions about the causes of traffic collisions, the passion exhibited within the South Africa responses was notably higher. Not only were there more lengthy comments (53 South Africans contributed comments of 50 words or more, as against only one respondent from Sweden) but the South African comments were characterised by grammar and language which suggested urgency and passion – exclamation marks, capital letters and expletives or derogatory words were present in 18% of comments.

Most of the Swedish comments related to behaviour of specific individuals – drivers exceeding the speed limit or unpredictable behaviour of cyclists and taxis, for example. One student commented: "*Very many drivers drive faster than the speed limit, probably because it saves time and it doesn't feel that dangerous*." Another noted: "*Most people obey the laws except for taxi drivers and cyklists*(sic)". A third wrote: "*People on bikes don't understand that they have to obey the same laws, not biking past a red light*". Four respondents referred to the 'unreasonableness' of legislation; for example: "*The speed limits are way too low on most roads*" while another said "*Most of the laws are too restrictive*".

Given the very small number of comments received from the Swedish respondents the remainder of this section concentrates on analysing the comments from the South African respondents.

Among the South African respondents there was a high level of acknowledgement that driving standards are poor. One respondent noted: "*People disobey laws everyday, turn without indicating, speed, stop on the side of the road without hazard lights on, stop on the sidewalk with no indication*". Another commented: *"Trying to get to class is like a cross between the amazing race, survivor and organized chaos... you're not quite sure what you'll see on the roads. ..cell phones, people that drive at 80 in the fast lane etc*."

A content analysis of the comments indicated that the top three suggested causes for high levels of traffic infringement given by the South African were (i) a weak legal system, (ii) apathy (the failure on the part of drivers to care about safety), and (iii) ignorance. "Culture" was the fourth highest cause, with a high number of respondents referring to South Africa as having a 'culture' of poor driving; terms used were "*culture of speeding*", "*culture of lawlessness*", "*mentality of not caring*" and a "*criminal' culture*". A large number of students referred to wider and associated levels of law breaking, particularly corruption within the police services which they associated with driving fines being quashed and unlawful behaviour being ignored.

The absence of serious traffic law enforcement appears to be viewed as the main reason for low standards of driving and high levels of traffic infringement. Corruption of officials, reported frequently in the media, has obviously undermined respect for the rule of traffic law, as evidenced in the comment: "*A lot of people have contacts in the police to make traffic fines 'disappear*". And: "*It is a South African thing to be contemptuous of traffic police and to do whatever you like*".

There was a common complaint made about the lack of sufficient levels of traffic law enforcement: "*There is no consequence to not obeying the law. When someone jumps through a red light, there's no traffic officer waiting on the other side to fine them. When they change lanes without indicating, they are not fined. No one obeys the law, as there are hardly any traffic officers to enforce the law*".

This situation seemingly creates an opportunity for drivers to get away with behaviour and manoeuvres that pose risks for other road users. Most often it was taxi drivers who were blamed for blatant infringements – 183 references were made to taxis. Some examples: "*There are too many taxi drivers that are dangerous, often unlicensed and who think the roads belong to them*" and: "*Taxis get away with murder and other cars follow suit*".

Interestingly, however, a few comments suggested that poor driving standards were no longer confined to taxi drivers but had percolated down to the general traffic. One respondent noted: "*It started with the taxis – they began taking chances and nothing happened to them, so gradually everyone else started driving more and more badly. Now it's a 'free-for-all*'". Another echoed this by commenting "*There is little enforcement of law in South Africa - you break the law initially because you think it is unreasonable and no one ever catches you or fines you for it, so you start to do it more and more ... until it becomes a complete culture to disregard the rules of the road because, hey, everyone else is doing it...*".

A respondent added a sense of personal experience to this when she wrote: "*Sometimes if you obey the law – for example if you stick to the speed limit – the other drivers swerve around you and make you feel like an idiot just because you are doing what the law says you should. I feel there is often pressure to act like every other person on the road and break the law.*"

This last comment highlights a perception that pressure from other drivers may be a force of change in driving practice and standards. At a broader level, a number of comments were made that addressed the influence of different characteristics

of South African society on driving. For example, one respondent commented: "*It is simple... people feel frustrated by life in South Africa and it comes out in their driving*".

One respondent addressed the historic status of traffic law in the context of South Africa's political history when he said: "*Trivial laws like many of those in SA traffic law are and have always been a joke in a country when the police and the legal system has been focused on more fundamental things – under apartheid it was about maintaining the privilege of whites, now it is about maintaining the privilege of ANC politicians*". One other noted: "*Traffic law has historically been a low level priority in South Africa – to put it simple (sic), there have always bigger fish to fry!*"

5. Discussion

This study explored young adults' representations around road safety and their values and attitudes towards a range of factors that have in the past been found to influence road safety. These factors are discussed separately below.

5.1. Exposure and self-awareness

A disquieting observation in the responses was the fact, that while the exposure of South African students to traffic risk is significantly higher than that of the Swedish respondents and was *understood* by them to be significant, there was little acknowledgement of personal responsibility for that situation. The high self-rating of South African drivers compared with the almost blanket derision for the behaviour of other drivers is worth highlighting. It contrasts noticeably with the Swedish sample where self-assessment of driving skills was more moderate, and where criticism of other drivers was lower. South Africans, in this sample at least, do not appear to see themselves as being part of a national problem; instead they ascribe the cause of the problem exclusively to the behaviour of others. This could be the consequence of what is known among psychologists as the "blind spot of communication" explained by Risser (2011:2) as follows: "As suggested by Luft (1966) our view on how our own behaviour is perceived by the others is impaired by the fact that we do not see ourselves, both in a narrow sense and in a more symbolic sense". Why this is more of an issue for South Africans than for Swedish respondents is, however, unclear.

5.2. Values and attitudes

To an extent, some of the most interesting findings in this study were the similarities in values and beliefs between South African and Swedish respondents. Both groups almost equally weighted the value of road traffic legislation against other forms of legislation; both recognised the dangers inherent in forms of poor driving (including, interestingly, the risk associated with alcohol use). This suggests that the road safety aspirations and awareness of both groups is very similar.

Some of the differences – for example the lower intensity of feeling among South Africans that drivers should be fined for driving through red traffic signals – is most likely a consequence of anxieties associated with night-time driving and a recognition that a new norm that has emerged in South Africa which accepts red lights, at night, as 'advisory'. Attitudes towards speeding, towards drink-driving and behaviour at pedestrian crossings were extremely similar between the groups.

5.3. Self-reported driving behaviour

In much the same way that the beliefs of both groups were found to be similar, so were the reported behaviours. With two exceptions – a small difference in self-reported driving after consuming alcohol, and not stopping at red lights at night – all the categories of potentially dangerous manoeuvring were completed in a similar fashion by both groups, although in almost every case the South African respondents reported higher levels of infringement than Swedish respondents. It is possible that these types of behaviour represent young drivers' characteristics, more than national or cultural ones.

5.4. The role of norms

There is little doubt that driving standards in South Africa are in a state of flux. Contraventions of traffic laws occur frequently and poor driving standards and high-risk, aggressive motoring behaviour are commonplace. The South African responses indicate that South Africans on the whole appear to have an inherent disrespect for traffic officials and a fluid interpretation of traffic laws, notwithstanding the high level of importance placed on them in the survey by South African respondents. There was clear indication, evidenced in the opinions given about 'other drivers' that South African drivers in general are not law abiding. What was interesting from the South African responses particularly was an indication that a number of respondents recognised an iterative process to behaviour change, and a link between behaviour and social norms. Many of these comments highlight the link between cultural context and the evolution of new norms thus acknowledging, although not in psychological language, that cultural history does have has a direct role to play in contemporary traffic behaviour.

What was interesting in the comments around norms was the suggestion that South African disregard for traffic law has been a common feature of life for many years. There was, however, a sense that this had got worse, in that corruption of

traffic officials is more directly associated with the new South African government, and that this commonly held view of corruption has undermined, even further, the respect for traffic law and traffic authorities. This creates the potential for a weakening culture of compliance and increased risk.

Different tolerances for specific behaviours are regularly seen in many areas of life – smoking in restaurants, for example, has become a socially unacceptable practice across the United States but is not considered nearly as reprehensible in many European countries, even those that have legislated against it. Some traffic behaviour that has become tolerated in South Africa would be viewed with alarm in many more developed countries. Social context and local culture thus clearly influence what is considered acceptable across a wide range of spheres, including traffic behaviour.

5.5. Tension between the individual and the collective

In spite of the fact that only a small proportion of South African respondents felt that driving standards in the country were good, most people in South Africa (and indeed elsewhere) when asked, would identify themselves – and earnestly see themselves – as law abiding. Psychologists have, however, long understood that the individuals can adopt a flexible, even utilitarian, approach to norms without compromising their sense of virtue. Robert Caldiani, for example, conducted a series of experiments on littering, where the littering behaviour was found to be directly influenced by the presence of existing litter and particularly by the company of other people actively littering in clear view (Cialdini et al., 2006). The more people engaged in dumping rubbish at the time, the more inclined each newcomer was to do the same. Mullen, Copper, and Driskell (1990) noted a similar pattern of influence in their study of jaywalking in New York, where pedestrians were found to be more likely to cross against a red light when a "high-status" person did so first.

Allowing the behaviour of others to influence one's own behaviour, even when that behaviour is antithetical to core beliefs and values, is a feature common to all societies and the means by which people justify their actions to themselves. As Foster (1991:345) noted "There can be no doubt that social and interpersonal influence is a fundamental aspect of the human condition... It is difficult to conceive of any individual or any human situation which is not subject to processes of influence".

In the context of traffic behaviour, it would appear that people minimise the contradiction inherent in the practice of breaking driving law by comparing their own behaviour with that of others, particularly those also violating traffic law at the same time (the bias of false consensus). By doing so, drivers create a sense of belonging to a majority group that negates the possibility that they are behaving in a socially irresponsible manner.

6. Conclusion

The intention of the study was to compare the attitudes and experiences of young drivers in two very different countries, one with high levels of social change and road deaths and another characterised by social stability and few traffic deaths. Although both groups demonstrated similar attitudes towards the rule of law in theory, the South African respondents articulated passionate concern over road safety within the country. The comments illustrate the influence that wider social and political changes may have on driving and reflect an awareness that the process of deterioration of standards is both ongoing and the consequence of structural factors including history of traffic enforcement, the emergence of a culture of lawlessness and the influence of other peoples' behaviour and attitudes.

Appendix A

No.	Description	Grouping	Statistic	*p*-Value
1	SA females less likely to rate their driving as 'excellent'	Gender	$F(1,790) = 49.4$	$P < 0.01$
2	Males both countries more likely to speed because 'it feels good'.	Country	$F(1789) = 30.61$	$P < 0.01$
3	Females more likely to worry about collisions than males	Gender	$F(1789) = 32.95$	$P < 0.01$
4	South Africans more concerned about being injured than Swedish	Country	Chi-squared (3) = 71.5	$P < 0.01$
5	South Africans worry more about injuring another road user	Country	Chi-squared (3) = 53.6	$P < 0.01$
6	SA drivers view alcohol laws as less important than Swedish	Country	Chi-squared (1) = 13.8	$P < 0.01$
7	Fewer SA drivers believe that fellow drivers respect and obey traffic laws.	Country	Chi-squared (2) = 161.9	$P < 0.01$
8	SA drivers overestimated driving skill	Country	$F(1.953) = 7.3$	$P < 0.01$
9	SA drivers more likely to drive after drinking	Country	$F(1.947) = 73.7$	$P < 0.01$
10	SA's less likely to stop friends from driving drunk	Country	Chi-squared	$P < 0.01$

Appendix A (*continued*)

No.	Description	Grouping	Statistic	*p*-Value
11	SA drivers more likely to see speeding as a serious offence	Country	(4) = 134.6 *F*(1.951) = 41.3	*P* < 0.01
12	SA drivers more likely to speed	Country	Chi-squared (3) = 49.9	*P* < 0.01
13	SA drivers less likely to interfere if friends are driving too fast	Country	Chi-squared (2) = 114.7	*P* < 0.01

References

Arthur, R. M. (2011). Examining traffic flow and speed data: Determining imitative behaviour. *Traffic Injury Prevention, 12*(3), 266–273.

Bronfenbrenner, U., & Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Cawthra, H., & Kraak, G. (1999). Development update. *Quarterly Journal of the South African National NGO Coalition and INTERFUND, 2*(3).

Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., & Winter, P. L. (2006). Managing social norms for persuasive impact. *Social Influence, 1*, 3–15.

Connolly, T., & Åberg, L. (1993). Some contagion models of speeding. *Accident Analysis & Prevention, February 25*(1), 57–66.

DeJoy, D. M. (1992). An examination of gender differences in traffic accident risk perception. *Accident Analysis & Prevention, 24*(3), 237–246.

Farrow, J. A., & Brissing, P. (1990). Risk for DWI: A new look at gender differences in drinking and driving influences, experiences, and attitudes among new adolescent drivers. *Health Education & Behavior, 17*(2), 213–221.

Foster, D. (1991). Social Influence – Ideology. In D. Foster & J. Louw-Potgieter (Eds.), *Social Psychology in South Africa*. Johannesburg: Lexicon.

Gainewe, M., & Masangu, N. (2010). *Factors leading to fatal crashes and fatalities on South African roads: 2005–2009*. South African Transport Conference, Pretoria.

Hadenius, S. (1931–1999). *Swedish politics during the 20th century: Conflict and consensus*. Stockholm, Sweden: Swedish Institute, Stockholm, Sweden.

Hamber, B. (2000). Have no doubt it is fear in the land: An exploration of the continuing cycles of violence in South Africa. *Southern African Journal of Child and Adolescent Mental Health, 12*(1), 5–18.

Kelman, S. (1981). *Regulating America, regulating Sweden*. Cambridge, Mass: MIT Press.

Kumlin, S., & Rothstein, B. (2005). Making and breaking social capital: The impact of welfare-state institutions (author abstract). *Comparative Political Studies, 38*(4), 339.

Luft, J. (1966). *Group processes – An introduction to group dynamics*. Palo Alto, CA: National Press.

Matzopoulos, R., Mathews, S., Bowman, B. & Myers, J. (2007). Western Cape burden of disease reduction study: Injury due to interpersonal violence and traffic (Vol. 5).

Milner, H. (1990). *Sweden: Social democracy in practice*. Oxford: Oxford University Press, Oxford.

Mullen, B., Copper, C., & Driskell, J. E. (1990). Jaywalking as a function of model behaviour. *Personality and Social Psychology Bulletin, 16*(2), 320–330.

Özkan, T., & Lajunen, T. (2006). What causes the differences in driving between young men and women? the effects of gender roles and sex on young drivers' driving behaviour and self-assessment of skills. *Transportation Research Part F: Traffic Psychology and Behaviour, 9*(4), 269–277.

Reason, J. T., Manstead, A. S. R., Stradling, S. G., Baxter, J. S., & Campbell, K. (1990). Errors and violations on the road: A real distinction? *Ergonomics, 33*(1990), 1315–1332.

Risser, R. (2000). Measuring influences of speed reduction on subjective safety. In *Proceedings of the ICTCT workshop on traffic calming*, New Delhi, Vienna.

Risser, R. (2011). *Some thoughts about traffic psychology*. Unpublished manuscript, Vienna.

Rojas, M. (1998). *The rise and fall of the Swedish model, London: Social Market Foundation*. London: Centre for Post-Collectivist Studies.

Tavris, D. R., Kuhn, E. M., & Layde, P. M. (2001). Age and gender patterns in motor vehicle crash injuries: Importance of type of crash and occupant role. *Accident Analysis & Prevention, 33*(2), 167–172.

Thomas, L. J., Srinivasan, R., Decina, L. E., & Staplin, L. (2008). Safety effects of automated speed enforcement programs: Critical review of international literature. *Transportation Research Record: Journal of the Transportation Research Board, 2078*, 117–126.

Turner, C., & McClure, R. (2003). Age and gender differences in risk-taking behaviour as an explanation for high incidence of motor vehicle crashes as a driver in young males. *Injury Control and Safety Promotion, 10*(3), 123–130.

World Health Organization, Global Status Report (2013). <http://www.who.int/violence_injury_prevention/road_safety_status/2013/en/index.html>.

Zaidel, D. M. (1992). A modeling perspective on the culture of driving. *Accident; Analysis and Prevention, 24*(6), 585.