

CRANFIELD INSTITUTE OF TECHNOLOGY.

J.R.ADAMS BA MSc,

**YOUNG PEOPLE AND ROAD USER BEHAVIOUR:
ATTITUDES, JUDGEMENTS AND BEHAVIOUR.**

(VOLUME TWO)

**APPLIED PSYCHOLOGY UNIT
COLLEGE OF AERONAUTICS.**

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APPENDICES.

APPENDIX A1.

THE NON-DRIVER QUESTIONNAIRES (I and II).

DRIVER BEHAVIOUR QUESTIONNAIRE 1

Subject No. _____

This is not a test or an exam. There are no right or wrong answers. It is a questionnaire to find out something about your attitudes to driving and what sort of driver you think you will be. The questionnaire is very simple to complete, mostly requiring you only to place ticks in appropriate places in order to indicate your answers. Please read the questions carefully and answer them as best as you can. If you have any problems or do not understand any of the questions please ask me and I will explain it more clearly.

There are five short sections to this questionnaire: please complete them in the order in which they are presented and ensure that you have answered all the questions.

Your answers on this questionnaire will be not be seen by your parents or teachers.

IMPORTANT: The words "drink and drive" and "drinking and driving" are used throughout this questionnaire. These phrases mean that a man or woman has drunk alcohol and then driven his or her car. The amount of alcohol can be anything from a very small amount to a very large amount, unless the question states otherwise.

Please write in pen, not pencil.

SECTION A

OFFICIAL
USE ONLY

LINE 1
1 2 3 4

Please state your birth date below.

date month year

For example 14th March 1975

Please tick whether you are male or female.

Male

Female

What year are you in at school?

1st 2nd 3rd 4th 5th 6th Upper 6th Lower 6th (Circle only one)

When you are older do you intend learning to drive:

a) a car? YES NO (tick only one box)

b) a motorbike? YES NO (tick only one box)

Do you think your parents will
want you to learn to drive a car?

YES

NO

How much do you think your parents
will help you with the financial
costs of having a car?

not at all

a bit

a fair amount

a lot

all of it

When you have passed your driving test do you
think your parents will let you use their car?

YES

NO

parents do not
have a car

How many of your friends drive cars?

How many of your friends ride motorbikes?

Do you have any
brothers or sisters?

YES

NO

If yes, do any of
them drive cars?

YES

NO

5 6 7 8

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SECTION B

OFFICIAL
USE ONLY

Below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement.

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree	
The police do a good job						24 ☐
Most people drink and drive						25 ☐
I think I will enjoy driving						26 ☐
Alcohol improves your driving						27 ☐
I like the police						28 ☐
I think I will be a safe driver						29 ☐
Men drive faster than women						30 ☐
Driving lets young people have more fun						31 ☐
Women are the most skilful drivers						32 ☐
Most young people drink and drive						33 ☐
I think my driving ability will be above average						34 ☐
People who drive fast are the most skilful drivers						35 ☐
The speed limit on motorways is too slow						36 ☐
Young drivers are safer drivers than older drivers						37 ☐
Having a car will help me get boyfriends/girlfriends						38 ☐
There should be more traffic police						39 ☐

////////

OFFICIAL
USE ONLY

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree	
My mother drives fast						41
I have lots of friends						42
I respect most of my teachers						43
I often feel superior to others						44
I am a shy person						45
Young drivers often show off						46
My father drives fast						47
I get on well with my mother						48
Women are safer drivers than men						49
I think I will find driving stressful most of the time						50
Speed limits on most roads are too slow						51
Being able to drive will make me a more confident person						52
The police always pick on young drivers						53
Young drivers deliberately take risks						54
I think I will be a fast driver						55
It would be fun to learn how to drive fast						56
Overtaking other cars will be exciting						57
It is O.K. to drive by yourself without having passed your test						58

////////

SECTION C

OFFICIAL
USE ONLY

1) Below is a list of reasons why some people want to learn to drive a car. When you have read them, say how important each reason is to you by giving it a number between 1 and 5, where 1 means "not at all important", 2 means "slightly important", 3 means "important", 4 means "very important" and 5 means "extremely important".

I want to learn to drive because:

<div style="border: 1px solid black; width: 50px; height: 100px; margin-right: 10px;"></div>	I will be able to get about easier
	My friends will be learning to drive
	People treat you more like an adult when you have a car
	It will be fun to drive a car
	It will help my social activities
	My parents want me to
	Other reasons
	Please say what your other reasons are _____

60	
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////////	

2) Please indicate how much each of the following qualities in a car would influence you in deciding which car you would like to have. Use the same Scale as used in question 1. (a scale of 1-not very important- to 5-extremely important)

it is fast
it looks good
it is a good make
it is economical
safety features

parents have one
friend has one
it handles well
the size of it
it is reliable

68	
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77	

3) Read the list of cars below and say how much you would like to have each one by putting a number from 1 to 5 in each box. Put a 1 in a box if you would not really want to have a particular type of car, a 2 if you would like it a bit, etc all the way up to 5 meaning that you would really like to have that type of car. If you do not know how much you would like to have a particular type of car (or you do not know the car) put an X in the box instead.

1) A small hatchback
(for example, a
Metro or Fiesta)

4) A fast hatchback
(for example, a Golf GTi
or a Peugeot 205GTi)

2) A medium hatchback
(for example, an
Escort or Astra)

5) A saloon car
(for example, a Sierra
or a Montego)

3) Sports Coupe
(for example,
an Audi Coupe
or Capri 2.8i)

LINE 2

1	
2	
3	
4	
5	
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SECTION D

OFFICIAL
USE ONLY

Below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement.

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree		
I am an aggressive person						7	
I find cars boring						8	
I am a competitive person						9	
I am interested in how cars work						10	
I usually ignore car adverts						11	
When I drive I will probably take some risks						12	
I am interested in motor sports						13	
I get on well with my father						14	
Driving fast on country lanes will be exciting						15	
Most young drivers drive fast						16	
My parents disapprove of drinking and driving						17	
Speed limits are not needed on country roads						18	
Drivers should be nice to each other when driving						19	
It is O.K. for skilful drivers to ignore speed limits						20	

////////

OFFICIAL
USE ONLY

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree	
I am an independent sort of person						22
It is safe to drink over the legal limit and drive						23
People who have fast cars are the most skilful drivers						24
Car adverts encourage people to drive fast						25
People who drive fast are the safest drivers						26
It is O.K. to drive after a few drinks.						27
People who have fast cars make the safest drivers						28
Driving will be a way of expressing my personality						29
Young people feel powerful when driving fast						30
Most drivers who have accidents are just unlucky						31
Making drivers pay fines does not stop them breaking the law						32
Adverts about drinking and driving will deter people from doing it						33
Driving a car fast will help me to let off steam after an argument						34
For me, the <u>kind of car</u> you have is almost as important as having a car						35

////////

1) Below is a list of some of the things that people do when driving. How dangerous do you consider each of them? Rate each one on a scale of 1 to 5, Not at all dangerous to very dangerous.

not very **very**
dangerous **dangerous**

1 2 3 4 5

- 1) Not stopping at pedestrian crossings when someone is trying to cross
- 2) Being over-cautious at roundabouts
- 3) Going too fast on roundabouts
- 4) Parking on double yellow lines
- 5) Braking too quickly in wet weather
- 6) Parking on the pavement
- 7) Not indicating when turning right
- 8) Driving too slowly in town
- 9) Jumping the queue in traffic jams by driving down the bus lane
- 10) Failing to give way to other drivers at junctions
- 11) Driving through red traffic lights just after they have turned red
- 12) Following the car in front too closely
- 13) Overtaking a car when approaching a bend
- 14) Driving above the speed limit in town
- 15) Driving above the speed limit on motorways
- 16) Turning in a road where U-turns are not allowed
- 17) Driving a car alone without a full driving licence
- 18) Driving when having drunk slightly over the legal limit

					37	
					38	
					39	
					40	
					41	
					42	
					43	
					44	
					45	
					46	
					47	
					48	
					49	
					50	
					51	
					52	
					53	
					54	

DRIVER BEHAVIOUR QUESTIONNAIRE 2

Subject No. _____

This is the second part of the Driver Behaviour Questionnaire. Again, it is not a test or an exam and there are no right or wrong answers. It is a questionnaire to find out something about your attitudes to driving and what sort of driver you think you will be. The questionnaire is very simple to complete, mostly requiring you to only place ticks in appropriate places in order to indicate your answers. Please read the questions carefully and answer them as best as you can. If you have any problems or do not understand any of the questions please ask me and I will explain it more clearly.

There are four short sections to this questionnaire: please complete them in the order in which they are presented and ensure that you have answered all the questions.

IMPORTANT: The words "drink and drive" and "drinking and driving" are used throughout this questionnaire. These phrases mean that a man or woman has drunk alcohol and then driven his or her car. The amount of alcohol can be anything from a very small amount to a very large amount, unless the question states otherwise.

Your answers on this questionnaire will not be seen by your parents or teachers.

Please write in pen, not pencil.

DRIVER BEHAVIOUR QUESTIONNAIRE

OFFICIAL
USE ONLY

SECTION A

Date of birth: date _____ month _____ year _____

55	56	57	58

For example, 14th March 1975

School year: 1st 2nd 3rd 4th 5th 6th 7th (circle one)

59 ☐

1) Taking account of all the subjects you study at school, would you say your work is: (circle one)

60 ☐

well below average below average average above average well above average

2) Please indicate your parents' occupations:

Father _____

Mother _____

61 ☐

62 ☐

////////

3) Do you plan to: Finish education after the 5th year
 Finish education after the 6th form
 Go on to University, Polytechnic or
 College

64 ☐

65 ☐

66 ☐

////////

4) At what age do you think people should first be allowed to get a driving licence?

Tick one. 13___ 14___ 15___ 16___ 17___ 18___ 19___ 20___ 21___

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5) Have you ever tried to drive a car, even for a very short distance?

YES ☐

NO ☐

71 ☐

6) Have you ever tried to ride a motorbike, even for a very short distance?

YES ☐

NO ☐

72 ☐

7) Have you ever been a passenger on a motorbike?

YES ☐

NO ☐

73 ☐

OFFICIAL
USE ONLY
LINE 3

- | | | | |
|-----|--|----|--|
| YES | | NO | |
| YES | | NO | |
| YES | | NO | |

1
2
3

- every day
several times a week
once a week
once every two weeks
once a month
less than once a month

4

- a friend
parent
relative
other

5

////

- YES ☐
- NO ☐

7	
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Will stop most people	
Will stop some people	
Will stop very few people	

8

- not very very**
difficult ←=====→ difficult

- [illegible]

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10	
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SECTION B

OFFICIAL
USE ONLY

Below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement.

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
It is safe to drive 10mph above the speed limit					
Young drivers often engage in daredevil practices such as racing on public roads					
There should be stricter penalties for those who drink and drive					
For me, driving will be way of escaping the problems of everyday life					
You should not drink and drive in case you have an accident					
Racing other drivers away from traffic lights will be fun					
For me, a car will must be a way of getting from A to B					
Young drivers are better at driving after drinking than older drivers					
Young drivers think they are better drivers than they really are					
Young drivers are more likely than other drivers to have an accident					
I would accept a lift from someone who had drunk fair bit of alcohol					

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SECTION B

OFFICIAL
USE ONLY

Below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement.

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
It is safe to drive 10mph above the speed limit					
Young drivers often engage in daredevil practices such as racing on public roads					
There should be stricter penalties for those who drink and drive					
For me, driving will be way of escaping the problems of everyday life					
You should not drink and drive in case you have an accident					
Racing other drivers away from traffic lights will be fun					
For me, a car will just be a way of getting from A to B					
Young drivers are better at driving after drinking than older drivers					
Young drivers think they are better drivers than they really are					
Young drivers are more likely than other drivers to have an accident.					
I would accept a lift from someone who had drunk a fair bit of alcohol					

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SECTION C

OFFICIAL
USE ONLY

1) Do you ever drink alcohol?

YES
NO

If YES,

a) what do you drink?

b) how much in one evening?

Please state the amount as exactly as possible.

e.g. 5 pints of beer, 3 glasses of wine etc..

Do you drink alcohol
with your parents?

YES
NO

Do you drink alcohol
with your friends?

YES
NO

How often do you drink
alcohol?

every day
several times a week
once a week
once every two weeks
once a month
less than once a month

2) How much alcohol do you think the average man could drink
without it affecting his driving?

3) How much alcohol do you think the average woman could drink
without it affecting her driving?

4) What is the largest amount of alcohol the average man could
drink without exceeding the legal drinking and driving limit?

5) What is the largest amount of alcohol the average woman could
drink without exceeding the legal drinking and driving limit?

6) How often do you wear a seat-belt when travelling as a
passenger in the front seat of a car?

never
1 2 3 4 5 always

(Circle one number only)

29

30

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31 - 32

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39 - 40

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41 - 42

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43 - 44

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45 - 46

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48

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OFFICIAL
USE ONLY

7) How sorry do you feel for people when you hear that they have been prosecuted by the police for the offences described below? Circle a number between 1 - 5 for each part of the question to indicate how sorry you feel for them.

	Not Sorry	1	2	3	4	5	Very Sorry	
1) driving at 40 mph on a 30 mph road	1	2	3	4	5			50
2) driving at 50 mph on a 30 mph road	1	2	3	4	5			51
3) driving at 80 mph on a 60 mph road	1	2	3	4	5			52
4) driving at 70 mph on a 60 mph road	1	2	3	4	5			53
5) driving through traffic lights just after they have turned red	1	2	3	4	5			54
6) parking on double yellow lines	1	2	3	4	5			55
7) racing with other cars on public roads	1	2	3	4	5			56
8) driving at 90 mph on a motorway (where the speed limit is 70 mph)	1	2	3	4	5			57
9) driving fast because they are late for a meeting	1	2	3	4	5			58
10) not wearing a seat-belt as a passenger in the front seat of a car	1	2	3	4	5			59
11) overtaking where they are not allowed to	1	2	3	4	5			60
12) drinking over the legal limit and then driving a car	1	2	3	4	5			61

8) How dangerous are the following daytime road conditions when someone is driving?

////////

	not very dangerous	1	2	3	4	5	very dangerous	
a) heavy rain		1	2	3	4	5		63
b) thick fog		1	2	3	4	5		64
c) icy conditions		1	2	3	4	5		65
d) dazzle (by sun or headlights)		1	2	3	4	5		66
e) snowing		1	2	3	4	5		67
f) wet road		1	2	3	4	5		68

SECTION D

OFFICIAL
USE ONLY

How often do you think each of the following factors causes a driver to have an accident? Circle a number from 1 to 5 for each factor to show your answer.

LINE 4

	not very often $\Leftarrow \text{=====} \Rightarrow$ very often					
a) weather conditions (fog, rain, sun,)	1	2	3	4	5	1 <input type="text"/>
b) road conditions (e.g. snow, wet roads)	1	2	3	4	5	2 <input type="text"/>
c) the driver's driving ability	1	2	3	4	5	3 <input type="text"/>
d) other drivers on the road	1	2	3	4	5	4 <input type="text"/>
e) mechanical problems	1	2	3	4	5	5 <input type="text"/>
f) pedestrians and cyclists	1	2	3	4	5	6 <input type="text"/>
g) bad luck	1	2	3	4	5	7 <input type="text"/>
h) alcohol	1	2	3	4	5	8 <input type="text"/>
i) lack of attention	1	2	3	4	5	9 <input type="text"/>
j) inexperience	1	2	3	4	5	10 <input type="text"/>
k) bad road layout	1	2	3	4	5	11 <input type="text"/>
l) age	1	2	3	4	5	12 <input type="text"/>
m) poor driving attitudes	1	2	3	4	5	13 <input type="text"/>
n) speed	1	2	3	4	5	14 <input type="text"/>

How difficult do you think it will be to master each of the following driving skills?

////////

	Not Very Difficult $\Leftarrow \text{=====} \Rightarrow$ Very Difficult					
a) Changing gear	1	2	3	4	5	16 <input type="text"/>
b) Correct use of mirrors	1	2	3	4	5	17 <input type="text"/>
c) Steering and road position	1	2	3	4	5	18 <input type="text"/>
d) Judging stopping distances	1	2	3	4	5	19 <input type="text"/>
e) Controlling speed	1	2	3	4	5	20 <input type="text"/>
f) Co-ordinating the above skills	1	2	3	4	5	21 <input type="text"/>

11) Below is a list of some driving offences that some people commit when driving. How serious do you consider each of them to be? Rate each one on a scale of 1 to 5, not very serious to very serious.

OFFICIAL
USE ONLY

////

Not **Very**
very serious ←=====→ **serious**
 1 2 3 4 5

- 1) Not stopping at pedestrian crossings when someone is trying to cross
- 2) Going too fast on roundabouts
- 3) Parking on double yellow lines
- 4) Parking on the pavement
- 5) Not indicating when turning right
- 6) Failing to give way to other drivers at junctions
- 7) Driving through traffic lights just after they have turned red
- 8) Following the car in front too closely
- 9) Overtaking a car when approaching a bend
- 10) Driving above the speed limit in town
- 11) Driving above the speed limit on motorways
- 12) Turning in a road where U-turns are not allowed
- 13) Driving a car alone without a full driving licence
- 14) Driving when having drunk slightly over the legal limit
- 15) Driving when having drunk a lot over the legal limit

[illegible]

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7 F

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12) What do you think the chances are of a driver being caught by the Police while doing each of the following things? Please circle a number from 1 (LOW) to 5 (HIGH) for each part of the question to indicate your answer.

OFFICIAL
USE ONLY

	LOW $\longleftrightarrow$ HIGH					
	1	2	3	4	5	
1) drink and driving	1	2	3	4	5	39 <input type="text"/>
2) speeding in town	1	2	3	4	5	40 <input type="text"/>
3) speeding on the motorway	1	2	3	4	5	41 <input type="text"/>
4) driving dangerously	1	2	3	4	5	42 <input type="text"/>
5) driving without insurance	1	2	3	4	5	43 <input type="text"/>
6) driving while on drugs	1	2	3	4	5	44 <input type="text"/>
7) parking on yellow lines	1	2	3	4	5	45 <input type="text"/>
8) overtaking other cars dangerously	1	2	3	4	5	46 <input type="text"/>
9) not wearing a seat-belt in the front seat of a car	1	2	3	4	5	47 <input type="text"/>
10) driving through traffic lights just after they have turned red	1	2	3	4	5	48 <input type="text"/>
11) driving without a full driving licence	1	2	3	4	5	49 <input type="text"/>
12) racing with other cars on public roads	1	2	3	4	5	50 <input type="text"/>

////////

13) How dangerous is it for someone to drive a car after having drunk enough alcohol to be well over the legal limit? Rate your answer on a scale of 1 to 5, not very dangerous to very dangerous.

not very dangerous					very dangerous
1	2	3	4	5	

52

////////

14) Read the statement below and then tick the box that best describes how you feel

OFFICIAL
USE ONLY

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
It will be important to me that friends think I can hold my drink when driving					
Young drivers are safer than others because they have quick reactions					
It will be important to me that friends think I am a safe driver					
It would be frightening to dart in and out of slower cars in heavy traffic					
You should not drink and drive in case you get caught by the police					
It will be important to me that friends think I am a skilful driver					
It will be important to me that friends think I am a fast driver					
As long as no-one gets hurt it is O.K. to break road traffic laws					
Young people take more chances when driving with friends in the car					
Young drivers are the most dangerous drivers because they are inexperienced					

54

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THANK YOU

END
OF
CASE

APPENDIX A2.

THE DRIVER QUESTIONNAIRES (I and II).

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» » » » » » » » » » » » » » » » » » » » » » » » » » » » » »
|
| DRIVER BEHAVIOUR QUESTIONNAIRE 1 |
|
» » » » » » » » » » » » » » » » » » » » » » » » » » » » » »

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SUBJECT NUMBER: _____

The Driver Behaviour Questionnaire is designed to collect your judgements and opinions on a number of issues relating to driver behaviour. Although the questionnaire may look a little long and daunting it really isn't all that bad. It should take you no more than 20-30 minutes to complete. Please don't spend too long on any one question. If there are any questions you do not understand please draw a line through the relevant parts and go on to the next question. Try to answer all questions as honestly as possible and keep in mind that there are no right or wrong answers. This is your opportunity to express your views on certain aspects of driving behaviour. Your answers on the questionnaire will remain anonymous and confidential.

Please note that this is not a test or an exam. There are no right or wrong answers. The questionnaire is very simple to complete, mostly requiring you only to place ticks in appropriate places in order to indicate your answers. Please read the questions carefully and answer them as best as you can.

Thank you for your help and co-operation.

DRIVER BEHAVIOUR QUESTIONNAIRE 1

PLEASE FILL IN THE DETAILS BELOW:

SCHOOL YEAR: LOWER 6th

UPPER 6th

(tick one box only)

Note: For question 2 (on the next page) write "6th Form student" where it asks you to state your occupation, and leave question 3 blank.

Now you may turn over the page and begin filling in the questionnaire.

DRIVER QUESTIONNAIRE

Your answers to this questionnaire are anonymous and will be communicated to nobody other than the researchers.

SECTION 1

1) SEX MALE AGE YEARS
 FEMALE MONTHS

2) OCCUPATION

3) If in full or part-time employment, does your job involve driving a motor vehicle?
 YES / NO

4) If you are in full-time education, please state what qualification(s) you are studying for

5) Do you hold a full British driving licence? YES / NO

If "yes" For how many years have you held a full driving licence?

If "no" How long have you been learning to drive?
 Years
 Months

6) Approximately how many thousand miles do you drive per year?

7) Approximately how many hours do you spend driving each week?

8) On which sort of roads do you drive most? (Tick one box only)

Rural roads
Urban roads
Motorways

9) Approximately how many near-miss accidents have you been involved in while driving during the last three months?

None 1 2 3 4 5 6 7 8+

OFFICIAL USE
ONLY
LINE 1

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1 2 3 4

5	
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6 7 8 9

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12	
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14	
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15 - 16

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17 - 18

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19 20 21

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22 23 24

25	
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26	
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//////////

10) In average, how many hours do you spend each week:

- a) driving during the day ? HOURS
b) driving during the evening ? HOURS
c) driving at weekends ? HOURS
d) driving during rush hour ? HOURS

28-29

30-31

32-33

34-35

11) How many road accidents have you been involved in as a driver? Include all accidents that caused any damage to persons, vehicles or property, whether or not they were reported and whether or not they were your fault.

None 1 2 3 4 5 6 7 8+

36

12) For how many driving offences have you been convicted when driving a vehicle (not including parking offences)?

None 1 2 3 4 5 6 7 8+

37

13) Please supply the following information about the vehicle that you drive most often.

Make of vehicle
(e.g. Ford, Vauxhall etc.)

38-39

Model of the vehicle. Please
as exact as possible.
(e.g. Escort XR3i)

40 41 42 43

Engine capacity (cc), if known

44-45

Approximate age of the
vehicle.

46 47 48 49

4) Do you own the vehicle? YES / NO

50-51

If "no", please state who does own it.

52

15) Please indicate how important each one of the factors listed below is to you in a car by rating them on a scale from (1) not at all important to (5) extremely important

//////////

Not at all
important

Extremely
Important

- | | | | | | |
|--------------------|---|---|---|---|---|
| a) manufacturer | 1 | 2 | 3 | 4 | 5 |
| b) fuel economy | 1 | 2 | 3 | 4 | 5 |
| c) performance | 1 | 2 | 3 | 4 | 5 |
| d) appearance | 1 | 2 | 3 | 4 | 5 |
| e) safety features | 1 | 2 | 3 | 4 | 5 |
| f) cost | 1 | 2 | 3 | 4 | 5 |
| g) size | 1 | 2 | 3 | 4 | 5 |

54

55

56

57

58

59

60

SECTION 2

For each of the questions below, clearly circle one number only for each part of the question.

1) On a scale of (1) perfectly relaxed to (5) extremely frustrated, how would you rate yourself as feeling most of the time when driving your car?

PERFECTLY RELAXED

EXTREMELY FRUSTRATED

1 2 3 4 5

61

2) You are driving on a main road with a single lane in each direction. When following a car travelling at 20 mph slower than you would like, how would you rate yourself as feeling?

PERFECTLY RELAXED

EXTREMELY FRUSTRATED

1 2 3 4 5

62

3) Compared with other drivers do you generally drive:

much slower 2 about average 3 4 a lot faster 5

- a) in heavy traffic
- b) in light traffic
- c) at night
- d) in rain
- e) on country lanes
- f) on dual carriage-ways
- g) on motorways
- h) around town
- i) on single-lane A roads
- j) on unfamiliar roads
- k) generally

65

66

67

68

69

70

71

72

73

4) How often are drivers seriously hurt in each of the following types of accident?

VERY
SELDOM

VERY
OFTEN

1 2 3 4 5

- a) overtaking accidents
- b) rear-end collisions
- c) accidents on roundabouts
- d) accidents at traffic lights
- e) accidents on the motorway
- f) accidents on country lanes

75

76

77

78

79

80

5) How often do you break the following speed limits?

	NEVER	=====	USUALLY
30mph	1	2	3 4 5
40mph	1	2	3 4 5
50mph	1	2	3 4 5
60mph	1	2	3 4 5
70mph	1	2	3 4 5

LINE 2

1	
2	
3	
4	
5	

6) Imagine you are driving at 45 mph along a road which has a 30 mph speed limit.

//////////

NOT VERY «=====» VERY
1 2 3 4 5

- a) How dangerous do you think it is to travel at this speed?
- b) How likely are you to have an accident at this speed?
- c) How serious do you think an accident would be at this speed?
- d) How confident are you that you could avoid a potential accident at this speed?

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

7	
8	
9	
10	

//////////

7

a) What is the fastest speed at which you would be prepared to drive at on a straight main road with a single lane in each direction with a 60mph speed limit?

less than 40mph 50 55 60 65 70 75 80 85 90 95 95+

NOT VERY «=====» VERY
1 2 3 4 5

- b) How dangerous do you think it is to travel at this speed?
- c) How likely are you to have an accident at this speed?
- d) How serious do you think an accident would be at this speed?
- e) How confident are you that you could avoid a potential accident at this speed?

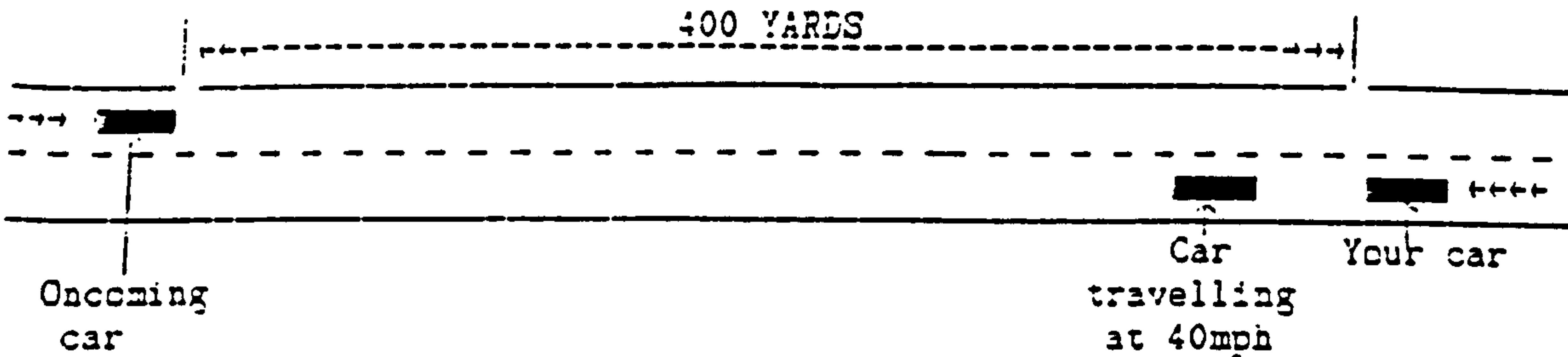
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

12	
13	
14	
15	

//////////

- 3) After following a car which is travelling at 40 mph for 1 mile, you see a straight stretch of road with an oncoming car 400 yards away.

A Bird's Eye-View of The Situation.



	NOT VERY «=====» VERY					
	1	2	3	4	5	
a) How <u>likely</u> are you to overtake the car in front of you?	1	2	3	4	5	17
b) How <u>dangerous</u> do you think it is to do this?	1	2	3	4	5	18
c) How <u>likely</u> are you to have an <u>accident</u> when doing this?	1	2	3	4	5	19
d) How <u>serious</u> do you think an accident would be when doing this?	1	2	3	4	5	20
e) How <u>confident</u> are you that you could avoid a potential accident when doing this?	1	2	3	4	5	21

//////////

9

- a) What is the fastest speed at which you would be prepared to drive at on a winding country lane with a 60mph speed limit?

less than 40mph 50 55 60 65 70 75 80 85 90 95 95+

	NOT VERY «=====» VERY					
	1	2	3	4	5	
b) How <u>dangerous</u> do you think it is to travel at this speed?	1	2	3	4	5	23
c) How <u>likely</u> are you to have an <u>accident</u> at this speed?	1	2	3	4	5	24
d) How <u>serious</u> do you think an accident would be at this speed?	1	2	3	4	5	25
e) How <u>confident</u> are you that you could avoid a potential accident at this speed?	1	2	3	4	5	26

//////////

10) Please answer the following questions about motorway driving.

NOT VERY «=====» VERY
1 2 3 4 5

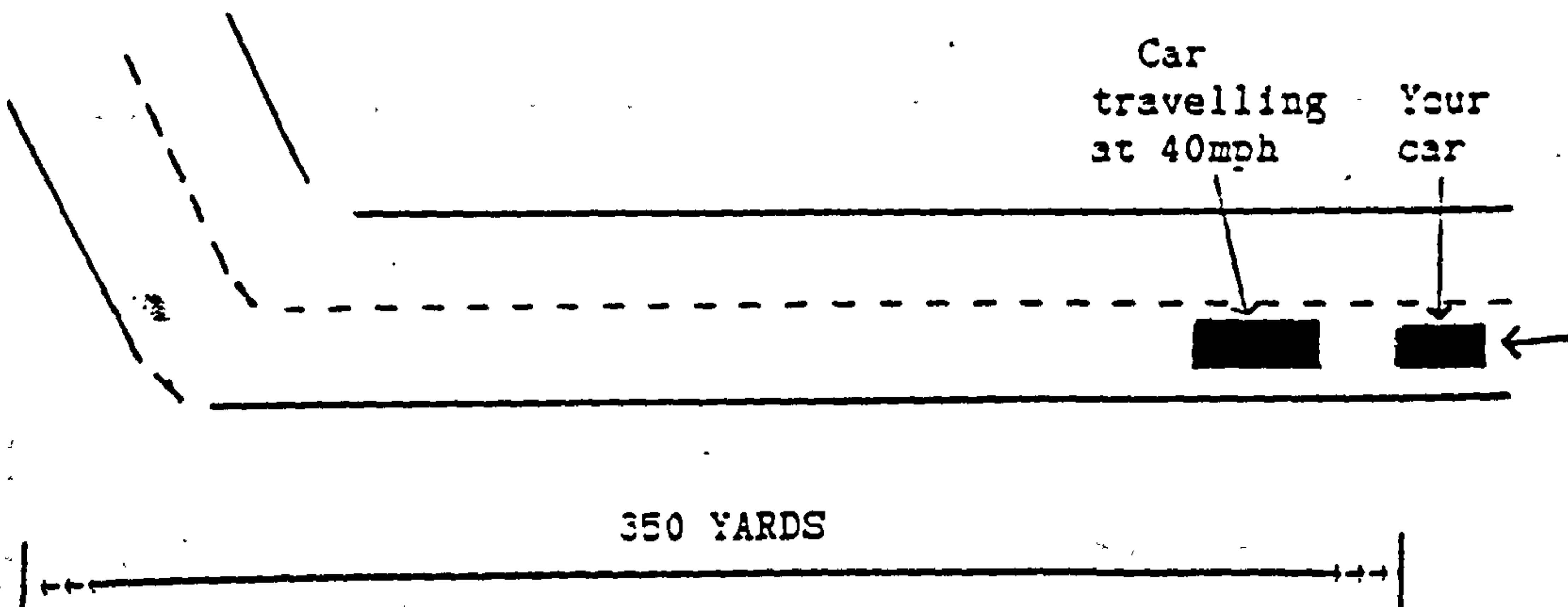
- a) How often do you overtake on the inside of motorways?
- b) How dangerous do you think it is to do this?
- c) How likely are you to have an accident when doing this?
- d) How serious do you think an accident would be when doing this?
- e) How confident are you that you could avoid a potential accident when doing this?

	1	2	3	4	5
a)	1	2	3	4	5
b)	1	2	3	4	5
c)	1	2	3	4	5
d)	1	2	3	4	5
e)	1	2	3	4	5

28
29
30
31
32

//////////

11) After following a car which is travelling at 40 mph for 1 mile, you see a straight stretch of road for 350 yards which terminates in a right hand bend. You can see no oncoming cars. Please look at the diagram below.



Now answer the questions below.

NOT VERY «=====» VERY
1 2 3 4 5

- a) How likely are you to overtake the car in front of you?
- b) How dangerous do you think it is to do this?
- c) How likely are you to have an accident when doing this?
- d) How serious do you think an accident would be when doing this?
- e) How confident are you that you could avoid a potential accident when doing this?

	1	2	3	4	5
a)	1	2	3	4	5
b)	1	2	3	4	5
c)	1	2	3	4	5
d)	1	2	3	4	5
e)	1	2	3	4	5

34
35
36
37
38

//////////

SECTION 3

1) Do you ever consume alcoholic drinks? YES / NO

If "no". go to Section 4. which starts on page 9.

40

2) Generally speaking, how often do you have an alcoholic drink?
(Please tick one box for each part of the question)

41

42

	less often	1 - 3 times a month	1 - 2 times a week	3 - 5 times a week	6 - 7 times a week	more often
--	---------------	---------------------------	--------------------------	--------------------------	--------------------------	---------------

//////////

a) At home						
b) Away from home						

LESS LIKELY MORE LIKELY

3) Compared to this time last year, how likely are you to drink over the legal limit and drive?

1 2 3 4 5

44

45

4) Compared to this time last year, how likely is the average driver to drink over the legal limit and drive?

1 2 3 4 5

5) Generally speaking, about how much would you drink on any single occasion, if you were intending to drive? Please state the amount in terms of pints of beer, glasses of wine or pub measures of drinks such as tacardi, whisky, gin etc.

46 - 47

6) To what extent are you on the lookout for police cars when driving after a few drinks?

NEVER ALWAYS

1 2 3 4 5

48

//////////

7) In the last 12 months, how often have you driven when you thought you might have drunk over the legal limit?

Never
Once or twice
3 to 5 times
6 to 10 times
About once a month
About once a week
More often

50

--

8) Which do you think would be worse: to have an accident (without the police being involved) while over the drink-driving limit or to be caught by the police?

a) to have an accident

--

b) to be caught by the police

--

(tick one box only)

51

--

9) Imagine you are driving in town between 10pm and 12am on a Friday night. What do you think your chances are of being breathalysed by the police when:

VERY LOW

VERY HIGH

a) you have not drunk any alcohol?

1 2 3 4 5

52

b) you have drunk over the legal limit?

1 2 3 4 5

53

10) Imagine you are driving in town between 10pm and 12am on a Friday night. What do you think your chances are of having an accident when:

VERY LOW

VERY HIGH

a) you have not drunk any alcohol?

1 2 3 4 5

54

b) you have drunk over the legal limit?

1 2 3 4 5

55

11) Imagine you were driving back from town between 10pm and 12am after having drunk enough alcohol to be over the legal drink-driving limit. What would the chances have to be of you having an accident or being breathalysed by the police in order to deter you from drinking and driving?

VERY LOW

VERY HIGH

a) having an accident

1 2 3 4 5

56

b) being breathalysed by the police

1 2 3 4 5

57

//////////

- 3 -

4. You are following a car which you want to overtake, but you think that you would have to let it go if it closely it an incoming car was to appear.

Order	Customer	Quantity	Unit Price	Total Price
1	Customer A	10	5.00	50.00
2	Customer B	20	3.00	60.00
3	Customer C	15	4.00	60.00
4	Customer D	25	2.00	50.00
5	Customer E	30	1.50	45.00

2) Please state how much the following people can drink without exceeding
the legal limit.

25 - 26

1

27 - 28

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59 - 70

11a) When following a car travelling at 45 mph, how many car lengths would you leave between yourself and the car in front?

., / / / : : ! / /

[illegible]

10	4	3	2
----	---	---	---

DRIVER BEHAVIOUR QUESTIONNAIRE 2

--

76

PLEASE FILL IN THE DETAILS BELOW:

--	--	--	--

77 - 80

SEX: MALE

--

FEMALE

--

(tick only one box)

AGE: YEARS _____

MONTHS _____

Now you may turn over the page and begin filling in the questionnaire.

- 1 -

SECTION 1.

LINE 3

1) What do you think your chances are of being caught by the police while doing each of the following things? Please circle a number from 1 (LOW) to 5 (HIGH) for each part of the question to indicate your answer.

	LOW ===== HIGH				
	1	2	3	4	5
1) speeding in town	1	2	3	4	5
2) speeding on the motorway	1	2	3	4	5
3) driving dangerously	1	2	3	4	5
4) driving without insurance	1	2	3	4	5
5) driving while on drugs	1	2	3	4	5
6) parking on yellow lines	1	2	3	4	5
7) overtaking other cars dangerously	1	2	3	4	5
8) not wearing a seat-belt in the front seat of a car	1	2	3	4	5
9) driving through traffic lights just after they have turned red	1	2	3	4	5
10) driving without a full driving licence	1	2	3	4	5
11) racing other cars on public roads	1	2	3	4	5

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

//////////

2) You have recently been driving in town with a speed limit of 30 mph for the last 15 minutes or so, in moderately heavy traffic. You have just left the 30 mph zone, but you are still behind some of the traffic you were behind in the town. In this situation are you more likely to overtake at the first possible opportunity than normal, in order to get clear of the heavy traffic:

YES NO

13 ☐

If you answered "NO", go straight on to question 4.

VERY UNLIKELY VERY LIKELY

1 2 3 4 5

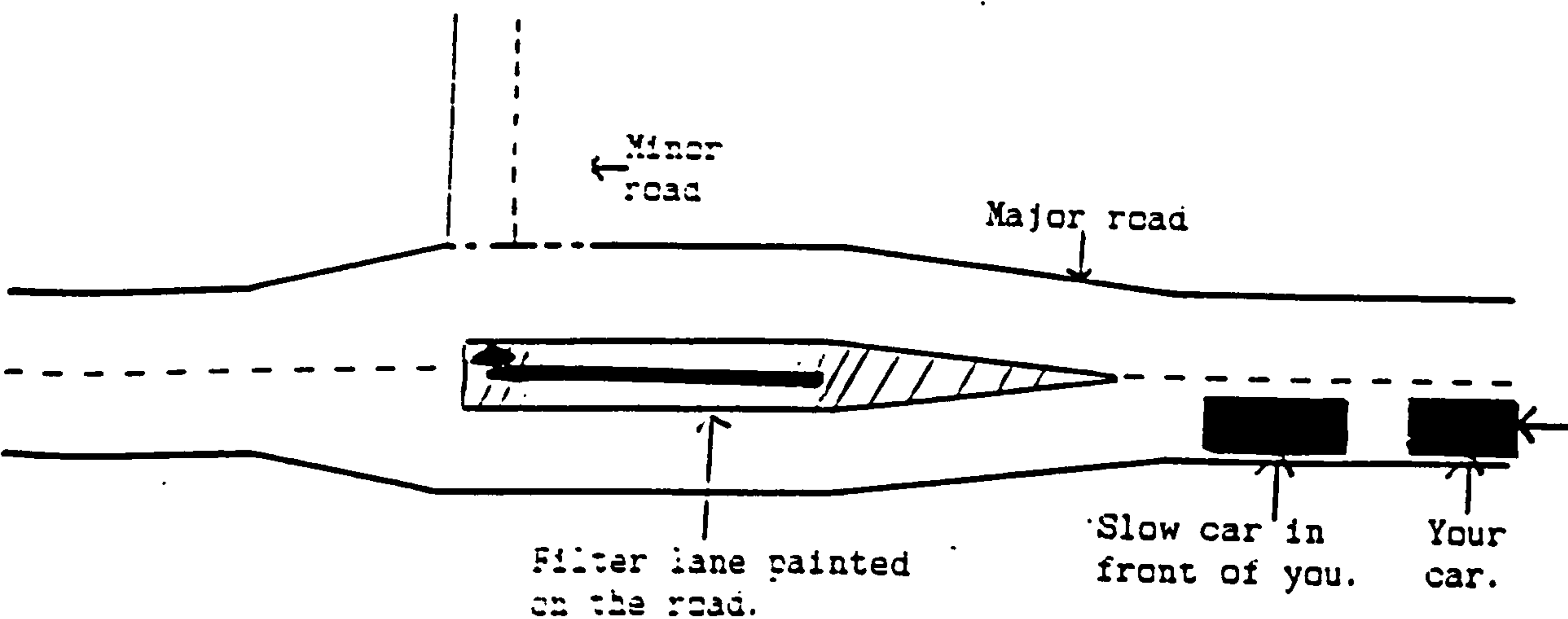
3) Because of this greater desire to overtake, how likely would you be to attempt to overtake using a smaller gap in the oncoming traffic than normal?

14 ☐

4) The diagram below gives a bird's eye view of a two lane road with a junction with a minor road on the right-hand side. The junction has a filter lane for vehicles turning right off the major road which is painted on the road: thus the total width of the road at this point is wider. Imagine that your car is travelling in the direction indicated by the arrow. You have been travelling along this straight road behind a slow vehicle when a possible overtaking opportunity makes itself available. You can see no vehicles approaching and no vehicles are present in the junction.

	VERY UNLIKELY			VERY LIKELY		
	1	2	3	4	5	
a) Using this possible overtaking opportunity, how likely are you to overtake the car in front:						15 ☐

b) In this situation, how likely are you to overtake if you could see a vehicle in the minor road waiting to pull out onto the major road?	1	2	3	4	5	16 ☐
--	---	---	---	---	---	-----------------------------



c) The location is still the same as above, but this time imagine that there are no gaps in the oncoming traffic in which to make a "conventional" overtaking manoeuvre.

	VERY UNLIKELY			VERY LIKELY		
	1	2	3	4	5	
How likely are you to use the filter lane as a kind of overtaking lane, thus overtaking between two lines of traffic?						17 ☐

2) Please state how much the following people can drink on an average occasion without it affecting their driving?

e.g. in terms of pub measures: 7 pint, 1 pint, a glass of wine, a pub measure of whisky, brandy and other spirits.

a) yourself

b) the average man

c) the average woman

18 - 19

20 - 21

22 - 23

6) Please indicate the extent to which you agree or disagree with each of the following statements.

////////

STRONGLY DISAGREE «=====» STRONGLY AGREE
1 2 3 4 5

I like the police

1 2 3 4 5

25

There should be more traffic police

1 2 3 4 5

26

The police always pick on young drivers

1 2 3 4 5

27

The police do a good job

1 2 3 4 5

28

The police should do random breath testing

1 2 3 4 5

29

7) Some people say their driving is affected by the mood they are in.

////////

a) When you are in a good mood, is your driving:

Worse than usual?

Unaffected:

Better than usual.

(tick one box only)

31

b) When you are in a bad mood, is your driving:

Worse than usual?

Unaffected:

Better than usual.

(tick one box only)

32

SECTION 2

1) When you are feeling frustrated due to following a slower moving vehicle. How likely are you to take a bit of a risk in order to overtake it? Please tick the box below if you never feel frustrated because of other cars in this situation and go on to the next question.

☐

VERY UNLIKELY

VERY LIKELY

33

☐

2) When following another vehicle. How likely are you to overtake that vehicle because you feel under pressure from another vehicle following you? Please tick the box below if you never feel under pressure because of other cars in this situation and go on to the next question.

☐

VERY UNLIKELY

VERY LIKELY

34

☐

3) When another car is following you closely, how likely are you to drive faster than you normally would because you feel under pressure? Please tick the box below if you never feel under pressure because of other cars in this situation and go on to the next question.

☐

VERY UNLIKELY

VERY LIKELY

35

☐

4) When another car is following you closely, would you be more likely to drive faster if the car behind you was a faster, more powerful car than yours?

YES

NO

36

☐

5) When following a slow moving vehicle, how often do you find yourself closing up the gap between your car and the one in front in order to encourage the other driver to drive faster?

NEVER

ALWAYS

37

☐

6) If I signal to change lanes in heavy traffic and do not get any co-operation from other drivers, I will begin to pull out anyway in order to make them "let me in".

STRONGLY DISAGREE

STRONGLY AGREE

38

☐

7) Using the scales below, circle a number to show the point on the scale which you feel best describes your driving style.

Defensive	1	2	3	4	5	Non-defensive	40	
Anticipating	1	2	3	4	5	Non-anticipating	41	
Attentive	1	2	3	4	5	Inattentive	42	
Careful	1	2	3	4	5	Careless	43	
Courteous	1	2	3	4	5	Discourteous	44	
Decisive	1	2	3	4	5	Indecisive	45	
Experienced	1	2	3	4	5	Inexperienced	46	
Forceful	1	2	3	4	5	Yielding	47	
Patient	1	2	3	4	5	Impatient	48	
Cautious	1	2	3	4	5	Risky	49	
Responsible	1	2	3	4	5	Irresponsible	50	
Fast	1	2	3	4	5	Slow	51	
Skilful	1	2	3	4	5	Unskilful	52	
Aggressive	1	2	3	4	5	Non-aggressive	53	
Confident	1	2	3	4	5	Nervous	54	

8) When driving on the motorway how likely are you to flash your lights to signal the driver in front to get out of your way when:

		VERY UNLIKELY			VERY LIKELY			
		1	2	3	4	5		
a) the car in front is a less powerful car than yours		1	2	3	4	5	56	
b) the car in front is a more powerful, faster car than yours		1	2	3	4	5	57	
c) the car in front has the same performance as yours		1	2	3	4	5	58	

9) Using the scales below, tick a box to show the point on the scale which you feel best describes the driving style of those drivers whom you consider to be the most dangerous.

Defensive	1	2	3	4	5	Non-defensive	60
Anticipating	1	2	3	4	5	Non-anticipating	61
Attentive	1	2	3	4	5	Inattentive	62
Careful	1	2	3	4	5	Careless	63
Courteous	1	2	3	4	5	Discourteous	64
Decisive	1	2	3	4	5	Indecisive	65
Experienced	1	2	3	4	5	Inexperienced	66
Forceful	1	2	3	4	5	Yielding	67
Patient	1	2	3	4	5	Impatient	68
Cautious	1	2	3	4	5	Risky	69
Responsible	1	2	3	4	5	Irresponsible	70
Fast	1	2	3	4	5	Slow	71
Skilful	1	2	3	4	5	Unskilful	72
Aggressive	1	2	3	4	5	Non-aggressive	73
Confident	1	2	3	4	5	Nervous	74

//////////

10) When travelling on a main road with a single lane in each direction, how fast would a vehicle have to be travelling before you would be content to remain behind it and not overtake? If you would not be willing to overtake at any speed, tick the box provided and go straight to question 13.

Would not overtake ☐

30 mph 40 mph 50 mph 60 mph 70 mph more than 70 mph

76 ☐

11) Assume that you are overtaking a car which is travelling at 50 mph. How many vehicles would you regard as the maximum number that it would be safe to attempt to overtake in a single manoeuvre, assuming that the vehicles were cars and were travelling close together on the road? Tick the box below if you would not overtake at all.

☐ 1 2 3 4 5 5+

77 ☐

12) In the situation just described in Question 11, would you close follow another vehicle who was also overtaking in order to get past a slower moving vehicle?

YES NO

Line 4

1

13) Please rate a) your driving ability and b) the driving ability of other drivers in general in each of the following factors. Use the scale given below.

A) YOURSELF:

	POOR				EXCELLENT
	1	2	3	4	5
Perceiving potential hazards	1	2	3	4	5
Avoiding potential hazards	1	2	3	4	5
Judging safe gaps in the traffic to make manoeuvres	1	2	3	4	5
Judging when it is safe to overtake	1	2	3	4	5

2

3

4

5

//////////

B) OTHER DRIVERS IN GENERAL

	POOR				EXCELLENT
	1	2	3	4	5
Perceiving potential hazards	1	2	3	4	5
Avoiding potential hazards	1	2	3	4	5
Judging safe gaps in the traffic to make manoeuvres	1	2	3	4	5
Judging when it is safe to overtake	1	2	3	4	5

7

8

9

10

14) Please indicate the extent to which you agree or disagree with each of the following statements.

STRONGLY DISAGREE «=====» STRONGLY AGREE
1 2 3 4 5

It annoys me to be overtaken

1 2 3 4 5

11

Inferior cars get in the way when I am driving

1 2 3 4 5

12

I am overtaken more than I overtake

1 2 3 4 5

13

It is fun to race with other drivers

1 2 3 4 5

14

STRONGLY
DISAGREE «=====» STRONGLY
1 2 3 4 5
AGREE

//////////

Most other drivers appear more
confident than I feel

1 2 3 4 5

16

The only way to get through
busy traffic is to be aggressive

1 2 3 4 5

17

The possibility of having a serious
accident worries me

1 2 3 4 5

18

I never worry about having a
minor accident

1 2 3 4 5

19

I am likely to have a minor
accident in the coming year

1 2 3 4 5

20

I am likely to have a serious
accident in the coming year

1 2 3 4 5

21

I enjoy driving fast on
winding country lanes

1 2 3 4 5

22

I find it difficult to stop in time
when cars in front brake suddenly

1 2 3 4 5

23

I would rather accelerate than brake
to get out of a difficult situation

1 2 3 4 5

24

I am nervous when overtaking
other cars

1 2 3 4 5

25

I am confident driving my
car on wet, greasy roads

1 2 3 4 5

26

My driving is superior to
that of most other drivers

1 2 3 4 5

27

I am less likely to have an
accident than other drivers

1 2 3 4 5

28

The chances of being caught
when drinking and driving
are not very high

1 2 3 4 5

29

I feel sorry for people who get
'fined' by the police when they
were just over the limit

1 2 3 4 5

30

It is O.K. to drink just over
the limit, if you're only driving
a short distance

1 2 3 4 5

31

APPENDIX A3.

THE INTERACTIVE VIDEO DRIVING PROGRAMME.

APPENDIX A3.

Format Of The Interactive Video Driving Programme.

University of Manchester
Road Research Project
Interactive Driving Programme
J.R.ADAMS & M.CONWAY
University of Manchester

Copyright 1989.

Please enter you name:
Press Return.

"You will watch a video on driving. You will be asked questions and given instructions on what to do. The keyboard is there for you to type your answers in on. All your answers will be saved in the computer to be analysed later".

Subjects were told about the different keys on the keyboard and what to use them for.

Instructions For Test Subjects.

Hello, (user name appears here)

You are about to see a video which has been "shot" from a car driver's point of view. Please watch closely and imagine that you are driving the car. When you are ready to start, please press the space-bar.

Subjects were then shown the three practice scenes and given explanations as detailed above. Details of the three practice scenes are contained in Chapter 2, methodology, Section 2.6.5.2).

You are now going to be shown four scenes from a car driver's point of view. Watch the video closely and imagine that you are the driver. Whenever you come across anything you think a good driver would take note of and have to pay attention to

Please tell me!

Press the space bar when you are ready to start.

"I'll explain this to you again before you start to make it more clear". Subjects were given instructions as detailed above, and shown the four verbal commentary test scenes, as detailed in Chapter 2, Methodology, Section 2.6.5.3). The researcher made notes on the subject's verbal commentary. After completion of the four verbal commentary test scenes, subjects moved onto the next stage

of the programme.

As you watch the video imagine that you are driving the car. Watch the road ahead and other cars very closely. You will be shown three different scenes. The video will stop once during each scene and questions will appear on the screen. You will be asked to type your answers in on the keyboard.

When you are ready to begin, press the space-bar.

We drive along an 'A' road with a single lane in each direction, with no cars in front of us, but with oncoming cars. We reach a small mini-roundabout, and begin to drive across it. As we enter the roundabout, a blue Fiesta from the left pulls across in front of us quickly. We stop and do not hit it. The tape stops.

How dangerous was it for the driver of the blue car to drive onto the roundabout when he did?

1 = not very dangerous

2 = dangerous

3 = very dangerous

Type a number from 1 to 3 to show your answer.

Answer:

Now press the Return key to continue.

If the subject types any other number, or hits any other key, the system would respond with:

The value of X is not allowed.

You may only type in a number from 1 to 3.

Press the space-bar to try again.

After the subject has typed in his answer the system then goes on to verify that this is the answer that the subject had intended to give.

You have given an answer of X.

Type Y for YES if this is the answer you wanted to give.

Type N for NO if you wish to change your answer.

After verifying his answer, we then move onto the next scene. We are driving along a country lane 'A' road, with no cars in front of us and no oncoming cars. There are grass verges on either side. We see a sign indicating a right-hand bend and there are double-white lines on the road. Just as our car begins to enter into the bend the tape stops.

What is the fastest speed that you would drive around this corner? Use the keyboard to type in your answer. Give

your answer in 'miles per hour'.

ANSWER:..... miles per hour.
Now press the Return key to continue.

After giving their answer the system verifies the answer with the subject. Additionally, if a subject enters a value of less than 5mph, the system tells him that this value is not acceptable and he must try again. Also, subjects are not allowed to enter a value above 99mph. It may be noted here that no subjects exceeded the upper limit, and none went below the minimum limit.

We move onto the next scene. We drive along an 'A' road, with no cars in front, but with oncoming cars. A lorry is parked on the left obstructing our lane. Our car stops to let some oncoming cars pass. Then it begins to move out to overtake the lorry, when there is an oncoming car travelling at between 30-40mph. The tape stops.

How likely is it that you would pull out and overtake this parked lorry at this point?

1	2	3	4	5
very		not		very
unlikely	unlikely	sure	likely	likely

Please type your answer in on the keyboard.

ANSWER: Now hit the Return key to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

If you were to pull out and overtake the lorry at this point, how likely do you think you would be to have an accident ?

1	2	3	4	5
very		not		very
unlikely	unlikely	sure	likely	likely

Please type your answer in on the keyboard.

ANSWER: Now hit the Return key to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

How likely is it that such an accident would be serious?

1	2	3	4	5
very		not		very
unlikely	unlikely	sure	likely	likely

Please type your answer in on the keyboard.

ANSWER: Now hit the Return key to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

You will now be driving along a road at 55mph. Please pretend that there is another car in front of you. You want to overtake this car because you are in a hurry. Hit the Return key whenever you think it is safe to pull out and overtake. You may overtake up to five times if you wish.

Press the space-bar for more instructions.....

When you hit the Return key the video will stop briefly and then start up again. If you would rather not overtake because you cannot find a safe place, then do not hit any keys. If you have any questions please ask the researcher now before we begin.

Press the space-bar when you are ready to begin.

Subjects were told that I would explain it to them again before they begun in order to ensure that they knew what to do. "I want you to imagine that you always have a car in front of you - a car that you wish to overtake. You won't actually see a car, you have got to imagine it's there. So as you drive along look out for safe places to overtake. When you find a safe place hit the Return key". When subjects hit the Return key, a number (1 to 5) appeared in the top left hand corner of the screen, to let the subject know how many times they have overtaken. The researcher verifies with the subject that he understands it fully before he begins.

As subjects watched the scene, their car drove along with visible oncoming traffic some of the time, blind bends, double white lines, single white lines and a hill. There was nowhere that could be considered safe for subjects to overtake. At the end of this scene subjects moved on to the next scene and the associated instructions.

You will now be driving the car along a different road. Watch the video very carefully and hit the Return key if you see anything that would make you want to brake.

Press the space-bar when you are ready to begin.

We are driving along an 'A' road. There are no cars in front of us; we drive up a hill which has a slight right-hand curve. At the top of the hill, a woman with a dog runs out in front of our car, but they are visible as we come up the hill.

If subjects brake too soon, the system tells them to try again. If they braked in time it congratulates them. If they braked too late or not at all, the system says:

Just as well it wasn't for real !!!!

Press the space-bar to continue.

You will now be driving the car along a road which has shops on either side. Watch very closely as the tape will stop and you will be asked questions.
Press the space-bar when you are ready to begin.

We drive along the road as described above, which has a thirty mile per hour speed limit. There are cars in front of us and oncoming cars. The tape stops at the end of the scene.

How fast would you drive along this road ? Give your answer in 'miles per hour'. Please type your answer in on the keyboard.

ANSWER: miles per hour.

Now hit the Return key to continue.

After giving their answer the system verifies the answer with the subject. Additionally, if a subject enters a value of less than 5mph, the system tells him that this value is not acceptable and he must try again. Also, subjects are not allowed to enter a value above 99mph. It may be noted here that no subjects exceeded the upper limit, and none went below the minimum limit.

You will now continue to drive down this road at the speed you have just chosen. Watch the road very carefully, and hit the Return key if you see something that would cause you to brake or take avoiding action.

Press the space-bar when you are ready to continue.

Then we drive along and a bike from a side road on the left pulls out into the road, in front of us without looking, slowing or stopping. If subjects do not brake, the system takes them on to the next scene. If subjects do brake it asks them to type in why they braked, and how likely this situation would have caused the average driver to have an accident. (Subjects are asked their reason for braking to verify that they braked for the correct reason, to keep the following variable constant across all subjects).

How likely is it that this would have caused the average driver to have an accident.

1	2	3	4	5
very		not		very
unlikely	unlikely	sure	likely	likely

Please type your answer in on the keyboard.

ANSWER: Now hit the Return key to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

If subjects did brake after answering the above question they were then asked another question as shown below.

How confident were you that you could have avoided having an accident at the point that you chose to begin braking.

1	2	3	4	5
not at all		neutral		very
confident				confident

Please type your answer in on the keyboard.

ANSWER: Now hit the Return key to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

Subjects then move on to the next scene.

Watch the next scene very carefully. Imagine that you are travelling at 50mph with a car in front of you. You want

to overtake this car because you are in a huury. Hit the Return key whenever you would choose to overtake. You may overtake up to five times if you wish. If you do not wish to overtake at all, then do not hit any key. Please ask me any questions before you begin.

Press the space-bar to begin.

Subjects were given the same additional instructions as for the earlier overtaking scene. The scene included: oncoming traffic; single-white lines; a hill; double-white lines; and an approach to a roundabout. After completing this scene, subjects then went on to the next scene and associated instructions.

Try this one now! It's the same as before - you are travelling at 50mph and I want you to imagine that there is a car in front of you that you wish to overtake. Hit the Return key whenever you would choose to overtake. You may overtake up to five times if you wish. If you do not wish to overtake at all, then do not hit any key. Please ask me any questions before you begin.

Press the space-bar to begin.

Subjects were given the same additional instructions as for the earlier overtaking scene. The scene included: oncoming traffic; a hill; single-white lines; double-white lines; a bend; and a junction. After completing this scene subjects moved on to the next one.

Watch the next three scenes very carefully. You will be driving the car along three different roads. When you see something that would cause you to brake or take avoiding action - hit the Return key.

Press the space-bar when you are ready to begin.

In scene one we drive along a road with shops, pedestrians and parked cars with a 30mph speed limit. The subject has two opportunities (very close together) to choose to brake. Firstly, a red car on the left is doing a U-turn in a layby and is beginning to pull out in front of us. Immediately after that a brown car is reversing out from a parking space on the left, and is reversing right into our path.

If subjects did not choose to brake they move on to the next scene. If they did brake, they were asked to type in their reasons for braking and then asked the following question.

How dangerous was that situation?

1 = not dangerous

2 = dangerous

3 = very dangerous

Please type your answer in below.

ANSWER: Press Return to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

Subjects then move on to the next scene.

Press the space-bar to go on to Scene 2. Remember to hit the Return key if you see anything that would cause you to brake.

In scene two we are driving along the same 30mph road, with shops, pedestrians and parked cars. We approach a zebra crossing and a woman from the left begins to run out onto it, holding a baby. We need to brake. If the subject brakes, he is asked the same questions as in scene one (reasons for braking and "How dangerous was that situation"), and then moves on to scene three. If the subject does not brake, he automatically moves on to scene three.

Press the space-bar to go on to scene three. Remember to hit the Return key if you see anything that would cause you to brake.

In scene three we are driving along a dual-carriageway in the left-hand lane, with cars beside us but not in front of us. There is a slight right-hand bend in the road, with a right-hand filter lane. A blue car beside us begins to move into this filter lane. A red car which is behind the blue car begins to overtake the blue car before it has moved out of the way, resulting in the red car moving over into our lane - right in our path.

If the subject does not brake he automatically moves onto the next scene and associated questions. If the subject brakes, he is asked the same questions as in scene two (the reason for braking and then "How dangerous was that situation"), and then moves on to the next scene and questions..

You are now going to be driving along a country lane. Please watch the video very closely because the tape will stop and you will be asked to say how fast you would have been travelling, if you had been driving.

Press the space-bar when you are ready to begin...

Our car drives along a country lane with no other cars around. The road is fairly straight in front of us. We pass a de-restricted speed limit sign. The tape stops.

What is the fastest speed that you would drive down this road? Type your answer in below.

ANSWER: miles per hour.

Press return to continue

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

Subjects then move on to the next scene.

You will now continue to drive down this country lane. Watch the video very closely as the tape will stop and you will be asked another question.

Press the space-bar to continue.....

We continue to drive along the same country lane, but pass signs indicating approaching bends. The tape stops.

What speed would you be travelling at now, if you were driving the car? Please type your answer in miles per hour below.

ANSWER: miles per hour.
Press Return to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

Subjects then move on to the next scene.

You will now continue to drive along this country lane. Watch the tape very closely because when it stops you will be asked a question.

Press the space-bar to continue

We carry on driving down this road and approach a right-hand bend, with a side road on the left. An oncoming motorbike turns right (right across our path), to go down the side road on our left. The tape stops.

How dangerous was this situation?

- 1 = not dangerous
- 2 = dangerous
- 3 = very dangerous

Please type your answer in below.

ANSWER:
Press Return to continue.

Subjects are asked to verify their answer as standard procedure, and are told if they put an out-of-range value in.

Subjects then move on to the next frame.

THE END
THANKYOU.

Subjects have now reached the end of the Interactive Video Driving Programme and are thanked for their time and interest.

APPENDIX B1

**THE CREATION OF DRIVING BEHAVIOUR,
ACCIDENT AND OFFENCE-RELATED META-VARIABLES:**

**STATISTICS TABLES FOR NON-DRIVER QUESTIONNAIRE
PRINCIPAL COMPONENTS AND RELIABILITY ANALYSES.**

APPENDIX B1.

1) RELIABILITY ANALYSES ON DRIVING OFFENCE VARIABLES.

The tables below provide full details of the reliability analyses used to produce the five Driving Offences meta-variables.

Table 2b. RESULTS OF 'OFFENDER SYMPATHY' RELIABILITY ANALYSIS

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
SORRY1	22.6898	90.8684	0.5077	0.9125
SORRY2	23.1771	85.7825	0.7626	0.9002
SORRY3	23.2596	84.1175	0.7823	0.8987
SORRY4	22.8702	88.3201	0.6343	0.9064
SORRY5	22.9604	88.0138	0.5845	0.9091
SORRY7	23.6700	85.9438	0.6991	0.9031
SORRY8	23.1804	83.6458	0.7505	0.9002
SORRY9	22.8053	89.8993	0.5604	0.9100
SORRY10	23.2167	85.7779	0.6623	0.9051
SORRY11	23.3443	85.6842	0.7399	0.9011
SORRY12	23.7767	86.1010	0.6378	0.9065

N. of Items = 11
N. of Cases = 909

ALPHA = 0.9128

Variable Label.

SORRY1 = how sorry subjects' felt for a driver caught while driving at 40 mph on a 30 mph road.
SORRY2 = how sorry subjects' felt for a driver caught while driving at 50 mph on a 30 mph road.
SORRY3 = how sorry subjects' felt for a driver caught while driving at 80 mph on a 60 mph road.

- SORRY4 = how sorry subjects' felt for a driver caught while driving at 70 mph on a 60 mph road.
- SORRY5 = how sorry subjects' felt for a driver caught while driving through traffic lights just after they have turned red.
- SORRY6 = how sorry subjects' felt for a driver caught while parking on double yellow lines.
- SORRY7 = how sorry subjects' felt for a driver caught while racing with other cars on public roads.
- SORRY8 = how sorry subjects' felt for a driver caught while driving at 90 mph on a motorway (where the speed limit is 70 mph).
- SORRY9 = how sorry subjects' felt for a driver caught while driving fast because they are late for a meeting.
- SORRY10 = how sorry subjects' felt for a driver caught while not wearing a seat-belt as a passenger in the front seat of a car.
- SORRY11 = how sorry subjects' felt for a driver caught while overtaking where they are not allowed to.
- SORRY12 = how sorry subjects' felt for a driver caught while drinking over the legal limit and then driving a car.

The variable SORRY6 was included in a previous principle components analysis, but as it only had a maximum value of 0.465 in the Factor Matrix and 0.457 in the Rotated (Varimax) Factor Matrix, it was dropped in the subsequent reliability analysis.

All variables were measured on a five-point scale ranging from (1) Not Sorry to (5) Very Sorry. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Offences' Section.

Table 2c. RESULTS OF 'PERCEIVED DANGEROUSNESS'
RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
PEDCROSS	64.5321	85.7352	0.3035	0.8404
CAUTIOUS	66.1167	85.5121	0.2322	0.8457
FASTRB	64.8226	83.2629	0.4900	0.8325
DYELLOW	66.2147	80.2109	0.4524	0.8341
BRAKEWET	64.8716	83.5629	0.4175	0.8354
PARKPAVE	66.0618	79.1515	0.4969	0.8315
INDICAT	64.7480	82.0556	0.5188	0.8308
TOSLOW	66.4597	86.0804	0.2113	0.8465
YQUEUE	64.9953	80.8621	0.5337	0.8296
GIVEWAY	64.9580	83.3884	0.4217	0.8352
REDLITE	64.7620	82.1699	0.4876	0.8321
TOOCLOSE	64.8401	83.1882	0.4794	0.8328
OVERTAKE	64.4387	85.3330	0.4364	0.8354
SPEEDT	64.8810	81.5980	0.5651	0.8289
SPEEDMOT	65.3547	79.2081	0.5303	0.8294
UTURN	65.0770	81.4637	0.5129	0.8307
NOLICENC	65.0618	81.0768	0.4766	0.8324
OVERDDL	64.5858	84.1775	0.4310	0.8349

N. of Items = 18
N. of Cases = 857

ALPHA = 0.8422

Variable Label.

PEDCROSS = the perceived dangerousness of not stopping
at a pedestrian crossing when
someone is trying to cross.
CAUTIOUS = the perceived dangerousness of being
over-cautious at roundabouts.
FASTRB = the perceived dangerousness of going too
fast on roundabouts.
DYELLOW = the perceived dangerousness of parking on
double yellow lines.

BRAKEWET	=	the perceived dangerousness of braking too quickly in wet weather.
PARKPAVE	=	the perceived dangerousness of parking on the pavement.
INDICAT	=	the perceived dangerousness of not indicating when turning right.
TOSLOW	=	the perceived dangerousness of driving too slowly in town.
YQUEUE	=	the perceived dangerousness of jumping the queue in traffic jams by driving down the bus lane.
GIVEWAY	=	the perceived dangerousness of failing to give way to other drivers at junctions.
REDLITE	=	the perceived dangerousness of driving through red traffic lights just after they have turned red.
TOOCLOSE	=	the perceived dangerousness of following the car in front too closely.
OVERTAKE	=	the perceived dangerousness of overtaking a car when approaching a bend.
SPEEDTOW	=	the perceived dangerousness of driving above the speed limit in town.
SPEEDMOT	=	the perceived dangerousness of driving above the speed limit on motorways.
UTURN	=	the perceived dangerousness of turning in a road where U-turns are not allowed.
NOLICENC	=	the perceived dangerousness of driving a car alone without a full driving licence.
OVERDDL	=	the perceived dangerousness of driving when having drunk slightly over the legal limit.

All variables were measured on a five-point scale ranging from (1) Not Very Dangerous to (5) Very Dangerous. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Offences' Section.

Table 2d. RESULTS OF 'PERCEIVED SERIOUSOUSNESS OF OFFENCES' RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
PEDCROS2	50.5282	47.9684	0.4366	0.7982
FASTRB2	50.8113	48.0266	0.4985	0.7936
PARKPAV2	51.7860	47.8781	0.3827	0.8035
INDICAT2	50.5397	48.1519	0.5209	0.7924
GIVEWAY2	50.7480	48.0827	0.4831	0.7946
REDLITE2	50.7687	47.1481	0.4675	0.7957
TOOCLOS2	50.7710	47.9970	0.4986	0.7936
OVERTAK2	50.2163	49.4601	0.4870	0.7959
SPEEDTW2	51.2140	51.9403	0.1635	0.8192
SPEEDMT2	51.0529	46.3013	0.4876	0.7940
UTURN2	50.7480	47.4629	0.5068	0.7926
NOLIC2	50.5650	48.0755	0.4194	0.7996
OVERDDL2	50.3924	49.1488	0.4253	0.7996
MEGADD	49.8021	51.7488	0.3618	0.8041

N. of Items = 14
N. of Cases = 869

ALPHA = 0.8101

Variable Label.

PEDCROS2 = the perceived seriousness of the offence of not stopping at a pedestrian crossing when someone is trying to cross.

FASTRB2 = the perceived seriousness of the offence of going too fast on roundabouts.

PARKPAV2 = the perceived seriousness of the offence of parking on the pavement.

INDICAT2 = the perceived seriousness of the offence of not indicating when turning right.

GIVEWAY2 = the perceived seriousness of the offence of failing to give way to other drivers at junctions.

REDLITE2	=	the perceived seriousness of the offence of driving through traffic lights just after they have turned red.
TOOCLOS2	=	the perceived seriousness of the offence of following the car in front too closely.
OVERTAK2	=	the perceived seriousness of the offence of overtaking a car when approaching a bend.
SPEEDTW2	=	the perceived seriousness of the offence of driving above the speed limit in town.
SPEEDMT2	=	the perceived seriousness of the offence of driving above the speed limit on motorways.
UTURN2	=	the perceived seriousness of the offence of turning in a road where U-turns are not allowed.
NOLIC2	=	the perceived seriousness of the offence of driving a car alone without a full driving licence.
OVERDDL2	=	the perceived seriousness of the offence of driving when having drunk slightly over the legal limit.
MEGADD	=	the perceived seriousness of the offence of driving when having drunk alot over the legal limit.

All variables were measured on a five-point scale ranging from (1) Not Very Serious to (5) Very serious. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Offences' Section.

Table 2e. RESULTS OF 'PERCEIVED LIKELIHOOD OF DETECTION' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
DDPLD	33.3538	53.9416	0.4807	0.8315
SPEEDPLD	33.6276	55.1791	0.4147	0.8363
MOTORWAY	33.8160	53.3389	0.4769	0.8318
DRIVDANG	33.4042	53.6884	0.5302	0.8281
INSURANC	34.6145	50.7547	0.5525	0.8256
DRUGS	33.9025	51.2811	0.4778	0.8333
OTDANGER	33.8258	51.7163	0.6244	0.8204
NOBELT	34.1336	50.7782	0.5642	0.8245
LITERED	34.0131	51.8397	0.5346	0.8271
LICENO	34.3691	50.1366	0.5983	0.8213
RACE	33.2618	54.0531	0.4853	0.8312

N. of Items = 11

N. of Cases = 913

ALPHA = 0.8415

Variable Label.

DDPLD	=	the perceived likelihood of detection for drink-driving.
SPEEDPLD	=	the perceived likelihood of detection for speeding in town.
MOTORWAY	=	the perceived likelihood of detection for speeding on the motorway.
DRIVDANG	=	the perceived likelihood of detection for driving dangerously.
INSURANC	=	the perceived likelihood of detection for driving without insurance.
DRUGS	=	the perceived likelihood of detection for driving while on drugs.
OTDANGER	=	the perceived likelihood of detection for overtaking other cars dangerously.
NOBELT	=	the perceived likelihood of detection for not wearing a seat-belt in the front seat of a car.
LITERED	=	the perceived likelihood of detection for driving through traffic lights just after they have turned red.
LICENO	=	the perceived likelihood of detection for driving without a full driving licence.
RACE	=	the perceived likelihood of detection for racing with other cars on public roads.

All variables were measured on a five-point scale ranging from (1) LOW to (5) HIGH. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Offences' Section.

Table 2f. RESULTS OF 'OFFENCE ACCEPTABILITY' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
LIMITSLO	15.4215	12.9122	0.4109	0.5773
MPH10	15.4918	13.3645	0.4067	0.5802
BREAK	16.0714	13.6685	0.3575	0.5942
ROADSLOW	15.4061	12.7052	0.4828	0.5563
DNOTEST	16.5148	14.6786	0.3177	0.6064
NONEED	16.0209	14.0952	0.2585	0.6234
OKSKILL	16.4468	14.2167	0.4274	0.5832
FINES	14.4116	16.0600	0.0303	0.6806

N. of Items = 8
N. of Cases = 911

ALPHA = 0.6341

Variable Label.

LIMITSLO = attitude towards the statement 'the speed limit on motorways is too slow'.
MPH10 = attitude towards the statement 'it is safe to drive 10 mph above the speed limit'.
BREAK = attitude towards the statement 'it is O.K. to break road traffic laws'.
ROADSLOW = attitude towards the statement 'speed limits on most roads are too slow'.
DNOTEST = attitude towards the statement 'it is O.K. to drive by yourself without having passed your test'.
NONEED = attitude towards the statement 'speed limits are not needed on country roads'.
OKSKILL = attitude towards the statement 'it is O.K. for skilful drivers to ignore speed limits'.
FINES = attitude towards the statement 'making drivers pay fines does not stop them breaking the law'.

All variables were measured on a five-point scale ranging from (1) Strongly Disagree to (5) Strongly Agree. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Offences' Section.

2) RELIABILITY ANALYSES ON DRIVING SKILL VARIABLES.

The tables below provide full details on the reliability analyses used to produce the two meta-variables MANUAL SKILLS and COGNITIVE SKILLS.

Table 3b. RESULTS OF 'COGNITIVE SKILLS' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
SKILL1	15.6420	12.9643	0.4502	0.6876
SKILL2	15.0588	12.8440	0.4794	0.6792
SKILL3	14.9369	12.2204	0.5139	0.6678
SKILL4	15.1306	12.6583	0.4800	0.6786
SKILL5	15.9347	13.3966	0.3729	0.7100
SKILL6	14.3906	12.7394	0.4458	0.6890

N. of Items = 6
N. of Cases = 919

ALPHA = 0.7236

Variable Label.

SKILL1 = perceived difficulty involved in mastering the skill of being aware of traffic and pedestrians.
SKILL2 = perceived difficulty involved in mastering the skill of judging when it is safe to overtake.
SKILL3 = perceived difficulty involved in mastering the skill of being aware of dangerous situations.
SKILL4 = perceived difficulty involved in mastering the skill of spotting hazards.
SKILL5 = perceived difficulty involved in mastering the skill of keeping a safe distance behind the car in front.
SKILL6 = perceived difficulty involved in mastering the skill of coping in situations where a lot is happening at once.

All variables were measured on a five-point scale ranging from (1) Not Very Difficult to (5) Very Difficult. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Skills' Section.

Table 3c. RESULTS OF 'MANUAL SKILLS' RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
GEAR	14.5407	18.9182	0.4902	0.8066
MIRROR	14.4767	18.9693	0.5434	0.7951
STEER	14.2823	18.0420	0.6025	0.7825
STOP	13.7372	18.0635	0.6257	0.7778
SPEED	14.0228	17.4984	0.6110	0.7804
ALLSKILS	13.3268	17.5094	0.6080	0.7811

N. of Items = 6

N. of Cases = 921

ALPHA = 0.8165

Variable Labels.

GEAR = perceived difficulty involved in mastering the skill of changing gear.

MIRROR = perceived difficulty involved in mastering the skill of correct use of mirrors.

STEER = perceived difficulty involved in mastering the skill of steering and road position.

STOP = perceived difficulty involved in mastering the skill of judging stopping distances.

SPEED = perceived difficulty involved in mastering the skill of controlling speed.

ALLSKILS = perceived difficulty involved in mastering the skill of co-ordinating the above skills.

All variables were measured on a five-point scale ranging from (1) Not Very Difficult to (5) Very Difficult. A full description of the above variables and their meanings are held in Appendix B2 under the 'Driving Skills' Section.

3) PRINCIPAL COMPONENTS ANALYSIS ON 'REASONS FOR DRIVING' VARIABLES.

Further details are provided here on the principal components analysis that was used to produce the six 'Reasons For Driving and Image' meta-variables.

The table below shows the pooled within groups correlation matrix, (Pearsons' r), for the principal components analysis performed on untransformed variables. In the table below the variables are labelled as numerical items, with their definitions displayed over the page.

Table 4b. Principal Component Analysis on 'Reasons For Driving': Correlation Matrix.

ITEM	1	2	3	4	5	6	7
1	1.000						
2	.193	1.000					
3	.101	.372	1.000				
4	.235	.303	.248	1.000			
5	.268	.167	.208	.311	1.000		
6	-.020	.308	.229	.190	.121	1.000	
7	.078	.138	-.014	.009	.123	-.016	1.000
8	.187	.227	.309	.373	.249	.130	.001
9	.237	.217	.198	.332	.216	.095	-.020
10	.203	.121	.055	.113	.153	-.032	-.012
11	-.031	-.117	-.050	-.079	.050	.041	.153
12	-.030	.269	.256	.154	.128	.328	.068
13	-.001	.371	.306	.243	.134	.290	.021
14	.175	.201	.130	.180	.157	.141	.050
15	.129	.194	.180	.161	.136	.146	.010
16	.161	.015	.005	.100	.107	.052	.134
17	.128	.031	-.011	-.003	.013	-.038	-.037
18	.099	.083	.093	.087	.057	-.015	.043
19	.119	.128	.134	.144	.118	.082	.053
20	.118	.096	.178	.213	.146	.038	-.008
21	-.056	.072	.048	.069	.043	.125	-.010

ITEM	8	9	10	11	12	13	14
<hr/>							
8	1.000						
9	.567	1.000					
10	.068	.123	1.000				
11	-.120	-.031	.191	1.000			
12	.191	.071	-.046	.005	1.000		
13	.298	.199	-.012	-.051	.550	1.000	
14	.215	.255	.270	.204	.117	.137	1.000
15	.240	.293	.195	.079	.155	.216	.317
16	.050	.178	.300	.283	-.017	-.046	.320
17	-.141	-.101	.126	-.026	-.042	-.020	.003
18	-.037	.023	.090	.020	-.020	.012	.026
19	.237	.277	.011	.018	.129	.161	.115
20	.260	.288	.090	-.079	.043	.119	.134
21	.115	.145	-.001	.107	.063	.058	.078
<hr/>							

ITEM	15	16	17	18	19	20	21
<hr/>							
15	1.000						
16	.224	1.000					
17	-.012	.042	1.000				
18	.078	.075	.328	1.000			
19	.103	.116	-.126	.059	1.000		
20	.161	.051	-.006	.052	.254	1.000	
21	.063	.075	-.278	.071	.107	.101	1.000
<hr/>							

Two variables (MD and WHYDRIV6) were not included in any of the final meta-variables produced from this analysis, as they had factor scores below 0.4.

Table 4c. Item Definitions For The Principal Components Analysis On 'Reasons For Driving' Variables.

ITEM VARIABLE NAME		
1	WHYDRIV1=	importance of the mobility afforded by being a car driver.
2	WHYDRIV2=	importance of peers in learning to drive.
3	WHYDRIV3=	importance of perceived status associated with being a car driver.
4	WHYDRIV4=	importance of fun involved in being a car driver.
5	WHYDRIV5=	importance of social activities in wanting to learn to drive.
6	WHYDRIV6=	importance of parents in learning to drive.
7	WHYDRIV7=	importance of 'other' reasons in wanting to learn to drive.
8	FAST=	importance of a car being fast.
9	GOOD=	importance of the image of a car.
10	ECON=	how important it is for a car to be economical.
11	SAFETY=	importance of safety features in a car.
12	MD=	importance of parental ownership of a model of car when deciding to own one.
13	PAL=	importance of peers in the perceived desirability of particular types of cars.
14	HANDLE=	importance of car handling features.
15	SIZE=	importance of the size of a car.
16	RELIABLE=	importance of car reliability.
17	SHATCH=	desirability of owning a small hatchback.
18	MHATCH=	desirability of owning a medium hatchback.
19	SPORTSC=	desirability of owning a sports coupe.
20	FHATCH=	desirability of owning a a fast hatchback.
21	SALOON=	desirability of owning a a saloon car.

A full description of the above variables and their meanings are held in Appendix B2 in the 'Reasons For Driving' Section.

4) RELIABILITY ANALYSES ON ACCIDENT CAUSATION FACTORS.

The tables below provide full details on the reliability analyses used to produce the three Accident Causation meta-variables.

Table 5b. RESULTS OF 'ROAD HAZARDOUSNESS' RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
RAIN	20.4414	9.6540	0.5210	0.7287
FOG	19.6139	10.3307	0.5720	0.7188
ICE	19.4957	10.5000	0.5656	0.7217
DAZZLE	20.3015	10.3390	0.4428	0.7487
SNOW	20.2928	9.7708	0.5213	0.7283
WETROAD	20.5380	9.8775	0.4689	0.7438

N. of Items = 6
N. of Cases = 922

ALPHA = 0.7659

Variable Labels.

RAIN = perceived dangerousness of heavy rain.
FOG = perceived dangerousness of thick fog.
ICE = perceived dangerousness of icy conditions.
DAZZLE = perceived dangerousness of dazzle (by sun or headlights)
SNOW = perceived dangerousness of snow.
WETROAD = perceived dangerousness of wet road.

All variables were measured on a five-point scale ranging from (1) Not Very Dangerous to (5) Very Dangerous. A full description of the above variables and their meanings are held in Appendix B2 under the 'Accident Causation Factors' Section.

Table 5c. RESULTS OF 'INTERNAL FACTORS' RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
ACCID3	21.9502	12.4172	0.2853	0.5860
ACCID8	20.8695	13.3096	0.2414	0.5975
ACCID9	21.4546	11.9359	0.4268	0.5408
ACCID10	22.0011	11.3721	0.4365	0.5324
ACCID12	22.9392	12.1259	0.2165	0.6203
ACCID13	21.9425	11.4452	0.3998	0.5451
ACCID14	20.9535	13.0012	0.3027	0.5806

N. of Items = 7
N. of Cases = 904

ALPHA = 0.6102

Variable Label: - 'How often do the following factors
cause drivers to have accidents?'

ACCID3 = the other driver's driving ability.
ACCID8 = alcohol.
ACCID9 = lack of attention.
ACCID10 = inexperience.
ACCID12 = age.
ACCID13 = poor driving attitudes.
ACCID14 = speed.

All variables were measured on a five-point scale ranging from (1) Not Very Often to (5) Very Often. A full description of the above variables and their meanings are held in Appendix B2 under the 'Accident Causation Factors' Section.

Table 5d. RESULTS OF 'EXTERNAL FACTORS' RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
ACCID1	18.2368	11.9285	0.2652	0.4765
ACCID2	17.8476	12.1030	0.2849	0.4714
ACCID4	17.9989	12.6070	0.1320	0.5281
ACCID5	18.5680	11.2204	0.2789	0.4691
ACCID6	18.6053	10.7068	0.3802	0.4236
ACCID7	19.4430	11.8453	0.1482	0.5323
ACCID11	18.7083	11.1047	0.3201	0.4511

N. of Items = 7
N. of Cases = 912

ALPHA = 0.5189

Variable Label: - 'How often do the following factors
cause drivers to have accidents?'

ACCID1 = weather conditions (fog, rain, sun etc).
ACCID2 = road conditions (snow, wet roads etc).
ACCID4 = other drivers on the road.
ACCID5 = mechanical problems.
ACCID6 = pedestrians and cyclists.
ACCID7 = bad luck.
ACCID11 = bad road layout.

All variables were measured on a five-point scale ranging from (1) Not Very Often to (5) Very Often. A full description of the above variables and their meanings are held in Appendix B2 under the 'Accident Causation Factors' Section.

5) PRINCIPAL COMPONENTS ANALYSIS ON SELF-PERCEPTION VARIABLES

Further details are provided here on the principal components analysis that was used to produce the meta-variables SELF-PERCEPTION FACTOR 1 and SELF-PERCEPTION FACTOR 2.

The table below shows the pooled within groups correlation matrix, (Pearsons' r), for the principal components analysis performed on untransformed variables. In the table below the variables are labelled as numerical items, with their definitions displayed over the page.

Table 6b. Principle Component Analysis on
'Self-Perception' Variables:
Correlation Matrix.

ITEM	1	2	3	4	5	6	7
1	1.000						
2	.075	1.000					
3	.186	-.037	1.000				
4	.154	-.089	.025	1.000			
5	.091	-.132	.228	.138	1.000		
6	.175	-.028	.254	.180	.166	1.000	
7	.058	.145	.008	.007	.055	.122	1.000

Item definitions are displayed over the page.

Table 6c. Item Definitions For Principal Components
Analysis on 'Self-Perception' Variables.

ITEM	VARIABLE NAME
1	LOTSPALS= I have lots of friends.
2	RESPECTT= I respect most of my teachers.
3	SUPERIOR= I often feel superior to others.
4	SHYN= I am a shy person (this variable was reversed).
5	AGGRESS= I am an aggressive person.
6	COMPETIV= I am a competitive person.
7	INDEP= I am an independent sort of person.

A full description of the above variables and their meanings are held in Appendix B2 in the 'Self-Perception' Factors Section.

6) RELIABILITY ANALYSIS ON EMOTION-EXPRESSION VARIABLES.

The table below provides full details of the reliability analysis used to produce the meta-variable EMOTION-EXPRESSION.

Table 7b. RESULTS OF 'EMOTION-EXPRESSION' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total . Correlation	ALPHA If Item Deleted
STEAM	30.2581	16.6675	0.4045	0.5547
ESCAPE	30.2009	18.3928	0.2841	0.5870
EXPRESS	29.9853	17.7766	0.3566	0.5701
POWER	29.3812	18.6445	0.2200	0.6024
STRESSN	29.0249	20.1506	0.0391	0.6500
CONFID	29.2258	18.7683	0.2678	0.5907
IENJOY	28.3710	19.5200	0.2764	0.5918
DFUN	29.5455	17.9282	0.2932	0.5849
EXCITE	30.2434	16.7571	0.4304	0.5490
BORGN	28.7449	18.3724	0.3047	0.5826

N. of Items = 10
N. of Cases = 682

ALPHA = with STRESSN: 0.6125
= without STRESSN: 0.6500

The chosen alpha value is after the variable STRESSN has been dropped.

Variable Label.

STEAM	=	attitude towards the statement 'driving a car fast will help me to let off steam after an argument'.
ESCAPE	=	attitude towards the statement 'for me, driving will be a way of escaping the problems of everyday life'.
EXPRESS	=	attitude towards the statement 'driving will be a way of expressing my personality'.
POWER	=	attitude towards the statement 'young people feel powerful when driving fast'.
CONFID	=	attitude towards the statement 'being able to drive will make me a more confident person'.
IENJOY	=	attitude towards the statement 'I think I will enjoy driving'.
DFUN	=	attitude towards the statement 'driving lets young people have more fun'.
EXCITE	=	attitude towards the statement 'overtaking other cars will be exciting'.
BORINGN	=	attitude towards the statement 'I find cars boring'. (this variable has been reversed).
STRESSN	=	attitude towards the statement 'I think I will find driving stressful most of the time' (this variable has been reversed).

All variables were measured on a five-point scale ranging from (1) Strongly Disagree to (5) Strongly Agree. A full description of the above variables and their meanings are held in Appendix B2 under the 'Emotion-Expression' Section.

7) RELIABILITY ANALYSIS ON 'ATTITUDES TOWARDS THE POLICE' VARIABLES.

The table below provides full details of the reliability analysis used to produce the meta-variable POLICE.

Table 8b. RESULTS OF 'ATTITUDES TOWARDS THE POLICE' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
GOODJOB	10.1325	4.5664	0.3754	0.4830
LIKEPOLC	10.4530	3.7197	0.5262	0.3449
TRAFFICP	10.1731	4.6866	0.2221	0.6000
PICKN	10.7222	3.9677	0.3144	0.5338

N. of Items = 4
N. of Cases = 936

ALPHA = with TRAFFICP: 0.5671
= without TRAFFICP: 0.6000

The chosen alpha is without the variable TRAFFICP (0.6000).

Variable Label.

GOODJOB = attitude towards the statement 'the police do a good job'.
LIKEPOLC = attitude towards the statement 'I like the police'.
PICKN = attitude towards the statement 'the police always pick on young drivers' (this variable has been reversed).
TRAFFICP = attitude towards the statement 'there should be more traffic police'.

All variables were measured on a five-point scale ranging from (1) Strongly Disagree to (5) Strongly Agree. A full description of the above variables and their meanings are held in Appendix B2 in the 'Attitudes Towards The Police' Section.

8) RELIABILITY ANALYSES ON PERCEPTIONS OF DRIVING STYLES.

The tables below provide full details of the reliability analyses used to produce the meta-variables FUTURE DRIVING STYLE and YOUNG PEOPLES DRIVING STYLES.

Table 9b. RESULTS OF 'FUTURE DRIVING STYLE' RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted</u>	<u>Scale Variance If variable Was Deleted</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
MYDABILT	13.0153	16.6730	0.1131	0.7848
IFASTD	13.9332	12.3892	0.6272	0.6702
PROBRISK	13.7612	13.2916	0.4636	0.7153
CLANE	13.9869	11.9604	0.5708	0.6834
TRAFLITS	14.5148	12.6514	0.5047	0.7039
FUNFAST	13.7623	11.7866	0.6018	0.6734

N. of items = 6

N. of cases = 913

ALPHA = 0.7460

Variable Label.

MYDABILT	=	attitude towards the statement 'I think my driving ability will be above average'.
IFASTD	=	attitude towards the statement 'I think I will be a fast driver'.
PROBRISK	=	attitude towards the statement 'when I drive I will probably take some risks'.
CLANE	=	attitude towards the statement 'driving fast on country lanes will be exciting'.
TRAFLITS	=	attitude towards the statement 'racing other drivers away from traffic lights will be fun'.
FUNFAST	=	attitude towards the statement 'it would be fun to learn how to drive fast'.

All variables were measured on a five-point scale ranging from (1) Strongly Disagree to (5) Strongly Agree. A full description of the above variables and their meanings are held in Appendix B2 in the 'Predictions Of Future Driving Style' Section.

Table 9c. RESULTS OF 'YOUNG PEOPLES' DRIVING STYLES'
RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted</u>	<u>Scale Variance If variable Was Deleted</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
YDFAST	12.9045	6.8770	0.3716	0.5626
THINK	12.6652	7.2906	0.3554	0.5709
LIKELY	13.0526	6.6686	0.4507	0.5217
INEXP	13.2704	6.9429	0.3668	0.5650
DAREDEVL	12.8884	7.0831	0.3151	0.5927

N. of items = 5
N. of cases = 932

ALPHA = 0.6200

Variable Label.

YDFAST = attitude towards the statement 'most young drivers drive fast'.
THINK = attitude towards the statement 'young drivers think they are better drivers than they really are'.
LIKELY = attitude towards the statement 'young drivers are more likely than other drivers to have an accident'.
INEXP = attitude towards the statement 'young drivers are the most dangerous because they are inexperienced'.
DAREDEVL = attitude towards the statement 'young drivers often engage in daredevil practices such as racing on public roads'.

The table above provides full details of the reliability analysis used to produce the meta-variable YOUNG PEOPLES' DRIVING STYLES.

All variables were measured on a five-point scale ranging from (1) Strongly Disagree to (5) Strongly Agree. A full description of the above variables and their meanings are held in Appendix B2 in the 'Perceptions Of Young Peoples' Driving Styles' Section.

APPENDIX B2.

**DESCRIPTIONS OF NON-DRIVER QUESTIONNAIRE
VARIABLES USED IN PRINCIPAL COMPONENT,
RELIABILITY AND DISCRIMINANT FUNCTION ANALYSES.**

NON-DRIVER QUESTIONNAIRE VARIABLE DESCRIPTIONS.

Appendix B2 contains descriptions and explanations of Non-Driver Questionnaire variables used in principal component, reliability and discriminant function analyses.

a) Variable Descriptions For Principal Component and Reliability Analyses.

The variables in each section below are presented firstly as meta-variables, and then as the component variables, and are presented within the following categories: Driving Offences, Driving Skills, Reasons For Driving and Image, Accident Causation Factors, Self-Perception Factors, Emotion-Expression, Attitudes Towards The Police, Predictions Of Future Driving Style, and Perceptions of Young Peoples' Driving Styles.

1) DRIVING OFFENCES.

OFFENDER SYMPATHY is a meta-variable comprised of 12 variables concerning subjects' ratings of how sorry they felt for drivers who are convicted of various driving offences. The 12 variables are presented below and described individually. All variables were measured on a five-point scale from (1) Not Sorry to (5) Very Sorry.

Subjects were asked, "how sorry do you feel for people when you hear that they have been prosecuted by the police for the offences described below. Circle a number between 1-5 for each part of the question to indicate how sorry you feel for them".

The offences presented to the subjects are as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
SORRY1	= driving at 40 mph on a 30 mph road.
SORRY2	= driving at 50 mph on a 30 mph road.
SORRY3	= driving at 80 mph on a 60 mph road.
SORRY4	= driving at 70 mph on a 60 mph road.
SORRY5	= driving through traffic lights just after they have turned red.

- SORRY6 = parking on double yellow lines.
- SORRY7 = racing with other cars on public roads.
- SORRY8 = driving at 90 mph on a motorway (where the speed limit is 70 mph).
- SORRY9 = driving fast because they are late for a meeting.
- SORRY10 = not wearing a seat-belt as a passenger in the front seat of a car.
- SORRY11 = overtaking where they are not allowed to.
- SORRY12 = drinking over the legal limit and then driving a car.

PERCEIVED DANGEROUSNESS is a meta-variable comprised of 18 variables concerning subjects' ratings of how dangerous certain driving behaviours are. The 18 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Dangerous to (5) Very Dangerous.

Subjects were told, "below is a list of some things that people do when driving", and were asked, "how dangerous do you consider each of them to be? Rate each one on a scale of 1 to 5, not very dangerous to very dangerous".

The behaviours presented to subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
PEDCROSS	= not stopping at a pedestrian crossing when someone is trying to cross.
CAUTIOUS	= being over-cautious at roundabouts.
FASTRB	= going too fast on roundabouts.
DYELLOW	= parking on double yellow lines.
BRAKEWET	= braking too quickly in wet weather.
PARKPAVE	= parking on the pavement.
INDICAT	= not indicating when turning right.

TOSLOW	=	driving too slowly in town.
YQUEUE	=	jumping the queue in traffic jams by driving down the bus lane.
GIVEWAY	=	failing to give way to other drivers at junctions.
REDLITE	=	driving through red traffic lights just after they have turned red.
TOOCLOSE	=	following the car in front too closely.
OVERTAKE	=	overtaking a car when approaching a bend.
SPEEDTOW	=	driving above the speed limit in town.
SPEEDMOT	=	driving above the speed limit on motorways.
UTURN	=	turning in a road where U-turns are not allowed.
NOLICENC	=	driving a car alone without a full driving licence.
OVERDDL	=	driving when having drunk slightly over the legal limit.

PERCEIVED SERIOUSNESS OF OFFENCES is a meta-variable comprised of 14 variables concerning subjects' ratings of how serious different driving offences are. The 14 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Serious to (5) Very Serious.

Subjects were told, "below is a list of some driving offences that some people commit when driving", and were asked, "how serious do you consider each of them to be? Rate each one on a scale of 1 to 5, not very serious to very serious".

The offences presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
PEDCROS2	= not stopping at a pedestrian crossing when someone is trying to cross.
FASTRB2	= going too fast on roundabouts.

PARKPAV2 = parking on the pavement.

INDICAT2 = not indicating when turning right.

GIVEWAY2 = failing to give way to other drivers at junctions.

REDLITE2 = driving through traffic lights just after they have turned red.

TOOCLOS2 = following the car in front too closely.

OVERTAK2 = overtaking a car when approaching a bend.

SPEEDTW2 = driving above the speed limit in town.

SPEEDMT2 = driving above the speed limit on motorways.

UTURN2 = turning in a road where U-turns are not allowed.

NOLIC2 = driving a car alone without a full driving licence.

OVERDDL2 = driving when having drunk slightly over the legal limit.

MEGADD = driving when having drunk alot over the legal limit.

PERCEIVED LIKELIHOOD OF DETECTION is a meta-variable comprised of 11 variables concerning subjects' ratings of the likelihood of detection for different driving offences. The 11 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) LOW to (5) HIGH.

Subjects were asked, "what do you think the chances are of a driver being caught by the police while doing each of the following things? Please circle a number from (1) LOW to (5) HIGH for each part of the question to indicate your answer".

The offences presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
DDPLD	= drink-driving.
SPEEDPLD	= speeding in town.

MOTORWAY = speeding on the motorway.
 DRIVDANG = driving dangerously.
 INSURANC = driving without insurance.
 DRUGS = driving while on drugs.
 OTDANGER = overtaking other cars dangerously.
 NOBELT = not wearing a seat-belt in the front seat of a car.
 LITERED = driving through traffic lights just after they have turned red.
 LICENO = driving without a full driving licence.
 RACE = racing with other cars on public roads.

OFFENCE ACCEPTABILITY is a meta-variable comprised of 8 variables concerning subjects' attitudes towards a variety of offences. The 8 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

Subjects were presented with eight separate attitude statements and asked to indicate their degree of agreement/disagreement with each statement, using the five-point scale. The eight attitude statements are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
LIMITSLO	= the speed limit on motorways is too slow.
MPH10	= it is safe to drive 10 mph above the speed limit.
BREAK	= it is O.K. to break road traffic laws.
ROADSLOW	= speed limits on most roads are too slow.
DNOTEST	= it is O.K. to drive by yourself without having passed your test.
NONEED	= speed limits are not needed on country roads.

OKSKILL = it is O.K. for skilful drivers to ignore speed limits.

FINES = making drivers pay fines does not stop them breaking the law.

2) DRIVING SKILLS.

COGNITIVE SKILLS is a meta-variable comprised of 6 variables concerning subjects' ratings of the level of difficulty in mastering certain driving skills. The 6 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Difficult to (5) Very Difficult.

Subjects were asked, "how difficult do you think it will be to master the following skills as a driver?" The six driving skills in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
SKILL1	= being aware of traffic and pedestrians.
SKILL2	= judging when it is safe to overtake.
SKILL3	= being aware of dangerous situations.
SKILL4	= spotting hazards.
SKILL5	= keeping a safe distance behind the car in front.
SKILL6	= coping in situations where a lot is happening at once.

MANUAL SKILLS is a meta-variable comprised of 6 variables concerning subjects' ratings of the level of difficulty in mastering (mainly) manual driving skills. The 6 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Difficult to (5) Very Difficult.

Subjects were asked, "how difficult do you think it will be to master each of the following driving skills?" The six driving skills in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
GEAR	= changing gear.
MIRROR	= correct use of mirrors.
STEER	= steering and road position.
STOP	= judging stopping distances.
SPEED	= controlling speed.
ALLSKILS	= co-ordinating the above skills.

3) REASONS FOR DRIVING AND IMAGE.

Three main five-point scales were used with the original variables and are described here first. Descriptions of each individual variable will then follow.

The scale used for the variables WHYDRIV1 to WHYDRIV7 ranged from 'not at all important (1) to 'extremely important' (5). Subjects were told, "below is a list of reasons why some people want to learn to drive a car. When you have read them, indicate how important each reason is to you by giving it a number between 1 and 5", etc.

The scale used for the variables FAST, GOOD, MAKE, ECON, SAFETY, MD, PAL, HANDLE, SIZE and RELIABLE ranged from (1) 'not very important' to (5) 'extremely important'. Subjects were told " please indicate how much each of the following qualities in a car would influence you in deciding which car you would like to have". The scale is the same as above.

The scale used for the variables SHATCH, MHATCH, SPORTSC, FHATCH and SALOON ranged from 1 to 5. Subjects were told, "read the list of cars below and say how much you would like to have each one by putting a number from 1 to 5 in each box. Put a 1 in a box if you would not really want to have a particular type of car, a 2 if you would like it a bit, etc all the way up to 5 meaning that you would really like to have that type of car".

IMAGE is a meta-variable comprised of five variables relating to the desirability of owning a car, the type of car and reasons why. The five variables are presented below and are described individually. Each variable was measured on a five-point scale, the exact scale for each variable being described above.

The variables presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
WHYDRIV1	= I will be able to get about easier.
WHYDRIV4	= it will be fun to drive car.
FAST	= it is fast.
GOOD	= it looks good.
FHATCH	= a fast hatchback (for example, a Golf GTi or a Peugeot 205GTi).

SOCIAL INFLUENCE is a meta-variable comprised of three variables relating to the influence of peers and parents on the desire to want to drive a car. The three variables are presented below and are described individually. Each variable was measured on a five-point scale, the exact scale for each variable being described above.

The variables presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
WHYDRIV2	= my friends will be learning to drive.
WHYDRIV3	= people treat you more like an adult when you have a car.
PAL	= a friend has one (a car).

CAR FEATURES is a meta-variable comprised of five variables relating to the desirability of certain 'functional' features of a car, such as safety, handling and size. The five variables are presented below and are described individually. Each variable was measured on a five-point scale, the exact scale for each variable being described above.

The variables presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
-----------------------	------------------------------

ECON	= it is economical.
SAFETY	= safety features.
HANDLE	= it handles well.
SIZE	= the size of it.
RELIABLE	= it is reliable.

SMALL CAR DESIRABILITY is a meta-variable comprised of two variables relating to the desirability of small and medium hatchbacks. The two variables are presented below and are described individually. Each variable was measured on a five-point scale, the exact scale for each variable being described above.

The variables presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
-----------------------	------------------------------

SHATCH	= a small hatchback (for example, a Metro or Fiesta).
MHATCH	= a medium hatchback (for example, an Escort or Astra).

LARGE CAR DESIRABILITY is a meta-variable comprised of two variables relating to the desirability of saloon and sports cars. The two variables are presented below and are described individually. Each variable was measured on a five-point scale, the exact scale for each variable being described above.

The variables presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
-----------------------	------------------------------

SPORTSC	= sports coupe (for example, an Audi Coupe or Capri 2.8i).
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SALOON = a saloon car (for example, a Sierra or Montego).

SOCIAL ACTIVITIES is a meta-variable comprised of two variables relating to the desirability of a car for social activities and miscellaneous other reasons. The two variables are presented below and are described individually. Each variable was measured on a five-point scale, the exact scale for each variable being described above.

The variables presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
WHYDRIV5	= it will help my social activities.
WHYDRIV7	= other reasons.

4) ACCIDENT CAUSATION FACTORS.

ROAD HAZARDOUSNESS is a meta-variable comprised of 6 variables concerning subjects' ratings of the hazardousness of certain road conditions. The 6 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Dangerous to (5) Very Dangerous.

Subjects were asked, "how dangerous are the following daytime road conditions when someone is driving". The six road conditions in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
RAIN	= heavy rain.
FOG	= thick fog.
ICE	= icy conditions.
DAZZLE	= dazzle (by sun or headlights)
SNOW	= snow.
WETROAD	= wet road.

INTERNAL FACTORS is a meta-variable comprised of seven variables concerning subjects' ratings of different factors and their likely causation of road traffic accidents. These factors have been considered as ones that may be attributed to the internal factors of a driver. The seven factors are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Often to (5) Very Often.

Subjects were asked, "how often do you think each of the following factors causes a driver to have an accident?" The seven factors in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
ACCID3	= the other driver's driving ability.
ACCID8	= alcohol.
ACCID9	= lack of attention.
ACCID10	= inexperience.
ACCID12	= age.
ACCID13	= poor driving attitudes.
ACCID14	= speed.

EXTERNAL FACTORS is a meta-variable comprised of seven variables concerning subjects' ratings of different factors and their likely causation of road traffic accidents. These factors have been considered as ones that may be attributed to factors external to a driver. The seven factors are presented below and are described individually. Each variable was measured on a five-point scale from (1) Not Very Often to (5) Very Often.

Subjects were asked, "how often do you think each of the following factors causes a driver to have an accident?" The seven factors in question are presented below.

VARIABLE
LABEL

VARIABLE DESCRIPTION.

ACCID1	=	weather conditions (fog, rain, sun etc).
ACCID2	=	road conditions (snow, wet roads etc).
ACCID4	=	other drivers on the road.
ACCID5	=	mechanical problems.
ACCID6	=	pedestrians and cyclists.
ACCID7	=	bad luck.
ACCID11	=	bad road layout.

5) SELF-PERCEPTION FACTORS.

SELF-PERCEPTION FACTOR 1 is a meta-variable comprised of five variables covering certain self-perception factors, such as aggressiveness, competitiveness and shyness. The five variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The five variables in question are presented below.

VARIABLE
LABEL

VARIABLE DESCRIPTION.

LOTSPAL	=	I have lots of friends.
SUPERIOR	=	I often feel superior to others.
SHYN	=	I am a shy person (this variable was reversed)
AGGRESS	=	I am an aggressive person.
COMPETIV	=	I am a competitive person.

SELF-PERCEPTION FACTOR 2 is a meta-variable comprised of two variables covering certain self-perception factors, such as level of independence and respect for teachers. The two variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The two variables in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
RESPECTT	= I respect most of my teachers.
INDEP	= I am an independent sort of person.

6) EMOTION-EXPRESSION.

EMOTION-EXPRESSION is a meta-variable comprised of 9 variables relating to thrill-seeking and driving behaviours. The nine variables are presented below and described individually. All variables were measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

Subjects were told, "below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement".

The statements presented to the subjects are as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
STEAM	= Driving a car fast will help me to let off steam after an argument.
ESCAPE	= For me, driving will be a way of escaping the problems of everyday life.
EXPRESS	= Driving will be a way of expressing my personality.
POWER	= Young people feel powerful when driving fast.

CONFID = Being able to drive will make me a more confident person.

IENJOY = I think I will enjoy driving.

DFUN = Driving lets young people have more fun.

EXCITE = Overtaking other cars will be exciting

BORINGN = I find cars boring. (this variable has been reversed).

The variable below was included in the reliability analysis, but as it lowered the alpha level it was not included in the meta-variable EMOTION-EXPRESSION.

STRESSN = I think I will find driving stressful most of the time. (this variable has been reversed).

7) ATTITUDES TOWARDS THE POLICE.

POLICE is a meta-variable comprised of 3 variables relating to attitudes towards the police. The three variables are presented below and described individually. All variables were measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

Subjects were told, "below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement".

The statements presented to the subjects are as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
GOODJOB =	The police do a good job.
LIKEPOLC =	I like the police.
PICKN =	The police always pick on young drivers. (this variable has been reversed).

The variable below was included in the reliability analysis, but as it lowered the alpha level it was not included in the meta-variable POLICE.

TRAFFICP = There should be more traffic police.

8) PERCEPTIONS OF DRIVING STYLES

FUTURE DRIVING STYLE is a meta-variable comprised of 6 variables relating to subjects' predictions of what their future driving style will be like. The six variables are presented below and described individually. All variables were measured on a five point scale from (1) Strongly Disagree to (5) Strongly Agree.

Subjects were told, "below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement".

The statements presented to the subjects are as follows.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
MYDABILT	=	I think my driving ability will be above average.
IFASTD	=	I think I will be a fast driver.
PROBRISK	=	When I drive I will probably take some risks.
CLANE	=	Driving fast on country lanes will be exciting.
TRAFLITS	=	Racing other drivers away from traffic lights will be fun.
FUNFAST	=	It would be fun to learn how to drive fast.

The variables below were included in earlier reliability analyses, but as they lowered the alpha level they were not included in the meta-variable FUTURE DRIVING STYLE.

ISAFE = I think I will be a safe driver.

DART = It would be frightening to dart in and out of slower cars in heavy traffic.

YOUNG PEOPLES' DRIVING STYLES is a meta-variable comprised of 5 variables relating to subjects' perceptions of young peoples' driving styles. The five variables are presented below and described individually. All variables were measured on a five point scale from (1) Strongly Disagree to (5) Strongly Agree.

Subjects were told, "below is a list of statements which I would like you to read and then tick the column that best describes how you feel. Please do this for all of the statements. Tick only one box for each statement".

The statements presented to the subjects are as follows.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
YDFAST	=	Most young drivers drive fast.
THINK	=	Young drivers think they are better drivers than they really are.
LIKELY	=	Young drivers are more likely than other drivers to have an accident.
INEXP	=	Young drivers are the most dangerous because they are inexperienced.
DAREDEVL	=	Young drivers often engage in daredevil practices such as racing on public roads.

The variables below were included in earlier reliability analyses, but as they lowered the alpha level they were not included in the meta-variable YOUNG PEOPLES' DRIVING STYLES.

REACT	=	Young drivers are safer than others because they have quick reactions.
FASTSKILL	=	People who drive fast are the most skilful drivers.
WSKILL	=	Women are the most skilful drivers.
YDSAFAER	=	Young drivers are safer drivers than

older drivers.

b) Variable Descriptions For 'Attitudes Towards Drink-Driving' Variables Employed In Discriminant Function Analyses.

The variables employed in the discriminant function analyses on age and sex by 'attitudes towards drink-driving' are described and explained below.

Subjects were required to read the following 11 statements and rate their level of agreement with them from (1) strongly disagree to (5) strongly agree.

MOSTPDD	= Most people drink and drive.
DIMPROV	= Alcohol improves your driving.
MOSTYPDD	= Most young people drink and drive.
OVERLL	= It is safe to drink over the legal limit and drive.
OKDD	= It is O.K. to drive after a few drinks.
HOLD	= It will be important to me that friends think I can hold my drink when driving.
STRICT	= There should be stricter penalties for those who drink and drive.
DDACCID	= You should not drink in case you have an accident.
BETTER	= Young drivers are better at driving after drinking than older drivers.
ALIFT	= I would accept a lift from someone who had drunk a fair bit of alcohol.
CAUGHT	= You should not drink and drive in case you get caught by the police.

Subjects were also presented with the following 5 variables to which they were asked to provide answers. Each variable and the rating scale used is described below.

DDLL	= Subjects were required to rate how dangerous they thought it was for someone to drive a car after having drunk enough alcohol to be well over the legal limit. Subjects had to provide their answer on a rating scale from (1) not very dangerous to (5) very dangerous.
OFTEND	= This variable required subjects to state how often they drank alcohol, and to provide ratings on the following scale: (6) every day, (5) several times a week, (4) once a week, (3) once every two weeks, (2) once a month, (1) less than once a month.

- TV = This was a dichotomous variable asking subjects:
"Have you seen any adverts on T.V. advising people not to drink and drive?"
- PALSD = This was a dichotomous variable asking subjects:
"Do you drink alcohol with your friends?"
- MEGADD = This was a variable asking subjects to rate how serious they perceived the offence of 'driving when having drunk alot over the legal limit' was. Subjects had to respond on a scale of (1) not very serious to (5) very serious.

APPENDIX B3.

**THE EXAMINATION OF GROUP DIFFERENCES ACROSS
DRIVING BEHAVIOUR, ACCIDENT AND OFFENCE-RELATED VARIABLES:**

**DETAILS OF DISCRIMINANT FUNCTION ANALYSES ON
THE NON-DRIVER QUESTIONNAIRE DATA.**

**THE EXAMINATION OF GROUP DIFFERENCES ACROSS DRIVING
BEHAVIOUR, ACCIDENT AND OFFENCE-RELATED VARIABLES:**

DETAILS OF DISCRIMINANT FUNCTION ANALYSES.

CONTENTS.

- 1) Driving offences.
- 2) Reasons for driving.
- 3) Accident causation factors.
- 4) General attitudes towards driving.
- 5) Attitudes towards drink-driving.

EXAMINATION OF ASSUMPTIONS.

A summary of the examination for univariate and multivariate outliers, and of the assumptions of normality, linearity and homoscedasticity for all the following discriminant function analyses is presented below.

An exploratory scatterplot of the residuals versus the predicted scores for each discriminant function analysis, indicated that the assumptions of normality, linearity and homoscedasticity were not violated. An initial inspection of the correlation matrices formed between the variables indicated that there were no strong inter-correlations between any of the variables. Thus no variables had to be excluded due to problems of multicollinearity (Tabachnick and Fidell, 1989). Univariate outliers were tested using the SPSS 'Frequencies' command: using this method no univariate outliers were identified ($p < 0.001$) and so no cases had to be excluded from future analyses. Multivariate outliers were tested among the independent variables using Mahalanobis's distance: using this procedure no multivariate outliers were identified ($p < 0.001$) and as such no cases had to be excluded from future analyses.

1) Attitudes Towards Driving Offences.

a) By Age:

Details of The Discriminant Function Analysis:

Information on the variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 740 complete cases were left for analysis. This gave a subject to variables ratio of 148: 1.

Table 10b. Means and Standard Deviations For Age Groups On 'Driving Offence' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on five-point scales (details in Appendix B2).

Variable	Age Group 1 (n=180)		Age Group 2 (n=230)	
	Mean	S.D	Mean	S.D
OFFENDER SYMPATHY	2.322	1.055	2.388	0.920
PERCEIVED DANGEROUSNESS	4.070	0.506	3.857	0.476
PERCEIVED SERIOUSNESS	4.123	0.510	3.855	0.531
P.LIKELIHOOD OF DETECTION	3.858	0.729	3.423	0.649
OFFENCE ACCEPTABILITY	2.115	0.536	2.251	0.506

Variable	Age Group 3 (n=200)		Age Group 4 (n=130)	
	Mean	S.D	Mean	S.D
OFFENDER SYMPATHY	2.262	0.764	2.275	0.662
PERCEIVED DANGEROUSNESS	3.697	0.556	3.655	0.422
PERCEIVED SERIOUSNESS	3.786	0.513	3.882	0.479
P.LIKELIHOOD OF DETECTION	3.178	0.617	2.921	0.515
OFFENCE ACCEPTABILITY	2.276	0.513	2.311	0.417

Table 10c. Univariate F-Tests with 3 and 736 Degrees of Freedom.

Variable	Wilks Lambda	F	Signif
OFFENDER SYMPATHY	0.99685	0.775	0.5082
PERCEIVED DANGEROUSNESS	0.91645	22.370	0.0000
PERCEIVED SERIOUSNESS	0.94283	14.880	0.0000
P.LIKELIHOOD OF DETECTION	0.80420	59.730	0.0000
OFFENCE ACCEPTABILITY	0.98038	4.909	0.0022

Table 10d. Canonical Discriminant Functions.

	Function 1	Function 2	Function 3
Eigenvalue	0.28960	0.02890	0.00474
Canonical Correl.	0.47389	0.16759	0.06866
% of variance*	89.59	8.94	1.47
Wilks Lambda	0.75010	0.96733	0.99529
Chi-Square	211.200	24.394	3.471
Degrees of Freedom	15	8	3
Significance	0.0000	0.0020	0.3246

* indicates the percent of variance in the solution accounted for by each function.

Table 10e. Group Centroids.

Group Centroids	Function 1	Function 2	Function 3
Age Group 1	0.73883	0.27820	0.02778
Age Group 2	0.13046	-0.10320	0.12645
Age Group 3	-0.28925	-0.20620	-0.09595
Age Group 4	-0.80880	0.11462	-0.11458

Table 10f. Rotated Standardized Canonical Discriminant Function Coefficients.

Variable	Function 1	Function 2	Function 3
OFFENDER SYMPATHY	0.06409	0.17835	0.65225
PERCEIVED DANGEROUSNESS	0.36345	-0.06462	0.90187
PERCEIVED SERIOUSNESS	-0.46940	1.13648	-0.39985
P.LIKELIHOOD OF DETECTION	0.97878	-0.18808	-0.20195
OFFENCE ACCEPTABILITY	-0.17607	0.09732	0.32482

Table 10g. Rotated Structure Matrix.

Rotated correlations between discriminating variables and discriminant functions.

Variable	Function 1	Function 2	Function 3
P.LIKELIHOOD OF DETECTION	0.91707	0.23621	-0.18791
PERCEIVED SERIOUSNESS	0.20493	0.95699	-0.14736
PERCEIVED DANGEROUSNESS	0.42140	0.51224	0.37920
OFFENDER SYMPATHY	-0.03778	0.03520	0.67304
OFFENCE ACCEPTABILITY	-0.27173	-0.16804	0.37605

Table 10h. Pooled Within-Groups Correlation Matrix.

	1	2	3	4	5
1) 1.000					
2) -0.171	1.000				
3) -0.172	0.613	1.000			
4) -0.073	0.306	0.415	1.000		
5) 0.281	-0.322	-0.321	-0.150	1.000	

No.	Variable Label
1)	OFFENDER SYMPATHY
2)	PERCEIVED DANGEROUSNESS
3)	PERCEIVED SERIOUSNESS
4)	P.LIKELIHOOD OF DETECTION
5)	OFFENCE ACCEPTABILITY

Table 10i. Classification Matrix.

Actual Group	N	Predicted Group Membership			
		11-12	13-14	15-16	16-17
11-12 years	180	93 51.7%	63 35.0%	15 8.3%	9 5.0%
13-14 years	230	60 26.1%	95 41.3%	58 25.2%	17 7.4%
15-16 years	200	28 14.0%	70 35.0%	76 38.0%	26 13.0%
17-18 years	130	7 5.4%	35 26.9%	42 32.3%	46 35.4%

Overall, 41.89% of cases were correctly classified.

b) By Sex.

An examination of the means for both sexes showed very little variation between them on any of the variables. The means table for the sexes is shown below.

Table 10J. Means For Males and Females on 'Driving Offence' Variables.

SEX	OFFENDER SYMPATHY	PERCEIVED DANGER	PERCEIVED P. LIKELIHOOD OF SEVERITY	OFFENCE ACCEPTAB.
Male	2.482	3.768	3.824	2.349
Female	2.153	3.893	3.990	2.121

A discriminant function analysis between the sexes based on the driving offences variables was undertaken but is not reported in full here, as although the discriminating function was significant, all of the standardized canonical discriminant function coefficients were low; all except one were below 0.5. The variable OFFENCE ACCEPTABILITY, subjects' ratings of the acceptability of committing certain driving offences, had a standardized canonical discriminant function coefficient of 0.555, indicating that males rated the acceptability of driving offences higher than did females.

2) Reasons For Driving.

a) By Age:

Details On The Discriminant Function Analysis.

Information on the meta-variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 736 complete cases were left for analysis. This gave a subject to variable ratio of 147.2:1.

Table 11b. Means and Standard Deviations For Each Age Group On 'Reasons For Driving' Variables.

In the table below the means and standard deviations are presented for each age group by each variable. The number of cases for each age group is: Age Group 1 = 170, Age Group 2 = 233, Age Group 3 = 202, Age Group 4 = 131.

Group Means

	IMAGF	PEERF	FEATURES	SMALCARF	LARGCARF
Age Group 1	2.81647	1.89020	3.86824	2.77353	3.48235
Age Group 2	3.25408	1.97139	3.85494	2.72532	3.59871
Age Group 3	3.33762	1.76403	3.93861	3.23762	3.25990
Age Group 4	3.41985	1.63868	3.94656	3.38931	3.06107

Group Standard Deviations

	IMAGF	PEERF	FEATURES	SMALCARF	LARGCARF
Age Group 1	.82316	.85256	.70067	1.04777	.98343
Age Group 2	.81091	.84709	.69709	.94212	.97982
Age Group 3	.77258	.62902	.57562	.88967	1.05591
Age Group 4	.74125	.50135	.59528	1.02148	1.09197

Table 11c. Univariate F-Tests with 3 and 732 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
IMAGF	0.92753	19.07	0.0000
PEERF	0.97353	6.634	0.0002
FEATURES	0.99604	0.968	0.4068
SMALCARF	0.92263	20.46	0.0000
LARGCARF	0.96330	9.296	0.0000

Table 11d. Canonical Discriminant Functions

	Function 1	Function 2	Function 3
Eigenvalue	0.3101	0.0364	0.0009
Canonical Correl.	0.4865	0.1874	0.0298
% of variance*	89.27	10.47	0.26
Wilks Lambda	0.7358	0.9640	0.9991
Chi-Square	224.097	26.765	0.650
Degrees of Freedom	15	8	3
Significance	0.0000	0.0008	0.8848

* indicates the percent of variance in the solution accounted for by each function.

Table 11e. Group Centroids

Group Centroids	Function 1	Function 2	Function 3
Age Group 1	-.60183	-.30466	.26957
Age Group 2	.01484	-.31530	.26739
Age Group 3	.22087	.29711	-.20803
Age Group 4	.41404	.49802	-.50464

Table 11f. Rotated Standardized Canonical Discriminant
Function Coefficients.

(only values over 0.5 will be accepted).

Variable	Function 1	Function 2	Function 3
IMAGF	1.18680	.12018	-.29749
FEATURES	-.33090	.31990	.03680
SMALCARF	-.00041	.93643	-.00458
LARGCARF	-.12780	-.04714	.74746
PEERF	-.29030	-.16916	.70954

Table 11g. Rotated Structure Matrix. Correlations
between rotated canonical discriminant functions and
discriminating variables.

Variable	Function 1	Function 2	Function 3
IMAGF	.89968	.11101	.31083
PEERF	.18088	.03454	.71180
FEATURES	-.02623	.36702	.19022
SMALCARF	-.06441	.93445	.06281
LARGCARF	.18727	-.00096	.77691

Table 11h. Pooled Within-Groups Correlation Matrix.

	IMAGF	PEERF	FEATURES	SMALCARF	LARGCARF
IMAGF	1.00000				
PEERF	.46964	1.00000			
FEATURES	.31968	.19036	1.00000		
SMALCARF	-.01644	.10134	.05134	1.00000	
LARGCARF	.35220	.18119	.15211	-.01511	1.00000

Table 11i. Classification Matrix.

Actual Group	N	Predicted Group Membership			
		11-12	13-14	15-16	16-17
11-12 years	250	77 30.8%	121 48.4%	50 20%	2 0.8%
13-14 years	298	48 16.1%	162 54.4%	83 27.9%	5 1.7%
15-16 years	235	31 13.2%	79 33.6%	96 40.9%	29 12.3%
17-18 years	161	4 2.5%	46 28.6%	85 52.8%	26 16.1%

Overall, 38.24% of cases were correctly classified.

944 cases were used for classification purposes, due to the application of the SPSSPC missing values 'meansub' command.

b) By Sex.

An examination of the means for both sexes showed very little variation between them on four out of the five variables. The means for the variable LARGCARF indicate that males showed a greater desirability to own a saloon or sports car than did females.

The means table for the sexes is shown below.

Table 11J. Means For Males and Females On 'Reasons For Driving' Variables.

SEX	IMAGF	PEERF	FEATURES	SMALCARF	LARGCARF
Female	3.01076	1.70161	3.86742	3.16289	3.03683
Male	3.38413	1.96208	3.91693	2.84127	3.70238

A discriminant function analysis between the sexes based on the 'reasons for driving' variables was undertaken but is not reported in full here, as although the discriminating function was significant, all of the standardized canonical discriminant function coefficients, except one, were below 0.4. The variable LARGCARF, subjects ratings of the desirability of owning saloon and sports cars, had a standardized canonical discriminant function coefficient of 0.68849. This result, along with the group means, indicates that males rated the desirability of owning a saloon or sports car higher than females.

3) Accident Causation Factors.

a) On Age:

Details Of The Discriminant Function Analysis.

Information on the variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 859 complete cases were left for analysis. This gave a subject to variables ratio of 286.33: 1.

Table 12b. Means and Standard Deviations For Each Age Group On 'Accident Causation' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on a five-point scale (details in Appendix B2).

Variable	Age Group 1 (n=216)		Age Group 2 (n=267)	
	Mean	S.D	Mean	S.D
<hr/>				
ROAD				
HAZARDOUSNESS	4.016	0.723	3.969	0.584
INTERNAL FACTORS	3.656	0.615	3.595	0.559
EXTERNAL FACTORS	3.199	0.576	3.069	0.577
<hr/>				

Variable	Age Group 3 (n=222)		Age Group 4 (n=154)	
	Mean	S.D	Mean	S.D
ROAD				
HAZARDOUSNESS	4.013	0.593	4.121	0.531
INTERNAL FACTORS	3.586	0.539	3.678	0.544
EXTERNAL FACTORS	2.956	0.493	3.083	0.469

Table 12c. Univariate F-Tests with 3 and 855 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
ROAD			
HAZARDOUSNESS	0.99306	1.991	0.1137
INTERNAL FACTORS	0.99653	0.9931	0.3954
EXTERNAL FACTORS	0.97714	6.666	0.0002

Table 12d. Canonical Discriminant Functions

	Function 1	Function 2	Function 3
Eigenvalue	0.02596	0.00769	0.000000
Canonical Correl.	0.1590561	0.0873676	0.0010704
% of variance*	77.14	22.86	0.00
Wilks Lambda	0.9672601	0.9923658	0.9999989
Chi-Square	28.444	6.5485	0.97913E-03
Degrees of Freedom	9	4	1
Significance	0.0008	0.1618	0.9750

* indicates the percent of variance in the solution accounted for by each function.

Table 12e. Group Centroids

Group Centroids	Function 1	Function 2	Function 3
Age Group 1	0.22167	-0.04299	0.00103
Age Group 2	0.00518	-0.07357	-0.03600
Age Group 3	-0.22253	0.01884	-0.01032
Age Group 4	0.00089	0.16069	0.07585

**Table 12f. Rotated Standardized Canonical Discriminant
Function Coefficients.**

Variable	Function 1	Function 2	Function 3
ROAD			
HAZARDOUSNESS	-0.11360	1.04684	-0.12085
INTERNAL FACTORS	-0.22820	-0.11581	1.10068
EXTERNAL FACTORS	1.09824	-0.10916	-0.22871

Table 12g. Rotated Structure Matrix.

Rotated correlations between discriminating variables and discriminant functions.

Variable	Function 1	Function 2	Function 3
EXTERNAL FACTORS	0.96809	0.12980	0.21436
ROAD HAZARDOUSNESS	0.12472	0.98372	0.12936
INTERNAL FACTORS	0.21485	0.13498	0.96727

Table 12h. Pooled Within-Groups Correlation Matrix.

	ROAD HAZARD.	INTERNAL FACTORS	EXTERNAL FACTORS
ROAD HAZARDOUSNESS	1.000		
INTERNAL FACTORS	0.284	1.000	
EXTERNAL FACTORS	0.276	0.432	1.000

Table 12i. Classification Matrix.

Actual Group N	Predicted Group Membership			
	11-12	13-14	15-16	16-17
11-12 years 216	45 20.8%	144 66.7%	27 12.5%	0 0.0%
13-14 years 267	36 13.5%	180 67.4%	51 19.1%	0 0.0%
15-16 years 222	11 5.0%	154 69.4%	57 25.7%	0 0.0%
17-18 years 154	23 14.9%	95 61.7%	36 23.4%	0 0.0%

Overall, 32.83% of cases were correctly classified.

b) By Sex.

An examination of the means for both sexes showed very little variation between them on any of the variables. The means table for the sexes is shown below.

Table 12J. Means For Males and Females On Accident Causation Variables.

SEX	ROAD HAZARD.	INTERNAL FACTORS	EXTERNAL FACTORS
Female	4.085	3.667	3.125
Male	3.955	3.577	3.023

A discriminant function analysis between the sexes based on the 'driving offence' variables was undertaken but is not reported in full here as although the discriminating function was significant, all of the standardized canonical discriminant function coefficients were low; all were below 0.5. The variable ROAD HAZARDOUSNESS, subjects' ratings of the hazardousness of certain road conditions, had the highest standardized canonical discriminant function coefficient, that of 0.440, indicating that males rated the hazardousness of certain road conditions as lower than did females.

4) General Attitudes Towards Driving.

a) By Age:

Details of the Discriminant Function Analysis:

Information on the variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 609 complete cases were left for analysis. This gave a subject to variables ratio of 76: 1.

Table 13b. Means and Standard Deviations For Each Age Group On General Attitudes Towards Driving Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. Details of all variables and their measurements are contained within Appendix B2.

Variable	Age Group 1 (n=144)		Age Group 2 (n=187)	
	Mean	S.D	Mean	S.D
FUTURE DRIVING STYLE	2.496	0.716	2.874	0.706
YOUNG PEOPLES DRIVING STYLE	3.275	0.619	3.210	0.645
POLICE	3.670	0.758	3.331	0.675
EMOTION EXPRESSION	3.144	0.492	3.265	0.488
SELF-PERCEPTION FACTOR 1	3.172	0.499	3.273	0.503
SELF-PERCEPTION FACTOR 2	3.737	0.627	3.530	0.675
MANUAL SKILLS	2.839	0.834	2.807	0.803
COGNITIVE SKILLS	3.195	0.692	3.083	0.689

Variable	Age Group 3 (n=153)		Age Group 4 (n=125)	
	Mean	S.D	Mean	S.D
FUTURE DRIVING STYLE	2.812	0.709	2.850	0.638
YOUNG PEOPLES DRIVING STYLE	3.170	0.584	3.221	0.654
POLICE	3.348	0.686	3.198	0.665
EMOTION EXPRESSION	3.234	0.505	3.161	0.451
SELF-PERCEPTION FACTOR 1	3.193	0.573	3.160	0.561
SELF-PERCEPTION FACTOR 2	3.772	0.558	3.910	0.449
MANUAL SKILLS	2.758	0.809	2.770	0.839
COGNITIVE SKILLS	2.938	0.662	2.926	0.620

Table 13c. Univariate F-Tests with 3 and 605 Degrees of Freedom.

Variable	Wilks Lambda	F	Signif.
FUTURE DRIVING STYLE	0.95722	9.013	0.0000
YOUNG PEOPLES DRIVING STYLE	0.99728	0.5506	0.6479
POLICE	0.94155	12.52	0.0000
EMOTION EXPRESSION	0.98595	2.874	0.0356
SELF-PERCEPTION FACTOR 1	0.99579	0.8523	0.4657
SELF-PERCEPTION FACTOR 2	0.95191	10.19	0.0000
MANUAL SKILLS	0.99743	0.5201	0.6686
COGNITIVE SKILLS	0.96645	7.001	0.0001

Table 13d. Canonical Discriminant Functions

	Function 1	Function 2	Function 3
Eigenvalue	0.15463	0.05725	0.01122
Canonical Correl.	0.3659503	0.2327082	0.1053284
% of variance*	69.31	25.66	5.03
Wilks Lambda	0.8100914	0.9353536	0.9889059
Chi-Square	126.79	40.232	6.7160
Degrees of Freedom	24	14	6
Significance	0.0000	0.0002	0.3479

* indicates the percent of variance in the solution accounted for by each function.

Table 13e. Group Centroids

Group Centroids	Function 1	Function 2	Function 3
Age Group 1	0.55728	0.25995	-0.01469
Age Group 2	0.10592	-0.32135	-0.06404
Age Group 3	-0.18242	-0.02346	0.17520
Age Group 4	-0.57716	0.21000	-0.10170

Table 13f. Rotated Standardized Canonical Discriminant Function Coefficients.

Variable	Function 1	Function 2	Function 3
FUTURE DRIVING STYLE	-0.61395	-0.54184	-0.04457
YOUNG PEOPLES DRIVING STYLE	0.06420	0.32270	-0.39387
POLICE	0.63912	0.00613	0.51795
EMOTION EXPRESSION	0.35173	-0.14126	0.92107
SELF-PERCEPTION FACTOR 1	0.36107	0.07822	-0.20712
SELF-PERCEPTION FACTOR 2	-0.49053	0.71006	0.25492
MANUAL SKILLS	-0.21069	-0.03949	0.06672
COGNITIVE SKILLS	0.47822	-0.06724	-0.41781

Table 13g. Rotated Structure Matrix.

Rotated correlations between discriminating variables and discriminant functions.

Variable	Function 1	Function 2	Function 3
POLICE	0.58491	0.36983	0.34673
COGNITIVE SKILLS	0.46093	-0.00139	-0.40740
SELF-PERCEPTION FACTOR 2	-0.29142	0.79670	0.30542
FUTURE DRIVING STYLE	-0.38146	-0.61627	0.20012
SELF-PERCEPTION FACTOR 1	0.13152	-0.16339	0.04526
EMOTION EXPRESSION	-0.00855	-0.4318	0.56357
YOUNG PEOPLES DRIVING STYLE	0.06155	0.16773	-0.21810
MANUAL SKILLS	0.09415	0.10971	-0.21518

Table 13h. Pooled Within-Groups Correlation Matrix.

	1	2	3	4	5
1)	1.000				
2)	0.205	1.000			
3)	-0.324	-0.062	1.000		
4)	0.624	0.276	-0.284	1.000	
5)	0.413	0.116	-0.150	0.387	1.000
6)	-0.143	-0.019	0.274	-0.123	-0.018
7)	-0.243	-0.336	0.124	-0.228	-0.119
8)	-0.133	0.015	0.137	-0.127	-0.121

	6	7	8
6)	1.000		
7)	0.053	1.000	
8)	-0.002	0.477	1.000

No.	Variable Label
1)	FUTURE DRIVING STYLE
2)	YOUNG PEOPLES DRIVING STYLE
3)	POLICE
4)	EMOTION EXPRESSION
5)	SELF-PERCEPTION FACTOR 1
6)	SELF-PERCEPTION FACTOR 2
7)	MANUAL SKILLS
8)	COGNITIVE SKILLS

Table 13i. Classification Matrix.

Actual Group N	Predicted Group Membership			
	11-12	13-14	15-16	16-17
11-12 years 144	68 47.2%	47 32.6%	19 13.2%	10 6.9%
13-14 years 187	30 16.0%	113 60.4%	22 11.8%	22 11.8%
15-16 years 153	32 20.9%	60 39.2%	34 22.2%	27 17.6%
17-18 years 125	19 5.2%	38 30.4%	25 20.0%	43 34.4%

Overall, 42.36% of cases were correctly classified.

b) By Sex:

An examination of the means for both sexes from a separate discriminant function analysis showed that none of the variables could be used to significantly discriminate between the age groups (all variables had discriminant function coefficients of below 0.43). The means table for the sexes is shown below.

Table 13J. Means For Males and Females On 'General Attitudes Towards Driving' Variables.

SEX	FUTURE DRIVING STYLE	YOUNG PEOPLES DRIVING STYLE	POLICE	EMOTION EXPRESSION	SP-FACTOR 1
Female	2.539	3.089	3.514	3.063	3.095
Male	2.973	3.340	3.280	3.346	3.313

SEX	SP-FACTOR 2	MANUAL SKILLS	COGNITIVE SKILLS
Female	3.799	3.035	3.152
Male	3.632	2.571	2.943

A discriminant function analysis between the sexes based on the 'general attitudes towards driving' variables was undertaken but is not reported in full here, as although the discriminating function was significant, all of the standardized canonical discriminant function coefficients were low (all were below 0.43).

5) Attitudes Towards Drink-Driving.

a) By Age:

Details of the Discriminant Function Analysis.

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 518 complete cases were left for analysis. This gave a subject to variables ratio of 28.7: 1.

Table 14b. Means and Standard Deviations For Each Age Group On 'Attitudes To Drink-Driving' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable.

Variable	Age Group 1 (n=107)		Age Group 2 (n=163)	
	Mean	S.D	Mean	S.D
MOSTPDD	2.925	1.070	2.797	1.133
DIMPROV	1.186	0.674	1.190	0.561
MOSTYPDD	3.018	1.054	2.883	0.996
PARENTDD	4.280	1.272	4.079	1.333
OVERLL	1.355	0.767	1.509	0.796
OKDD	2.186	1.108	2.251	0.989
TV	0.915	0.278	0.926	0.261
MEGADD	4.822	0.595	4.754	0.770
DDLL	4.728	0.652	4.803	0.652
HOLD	2.299	1.207	2.331	1.116
STRICT	4.271	0.927	4.067	1.237
DDACCID	4.327	1.035	4.368	0.935
BETTER	1.831	0.985	1.975	0.974
ALIFT	1.392	0.832	1.748	0.995
MDDRINKS	1.000	0.000	1.000	0.000
PALSD	0.149	0.358	0.527	0.500
OFTEND	2.214	1.317	2.674	1.355
CAUGHT	4.056	1.026	3.975	1.138

Variable	Age Group 3 (n=148)		Age Group 4 (n=100)	
	Mean	S.D	Mean	S.D
MOSTPDD	2.412	0.932	2.290	0.879
DIMPROV	1.114	0.378	1.120	0.408
MOSTYPDD	2.439	0.942	2.190	0.939
PARENTDD	4.236	1.127	4.430	0.945
OVERLL	1.371	0.740	1.370	0.562
OKDD	2.033	0.964	1.640	0.745
TV	0.966	0.181	0.930	0.256
MEGADD	4.804	0.696	4.910	0.473
DDL	4.844	0.476	4.930	0.293
HOLD	1.912	0.932	1.700	0.846
STRICT	4.337	0.922	4.300	0.937
DDACCID	4.479	0.732	4.510	0.627
BETTER	1.810	0.891	1.690	0.895
ALIFT	1.709	0.882	1.760	0.985
MDDRINKS	1.000	0.000	1.000	0.000
PALSD	0.783	0.413	0.930	0.256
OFTEND	3.013	1.370	3.370	1.219
CAUGHT	3.918	0.965	3.570	1.112

Table 14c. Univariate F-Tests with 3 and 605 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
MOSTPDD	0.94284	10.39	0.0000
DIMPROV	0.99512	0.840	0.4724
MOSTYPDD	0.90659	17.65	0.0000
PARENTDD	0.98930	1.854	0.1364
OVERLL	0.99176	1.424	0.2348
OKDD	0.94974	9.066	0.0000
TV	0.99362	1.100	0.3488
MEGADD	0.99337	1.144	0.3307
DDL	0.98279	3.000	0.0302
HOLD	0.94226	10.50	0.0000
STRICT	0.98801	2.080	0.1019
DDACCID	0.99282	1.239	0.2949
BETTER	0.98829	2.030	0.1087
ALIFT	0.97743	3.956	0.0083
MDDRINKS	is a constant		
PALSD	0.69057	76.77	0.0000
OFTEND	0.92033	14.83	0.0000
CAUGHT	0.97570	4.268	0.0054

Table 14d. Canonical Discriminant Functions

	Function 1	Function 2	Function 3
Eigenvalue	0.67536	0.06131	0.02700
Canonical Correl.	0.63491	0.24035	0.16215
% of variance*	88.44	8.03	3.53
Wilks Lambda	0.547651	0.9174537	0.9737052
Chi-Square	305.01	43.637	13.497
Degrees of Freedom	51	32	15
Significance	0.0000	0.0823	0.5640

* indicates the percent of variance in the solution accounted for by each function.

Table 14ei. Group Centroids

Group Centroids	Function 1	Function 2	Function 3
Age Group 1	-0.24298	-0.30100	-0.03530
Age Group 2	-0.33423	0.29391	0.12588
Age Group 3	0.51177	0.07227	-0.23285
Age Group 4	1.11736	-0.26396	0.17720

Table 14eii. Pooled Within-Groups Correlation Matrix.

	MOSTPDD	DIMPROV	MOSTYPDD	PARENTDD	OVERLL	OKDD	TV
MOSTPDD	1.00000						
DIMPROV	.06390	1.00000					
MOSTYPDD	.45822	.07474	1.00000				
PARENTDD	-.07346	-.06386	-.06222	1.00000			
OVERLL	.11500	.15067	.06680	-.09350	1.00000		
OKDD	.10492	.18396	.13108	-.05818	.29171	1.00000	
TV	-.04694	-.07126	-.03000	.01780	-.05687	-.00535	1.00000
MEGADD	.00587	-.11578	-.00852	.06666	-.17442	-.07455	-.06168
DDLL	-.04279	-.13667	-.08272	.08889	-.25217	-.18336	.01503
HOLD	.11637	.09732	.16396	-.11944	.17351	.18979	.04693
STRICT	.05912	-.08316	.06321	.13080	-.08846	-.18075	.00798
DDACCID	.01950	-.21768	.08701	.17694	-.19659	-.28244	-.04362
BETTER	-.03177	.04842	-.02096	-.00812	.11376	.15033	.11936

	MOSTPDD	DIMPROV	MOSTYPDD	PARENTDD	OVERLL	OKDD	TV
ALIFT	.04004	.15703	.05293	-.06999	.29282	.17788	-.02240
MDDRINKS	.	.	.	.	.	.	.
PALSD	.05523	.03845	-.03822	-.05084	.13623	.05877	.00207
OFTEND	.02507	.11960	-.00077	-.08045	.17648	.12928	.00414
CAUGHT	.06112	-.04899	.02208	.04127	-.01925	-.04576	.01344

	MEGADD	DDLL	HOLD	STRICT	DDACCID	BETTER	ALIFT
MEGADD	1.00000						
DDLL	.18178	1.00000					
HOLD	-.09376	-.15392	1.00000				
STRICT	.04334	.18110	-.05588	1.00000			
DDACCID	.09762	.12349	-.13133	.27144	1.00000		
BETTER	-.09491	-.08840	.20326	-.09822	-.13470	1.00000	
ALIFT	-.08235	-.16431	.11475	-.14310	-.17364	.14141	1.00000
MDDRINKS	.	.	.	.	.	.	.
PALSD	-.04263	-.10778	-.03750	.01733	-.06127	.00293	.10426
OFTEND	-.13713	-.22219	.08456	-.08695	-.10638	.10685	.26016
CAUGHT	.09592	.08829	.04502	.06111	.17431	-.06177	-.06719

	MDDRINKS	PALSD	OFTEND	CAUGHT
MDDRINKS	.			
PALSD	.	1.00000		
OFTEND	.	.32129	1.00000	
CAUGHT	.	-.02862	-.07517	1.00000

Correlations which cannot be computed are printed as '.'

Table 14f. Rotated Standardized Canonical Discriminant Function Coefficients.

Variable	Function 1	Function 2	Function 3
MOSTPDD	-0.19578	-0.04516	0.24961
DIMPROV	-0.01073	-0.05649	0.14542
MOSTYPDD	-0.21347	0.22222	0.12223
PARENTDD	0.03093	-0.31286	0.12897
OVERLL	0.00644	0.05240	0.33916
OKDD	-0.16748	0.41285	-0.50667
TV	0.06080	0.05542	-0.33912
MEGADD	0.05742	-0.24503	0.13900
DDLL	0.20916	0.21420	0.36995
HOLD	-0.10869	0.22609	0.26688
STRICT	-0.01522	-0.26198	-0.50910
DDACCID	0.14021	0.23694	0.02211
BETTER	-0.05685	0.24379	0.06527
ALIFT	0.13921	0.26270	0.08791
PALSD	0.77765	0.41107	-0.06528
OFTEND	0.17109	-0.28885	0.11983
CAUGHT	-0.15851	0.24290	-0.41734

Table 14g. Rotated Structure Matrix. Rotated correlations between discriminating variables and discriminant functions.

Variable	Function 1	Function 2	Function 3
PALSD	0.80825	0.33351	-0.04759
MOSTYPDD	-0.37842	0.29688	0.18405
OFTEND	0.35709	0.00202	0.12943
MOSTPDD	-0.29073	0.16070	0.26891
DDACCID	0.10059	-0.04584	-0.09955
OKDD	-0.22704	0.52145	-0.23002
HOLD	-0.27158	0.40351	0.23420
PARENTDD	0.05861	-0.37235	0.00284
ALIFT	0.14142	0.36635	0.22402
BETTER	0.07751	0.35159	0.08891
OVERLL	-0.02152	0.30963	0.28028
MEGADD	0.05236	-0.27472	0.08593
STRICT	0.05391	-0.30025	-0.41491
CAUGHT	-0.16339	0.22387	-0.37541
TV	0.05678	0.08679	-0.37409
DIMPROV	-0.07317	0.07083	0.19040
DDLL	0.15747	-0.03134	0.16109

Table 14i. Classification Matrix.

Actual Group N		Predicted Group Membership			
		11-12	13-14	15-16	16-17
11-12 years	250	169 67.6%	61 24.4%	15 6%	5 2%
13-14 years	298	106 35.6%	110 36.9%	65 21.8%	17 5.7%
15-16 years	235	47 20%	44 18.7%	115 48.9%	29 12.3%
17-18 years	161	12 7.5%	22 13.7%	63 39.1%	64 39.8%
Ungrouped Cases	4	1 25%	2 50%	1 25%	0 0%

Overall, 48.52% of cases were correctly classified.

948 cases were used for classification purposes, due to the application of the SPSSPC missing values 'meansub' command.

b) By Sex:

An examination of the means for both sexes from a separate discriminant function analysis showed that none of the variable could be used to significantly discriminate between the age groups (all variables had discriminant function coefficients of below 0.50). The means table for the sexes is shown below.

Table 14J. Means For Males and Females On 'Attitudes Towards Drink-Driving' Variables.

SEX	MOSTPDD	DIMPROV	MOSTYPDD	PARENTDD	OVERLL
Female	2.6729	1.1278	2.6241	4.2518	1.3157
Male	2.5702	1.1847	2.6988	4.2208	1.5181

SEX	OKDD	TV	MEGADD	DDLL	HOLD
Female	1.9624	0.9172	4.8909	4.8834	2.2008
Male	2.1686	0.9558	4.7834	4.7631	2.2008

SEX	STRICT	DDACCID	BETTER	ALIFT	MDDRINKS
Female	4.2443	4.4548	1.9718	1.5151	1.0000
Male	4.2249	4.3734	1.9718	1.8393	1.0000

SEX	PALSD	OFTEND	CAUGHT
Female	0.6127	2.5939	3.9511
Male	0.5823	3.04819	3.8273

A discriminant function analysis between the sexes based on the attitudes towards drink-driving variables was undertaken but is not reported in full here, as although the discriminating function was significant, all of the standardized canonical discriminant function coefficients were low (all were below 0.50). The variable with the highest discriminating function coefficient was OFTEND (the frequency with which subjects drink alcohol). The means above indicate that males drink alcohol more frequently than females.

APPENDIX C1.

**THE CREATION OF DRIVING OFFENCE,
BEHAVIOUR AND ATTITUDE META-VARIABLES:**

**STATISTICS TABLES FOR DRIVER QUESTIONNAIRE PRINCIPAL
COMPONENTS AND RELIABILITY ANALYSES.**

APPENDIX C1.

1) RELIABILITY ANALYSES ON DRIVING OFFENCE VARIABLES.

The tables below provide full details of the reliability analyses used to produce the two 'Driving Offence' meta-variables.

Table 16b. RESULTS OF 'PERCEIVED SERIOUSNESS OF OFFENCES'
RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
SERIOUS1	51.4609	63.3910	0.3040	0.8113
SERIOUS2	52.1652	65.1391	0.2152	0.8168
SERIOUS3	51.8435	60.9753	0.4342	0.8022
SERIOUS4	50.5478	58.8464	0.5909	0.7907
SERIOUS5	50.3391	62.1208	0.4272	0.8027
SERIOUS6	50.5478	59.1797	0.5209	0.7955
SERIOUS7	50.5913	61.2087	0.5692	0.7948
SERIOUS8	49.8348	64.4198	0.4421	0.8039
SERIOUS9	51.1739	62.3730	0.3860	0.8055
SERIOUS10	51.4000	63.0140	0.2360	0.8202
SERIOUS11	50.6174	60.6418	0.4524	0.8008
SERIOUS12	50.5304	60.2337	0.4375	0.8021
SERIOUS13	50.2348	59.6023	0.5371	0.7946
SERIOUS14	49.6174	62.5716	0.4946	0.7997
SERIOUS15	50.2087	60.6578	0.4936	0.7980

N. of Items = 15
N. of Cases = 115

ALPHA = 0.8135

Variable Label.

SERIOUS1	=	perceived seriousness of the offence of going too fast on roundabouts.
SERIOUS2	=	perceived seriousness of the offence of parking on double yellow lines.
SERIOUS3	=	perceived seriousness of the offence of parking on the pavement.
SERIOUS4	=	perceived seriousness of the offence of not indicating when turning right.
SERIOUS5	=	perceived seriousness of the offence of failing to give way to other drivers at junctions.
SERIOUS6	=	perceived seriousness of the offence of driving through traffic lights just after they have turned red.
SERIOUS7	=	perceived seriousness of the offence of following the car in front too closely.
SERIOUS8	=	perceived seriousness of the offence of overtaking a car when approaching a bend.
SERIOUS9	=	perceived seriousness of the offence of driving above the speed limit in town.
SERIOUS10	=	perceived seriousness of the offence of driving above the speed limit on motorways.
SERIOUS11	=	perceived seriousness of the offence of turning in a road where U-turns are not allowed.
SERIOUS12	=	perceived seriousness of the offence of driving a car alone without a full driving licence.
SERIOUS13	=	perceived seriousness of the offence of driving when having drunk slightly over the legal limit.
SERIOUS14	=	perceived seriousness of the offence of driving when having drunk a lot over the legal limit.
SERIOUS15	=	perceived seriousness of the offence of not stopping at pedestrian crossings when someone is trying to cross.

All variables were measured on a five-point scale ranging from (1) not very serious to (5) very serious. A full description of the above variables and their meanings are held in Appendix C2 under the 'Driving Offences' Section.

Table 16c. RESULTS OF 'PERCEIVED LIKELIHOOD OF DETECTION'
RELIABILITY ANALYSIS.

<u>VARIABLE</u>	<u>Scale Mean If Variable Was Deleted.</u>	<u>Scale Variance If Variable Was Deleted.</u>	<u>Corrected Variable- Total Correlation</u>	<u>ALPHA If Item Deleted</u>
DETECT1	31.4393	43.6260	0.2531	0.7579
DETECT2	31.7570	40.9781	0.3491	0.7491
DETECT3	31.0748	40.1076	0.5966	0.7215
DETECT4	32.6916	44.3851	0.2796	0.7536
DETECT5	31.2897	41.2455	0.3578	0.7472
DETECT6	31.1308	41.6431	0.3829	0.7435
DETECT7	31.8037	41.7441	0.4639	0.7356
DETECT8	32.0374	40.0363	0.4615	0.7339
DETECT9	31.9346	40.5712	0.4627	0.7341
DETECT10	32.4486	42.2308	0.3939	0.7424
DETECT11	30.9065	40.9534	0.4442	0.7364
BRETH2	30.8318	42.0280	0.3261	0.7507

N. of Items = 12
N. of Cases = 107

ALPHA = 0.7587

Variable Label.

DETECT1 = the perceived likelihood of detection for speeding in town.
DETECT2 = the perceived likelihood of detection for speeding on the motorway.
DETECT3 = the perceived likelihood of detection for driving dangerously.
DETECT4 = the perceived likelihood of detection for driving without insurance.
DETECT5 = the perceived likelihood of detection for driving while on drugs.
DETECT6 = the perceived likelihood of detection for parking on yellow lines.
DETECT7 = the perceived likelihood of detection for overtaking other cars dangerously.
DETECT8 = the perceived likelihood of detection for not wearing a seat-belt in the front seat of a car.
DETECT9 = the perceived likelihood of detection for driving through red traffic lights just after they have turned red.
DETECT10 = the perceived likelihood of detection for driving without a full driving licence.

DETECT11 = the perceived likelihood of detection for racing other cars on public roads.
 BRETH2 = the perceived likelihood of detection for driving in town on a Friday night between 10pm and 12am when having drunk over the legal limit.

All variables were measured on a five-point scale ranging from (1) low to (5) high. A full description of the above variables and their meanings are held in Appendix C2 under the 'Driving Offences' Section.

2) RELIABILITY ANALYSIS ON 'ATTITUDES TOWARDS THE POLICE' VARIABLES.

The table below provides full details of the reliability analysis used to produce the meta-variable 'ATTITUDES TOWARDS THE POLICE'.

Table 17b. RESULTS OF 'ATTITUDES TOWARDS THE POLICE' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
LIKEPOL	8.9600	3.9581	0.6027	0.3940
TRAFFICP	8.5360	4.0572	0.4645	0.5119
PICKYD	10.1520	6.4848	0.1506	0.6932
GOODJOB	8.8560	4.6726	0.4232	0.5431

N. of Items = 4
 N. of Cases = 125

ALPHA = 0.6259

Accepted ALPHA:

ALPHA with
 PICKYD deleted = 0.6932

The above meta-variable was created out of the three component variables LIKEPOLICE, TRAFFICP and GOODJOB.

Variable Labels.

LIKEPOL = attitude towards the statement 'I like the police'.
TRAFFICP = attitude towards the statement 'there should be more traffic police'.
GOODJOB = attitude towards the statement 'the police do a good job'.
PICKYD = attitude towards the statement 'the police always pick on young drivers'.

All variables were measured on a five-point scale ranging from (1) strongly disagree to (5) strongly agree. The variable PICKYD was reversed from its original form to place it in the same direction as the others in the set. A full description of the above variables and their meanings are held in Appendix C2 under the 'Attitudes Towards The Police' Section.

3) RELIABILITY ANALYSES ON 'COMPARATIVE DRIVING SPEED' VARIABLES.

The table below provides full details of the reliability analysis used to produce the meta-variable 'COMPARATIVE DRIVING SPEED'.

Table 18b. RESULTS OF 'COMPARATIVE DRIVING SPEED' RELIABILITY ANALYSIS.

VARIABLE	Scale Mean If Variable Was Deleted.	Scale Variance If Variable Was Deleted.	Corrected Variable- Total Correlation	ALPHA If Item Deleted
HTRAF	30.8352	39.4281	0.5934	0.8911
LTRAF	30.0989	38.8457	0.6680	0.8874
NIGHT	30.4835	37.9858	0.6398	0.8884
DRAIN	31.1319	38.7380	0.6293	0.8891
CLANE	30.2857	35.6063	0.6721	0.8875
DUAL	29.8791	37.9074	0.6491	0.8878
MOTORW	30.0549	38.3636	0.4587	0.9022
TOWN	30.5385	39.3402	0.6483	0.8887
AROAD	30.2308	37.4462	0.7525	0.8823
UNFAM	31.0879	38.3255	0.5674	0.8929
GENERAL	30.2088	37.8781	0.7929	0.8813

N. of Items = 11
N. of Cases = 91
ALPHA = 0.8981

Variable Label.

HTRAF	=	subjects' reported comparative driving speed when in heavy traffic.
LTRAF	=	subjects' reported comparative driving speed when in light traffic.
NIGHT	=	subjects' reported comparative driving speed when at night.
DRAIN	=	subjects' reported comparative driving speed in the rain.
CLANE	=	subjects' reported comparative driving speed on country lanes.
DUAL	=	subjects' reported comparative driving speed on dual carriage-ways.
MOTORW	=	subjects' reported comparative driving speed on motorways.
TOWN	=	subjects' reported comparative driving speed around town.
AROAD	=	subjects' reported comparative driving speed on single-lane A roads.
UNFAM	=	subjects' reported comparative driving speed on unfamiliar roads.
GENERAL	=	subjects' reported general driving speeds in comparison to other drivers.

All variables were measured on a five-point scale ranging from (1) much slower to (5) much faster. A full description of the above variables and their meanings are held in Appendix C2 under the 'Comparative Driving Speed' Section.

4) PRINCIPAL COMPONENT ANALYSIS ON 'GENERAL ATTITUDES TO DRIVING' VARIABLES.

Details are provided here of the principal components analysis that was used to produce the meta-variables RISK MOTIVATION, RECKLESS DRIVING, DRIVING CONFIDENCE, ACCIDENT-ANXIETY, ATTITUDES TOWARDS DRINK-DRIVING, PERCEIVED LIKELIHOOD OF AN ACCIDENT, and ATTITUDES TO OTHER DRIVERS.

The table over the page shows the pooled within-groups correlation matrix, (Pearsons' r), for principal components analysis performed on the 20 component variables. In the table below the variables are labelled as numerical items, with their full definitions contained in Appendix C2.

Table 19b. Item Definitions For The Principal Components Analysis On 'General Attitudes To Driving' Variables.

ITEM	VARIABLE NAME	VARIABLE LABEL
1	ANNOY	- attitude towards the statement 'it annoys me to be overtaken'.
2	INFERIOR	- attitude towards the statement 'inferior cars get in the way when I am driving'.
3	MORE	- attitude towards the statement 'I am overtaken more than I overtake'.
4	FNRAE	- attitude towards the statement 'it is fun to race with other drivers'.
5	DCONF	- attitude towards the statement 'most other drivers' appear more confident than I feel'.
6	BUSY	- attitude towards the statement 'the only way to get through busy traffic is to be aggressive'.
7	WORRY	- attitude towards the statement 'the possibility of having a serious accident worries me'.
8	MINOR	- attitude towards the statement 'I never worry about having a minor accident' (this variable was reversed).
9	LIKLY	- attitude towards the statement 'I am likely to have a minor accident in the coming year'.

ITEM	VARIABLE NAME	VARIABLE LABEL
10	SERACC	- attitude towards the statement 'I am likely to have a minor accident in the coming year'.
11	IENJOY	- attitude towards the statement 'I enjoy driving fast on winding country lanes'.
12	BRAKE	- attitude towards the statement 'I find it difficult to stop in time when cars in front brake suddenly'.
13	ACCEL	- attitude towards the statement 'I would rather accelerate than brake to get out of a difficult situation'.
14	NERV	- attitude towards the statement 'I am nervous when overtaking other cars'.
15	GREASY	- attitude towards the statement 'I am confident driving my car on wet greasy roads' (this variable was reversed).
16	SUPERIOR	- attitude towards the statement 'my driving is superior to that of most other drivers'.
17	LESSL	- attitude towards the statement 'I am less likely to have an accident than other drivers'.
18	DDONE	- attitude towards the statement 'the chances of being caught for drink-driving are not very high'.
19	SORRY	- attitude towards the statement 'I feel sorry for people who get 'done' by the police when they were just over the drink-driving limit'.
20	SHORT	- attitude towards the statement 'it is O.K. to drink just over the limit, if you're only driving a short distance'.

Table 19c. Pooled Within-Groups Correlation Matrix
From The PCA On 'General Attitudes Towards
Driving' Variables.

	ANNOY	INFERIOR	MORE	FNRACE	DCONF	BUSY	WORRY
ANNOY	1.00000						
INFERIOR	.34749	1.00000					
MORE	.14412	-.27546	1.00000				
FNRACE	.21312	.28190	-.34432	1.00000			
DCONF	.04075	-.17852	.41620	-.25114	1.00000		
BUSY	.10333	.35898	-.31686	.40702	-.09704	1.00000	
WORRY	.14251	.07434	-.10913	.04592	-.06159	.17242	1.00000
MINOR	.04357	.24665	-.21757	.21121	-.15898	.30171	.23024
LIKLY	-.04716	-.13468	.15957	.01902	.05473	-.09823	-.03843
SERACC	-.02599	-.01220	.12329	-.03733	.01388	-.09169	.12979
IENJOY	.14536	.24001	-.34650	.42284	-.30713	.42604	.17066
BRAKE	.11769	.03371	.10863	-.09393	.21143	.02095	-.10376
ACCEL	.11829	.13161	-.10885	.34050	-.14023	.33749	-.05745
NERV	.15136	-.18511	.36199	-.09417	.42171	-.17740	-.03589
GREASY	-.01179	.06303	-.24550	.13810	-.28190	.19295	.00809
SUPERIOR	.00878	.29174	-.29695	.12345	-.37772	.19544	-.00196
LESSL	-.07796	.14945	-.19749	.08677	-.33987	.03079	-.11217
DDONE	.14068	.18161	-.12451	.27564	-.12190	.23308	.01709
SORRY	.14135	.02048	.00329	.14382	-.05300	.05130	.04050
SHORT	.07838	.13167	-.08217	.17377	-.06676	.28904	.26020
	MINOR	LIKLY	SERACC	IENJOY	BRAKE	ACCEL	NERV
MINOR	1.00000						
LIKLY	-.05686	1.00000					
SERACC	.03870	.47434	1.00000				
IENJOY	.35261	-.10047	.05482	1.00000			
BRAKE	-.04514	.12074	.16171	.06505	1.00000		
ACCEL	.12669	.13319	.05413	.18191	.20389	1.00000	
NERV	-.13466	.07147	.10710	-.12500	.32634	.05074	1.00000
GREASY	.00992	-.05861	-.15055	.10975	-.19976	.15765	-.27181
SUPERIOR	.20503	-.34691	-.13252	.36550	-.01907	.12155	-.15631
LESSL	.01660	-.11206	-.01612	.30135	-.07631	-.07780	-.11619
DDONE	.09625	-.05814	-.14976	.22976	.13571	.08955	-.03487
SORRY	.08584	.21814	.11831	.16134	.13540	.07630	.00078
SHORT	.19850	.06451	.04709	.25530	.31449	.34769	.05757
	GREASY	SUPERIOR	LESSL	DDONE	SORRY	SHORT	
GREASY	1.00000						
SUPERIOR	.34845	1.00000					
LESSL	.27819	.57225	1.00000				
DDONE	.17646	.25823	.26689	1.00000			
SORRY	.07698	.04952	.04199	-.02196	1.00000		
SHORT	.12944	.14742	.05980	.13510	.57500	1.00000	

APPENDIX C2.

**DESCRIPTIONS OF DRIVER QUESTIONNAIRE
VARIABLES USED IN PRINCIPAL COMPONENTS, RELIABILITY
AND DISCRIMINANT FUNCTION ANALYSES.**

DRIVER QUESTIONNAIRE VARIABLE DESCRIPTIONS.

Appendix C2 contains descriptions and explanations of Driver Questionnaire variables used in principal component, reliability and discriminant function analyses.

a) Variable Descriptions For Principal Component and Reliability Analyses.

The variables in each section below are presented firstly as meta-variables, and then as the component variables, and are divided up into the following categories: Driving Offences, Attitudes Towards The Police, Comparative Driving Speed, and General Attitudes Towards Driving.

1) DRIVING OFFENCES.

PERCEIVED SERIOUSNESS OF OFFENCES is a meta-variable comprised of 15 variables concerning subjects' ratings of how serious they perceive certain driving offences to be. The 15 variables are presented below and described individually. All variables were measured on a five-point scale from (1) Not Very Serious to (5) Very Serious.

Subjects were asked, "Below is a list of driving offences that some people commit when driving. How serious do you consider each of them to be? Rate each one on a scale of 1 (not very serious) to 5 (very serious)".

The offences presented to the subjects are as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
SERIOUS1	= going too fast on roundabouts.
SERIOUS2	= parking on double yellow lines.
SERIOUS3	= parking on the pavement.
SERIOUS4	= not indicating when turning right.
SERIOUS5	= failing to give way to other drivers at junctions.

- SERIOUS6 = driving through traffic lights just after they have turned red.
- SERIOUS7 = following the car in front too closely.
- SERIOUS8 = overtaking a car when approaching a bend.
- SERIOUS9 = driving above the speed limit in town.
- SERIOUS10 = driving above the speed limit on motorways.
- SERIOUS11 = turning in a road where U-turns are not allowed.
- SERIOUS12 = driving a car alone without a full driving licence.
- SERIOUS13 = driving when having drunk slightly over the legal limit.
- SERIOUS14 = driving when having drunk a lot over the legal limit.
- SERIOUS15 = not stopping at pedestrian crossings when someone is trying to cross.

PERCEIVED LIKELIHOOD OF DETECTION is a meta-variable comprised of 12 variables concerning subjects' ratings of the perceived likelihood of detection for certain driving offences. The 12 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Low to (5) High.

Subjects were asked "What do you think your chances are of being caught by the police while doing each of the following things? Please circle a number from 1 (LOW) to 5 (HIGH) for each part of the question to indicate your answer".

The behaviours presented to subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
DETECT1	= speeding in town.
DETECT2	= speeding on the motorway.
DETECT3	= driving dangerously.
DETECT4	= driving without insurance.

DETECT5 = driving while on drugs.

DETECT6 = parking on yellow lines.

DETECT7 = overtaking other cars dangerously.

DETECT8 = not wearing a seat-belt in the front seat of a car.

DETECT9 = driving through red traffic lights just after they have turned red.

DETECT10 = driving without a full driving licence.

DETECT11 = racing other cars on public roads.

BRETH2 = driving in town on a Friday night between 10pm and 12am when having drunk over the legal limit.

2) ATTITUDES TOWARDS THE POLICE

One meta-variable relating to drivers attitudes towards the police was produced. The meta-variable label and its' meaning are given below.

ATTITUDES TOWARDS THE POLICE is a meta-variable comprised of 3 variables concerning subjects' ratings of their attitudes towards the police. The 3 variables are presented below and are described individually. Each variable was measured on a five-point scale from 1 (strongly disagree) to 5 (strongly agree).

Subjects were asked, "Please indicate the extent to which you agree or disagree with each of the following statements".

The statements presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
LIKEPOL	= I like the police.
TRAFFICP	= There should be more traffic police.
GOODJOB	= The police do a good job.
PICKYD	= The police always pick on young drivers.

The variable "PKYD" was reversed before inclusion into the

reliability analysis. After the reliability analysis it was excluded from further analyses.

3) COMPARATIVE DRIVING SPEED

One meta-variable relating to drivers' ratings of how fast they would drive compared to other drivers on certain types of roads was produced. The meta-variable label and its' meaning are given below.

COMPARATIVE DRIVING SPEED is a meta-variable comprised of 11 variables concerning subjects' ratings of how fast they would drive compared to other drivers on certain types of roads. The 11 variables are presented below and are described individually. Each variable was measured on a five-point scale from 1 (much slower) to 5 (a lot faster).

Subjects were asked, "Compared with other drivers do you generally drive: (1) much slower (3) about average (5) alot faster ?".

The types of roads presented to the subjects were as follows.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
HTRAF	= in heavy traffic.
LTRAF	= in light traffic.
NIGHT	= at night.
DRAIN	= in rain.
CLANE	= on country lanes.
DUAL	= on dual carriage-ways.
MOTORW	= on motorways.
TOWN	= around town.
AROAD	= on single-lane A roads.
UNFAM	= on unfamiliar roads.
GENERAL	= generally.

4) GENERAL ATTITUDES TOWARDS DRIVING.

RISK MOTIVATION is a meta-variable comprised of 4 variables relating to the enjoyment of fast driving, perception of self-driving skill and accident avoidance, and the perceived likelihood of detection for drink-driving. The 4 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 4 variables in question are presented below.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
IENJOY	=	"I enjoy driving fast on winding country lanes".
SUPERIOR	=	"My driving is superior to that of most other drivers".
LESSL	=	"I am less likely to have an accident than other drivers".
DDONE	=	"The chances of being caught for drink-driving are not very high".

RECKLESS DRIVING is a meta-variable comprised of 3 variables relating to the enjoyment of racing on the roads, aggressive driving and speed. The 3 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 3 variables in question are presented below.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
FNRACE	=	"It is fun to race with other drivers".
BUSY	=	"The only way to get through busy traffic is to be aggressive".
ACCEL	=	"I would rather accelerate than brake to get out of a difficult situation".

DRIVING CONFIDENCE is a meta-variable comprised of 5 variables relating to confidence in driving in terms of overtaking rate, perceived confidence in relation to others, controlled braking and confidence in hazardous conditions. The 5 variables are presented below and are

described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 5 variables in question are presented below.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
MORE	=	"I am overtaken more than I overtake".
DCONF	=	"Most other drivers appear more confident than I feel".
BRAKE	=	"I find it difficult to stop in time when cars in front brake suddenly".
NERV	=	"I am nervous when overtaking other cars".
GREASY	=	"I am confident driving my car on wet greasy roads" (this variable was reversed).

ACCIDENT-ANXIETY is a meta-variable comprised of 2 variables relating to the degree of anxiety about having an accident in the forthcoming year. The 2 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 2 variables in question are presented below.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
WORRY	=	"The possibility of having a serious accident worries me".
MINOR	=	"I never worry about having a minor accident". (this variable was reversed).

ATTITUDES TOWARDS DRINK-DRIVING is a meta-variable comprised of 2 variables relating to attitudes towards drink-driving and offenders. The 2 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 2 variables in question are presented below.

<u>VARIABLE LABEL</u>		<u>VARIABLE DESCRIPTION.</u>
SORRY	=	"I feel sorry for people who get 'done' by the police when they were just over

SHORT = the drink-driving limit.
 "It is O.K. to drink just over the limit, if you're only driving a short distance".

PERCEIVED LIKELIHOOD OF AN ACCIDENT is a meta-variable comprised of 2 variables relating to the perceived likelihood of having an accident in the coming year. The 2 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 2 variables in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
LIKLY =	"I am likely to have a minor accident in the coming year".
SERACC =	"I am likely to have a serious accident in the coming year".

ATTITUDES TOWARDS OTHER DRIVERS is a meta-variable comprised of 2 variables relating to a superior and aggressive attitude towards other road users. The 2 variables are presented below and are described individually. Each variable was measured on a five-point scale from (1) Strongly Disagree to (5) Strongly Agree.

The 2 variables in question are presented below.

<u>VARIABLE LABEL</u>	<u>VARIABLE DESCRIPTION.</u>
ANNOY =	"It annoys me to be overtaken".
INFERIOR =	"Inferior cars get in the way when I am driving".

b) Variable Descriptions For 'Reported Driving Behaviour', 'Perceived Likelihood Of Accident', 'Perceived Seriousness Of An Accident', and 'Attitudes Towards Drink-Driving' Variables.

The variables employed in the discriminant function analyses on 'Reported Driving Behaviour', 'Perceived Likelihood Of An Accident', 'Perceived Seriousness Of An Accident', and 'Attitudes Towards Drink-Driving' are described and explained below.

1) REPORTED DRIVING BEHAVIOURS.

The variables employed in the discriminant function analysis on age and sex by 'Reported Driving Behaviours' are detailed below.

60MPH SPEED LIMIT = Subjects were asked "what is the fastest speed at which you would be prepared to drive on a straight main road with a single lane in each direction with a 60mph speed limit?" Subjects had to provide their answer on a 12-point scale ranging from (1) less than 40mph to (12) 95+mph.

GAP AT 45MPH = Subjects were asked "when following a car travelling at 45mph, how many car lengths would you leave between yourself and the car in front?". Subjects had to provide their answer on an 8-point scale ranging from (1) less than 1, to (8) 7+ cars.

60MPH-COUNTRY LANE = Subjects were asked "What is the fastest speed at which you would be prepared to drive on a winding country lane with a 60mph speed limit?" Subjects had to provide their answer on a 12-point scale ranging from (1) less than 40mph, to (12) 95+mph.

OVERTAKE AT 40MPH = Subjects were asked how likely they would be to overtake a car which they had been following for 1 mile at 40mph, when they saw a straight stretch of road with an oncoming car 400 yards away. Subjects had to answer using a 5-point scale ranging from (1) not very likely to (5) very likely.

CUT-IN-FRONT = Subjects were asked how likely they would be to overtake a car if it would mean that they would have to cut in front of it closely if an oncoming car was to appear. Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

MOTORWAY = Subjects were asked how often did they overtake on the inside on motorways. Subjects had to

answer using a 5- point scale ranging from (1) not very often, to (5) very often.

OVERTAKE NEAR BEND = Subjects were asked how likely they would be to overtake a car in front of them (which they had been following at 40mph for 1 mile, when they could see a straight stretch of road for 350 yards which then terminated in a right hand bend). Subjects had to answer using a 5- point scale ranging from (1) not very likely, to (5) very likely.

2) PERCEIVED LIKELIHOOD OF ACCIDENT-INVOLVEMENT.

The variables employed in the discriminant function analysis on age and sex by 'Perceived Likelihood Of Accident-Involvement' are detailed below.

45MPH IN A 30 LIMIT = Subjects were asked how likely they would be to have an accident when travelling at 45mph along a road which has a 30mph speed limit. Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

CLOSE FOLLOWING DISTANCE = Subjects were asked how likely they would be to have an accident when travelling at 45mph with less than eight car lengths between their car and the one in front. Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

OVERTAKING AT 40MPH = Subjects were asked how likely they would be to have an accident when overtaking a car at 40mph with an oncoming car 400 yards away. Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

CUT-IN = Subjects were asked how likely they would be to have an accident when engaging in an overtaking manoeuvre that would mean they would have to cut in front of the overtaken car if an oncoming car was to appear. Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

OVERTAKE ON INSIDE = Subjects were asked how likely they would be to have an accident when overtaking on the inside on a motorway. Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

OVERTAKE-BEND = Subjects were asked how likely they would be to have an accident when overtaking a car in front of them (which they had been following at 40mph for 1 mile,

when they could see a straight stretch of road for 350 yards which then terminated in a right hand bend). Subjects had to answer using a 5-point scale ranging from (1) not very likely, to (5) very likely.

3) PERCEIVED SERIOUSNESS OF ACCIDENT-INVOLVEMENT.

The variables employed in the discriminant function analysis on age and sex by 'Perceived Seriousness Of Accident-Involvement' are detailed below.

45MPH = Subjects were asked how serious they thought an accident would be when travelling at 45mph along a road which has a 30mph speed limit. Subjects had to answer using a 5-point scale ranging from (1) not very serious, to (5) very serious.

GAP = Subjects were asked how serious they thought an accident would be when travelling at 45mph with less than eight car lengths between their car and the one in front. Subjects had to answer using a 5-point scale ranging from (1) not very serious, to (5) very serious.

40MPH = Subjects were asked how serious they thought an accident would be when overtaking a car at 40mph with an oncoming car 400 yards away. Subjects had to answer using a 5-point scale ranging from (1) not very serious, to (5) very serious.

CUTTING-IN = Subjects were asked how serious they thought an accident would be when overtaking a car when it would mean they would have to cut in front of the overtaken car if an oncoming car was to appear. Subjects had to answer using a 5-point scale ranging from (1) not very serious, to (5) very serious.

MOTORWAY-OVERTAKE = Subjects were asked how serious an accident would be when overtaking on the inside on a motorway. Subjects had to answer using a 5-point scale ranging from (1) not very serious, to (5) very serious.

BEND-OVERTAKE = Subjects were asked how serious they thought an accident would be when overtaking a car (which they had been following at 40mph for 1 mile, when they could see a straight stretch of road for 350 yards which then terminated in a right hand bend). Subjects had to answer using a 5-point scale ranging from (1) not very serious, to (5) very serious.

4) ATTITUDES TOWARDS DRINK-DRIVING.

The variables employed in the discriminant function analyses on age and sex by 'Attitudes Towards Drink-Driving' are described and explained below.

Subjects were required to rate the following two statements from (1) 'less likely' to (5) 'more likely'.

DD-LIKELIHOOD = Compared to this time last year, how likely are you to drink over the legal limit and drive?

AVERAGE DRIVER-DD = Compared to this time last year, how likely is the average driver to drink over the legal limit and drive?

Subjects were required to answer the following two questions on the scale (1) less often, (2) 1-3 times a month, (3) 1-2 times a week, (4) 3-5 times a week, (5) 6-7 times a week, (6) more often.

HOME = Generally speaking, how often do you have an alcoholic drink at home.

AWAY = Generally speaking, how often do you have an alcoholic drink away from home.

For the variable 'INTEND TO DRIVE' subjects were asked how much they would drink on any single occasion if they were intending to drive. Subjects were asked to state the amount in terms of pints of beer, glasses of wine or pub measures of drinks, such as bacardi, whisky, gin etc.

For the variable 'LOOK OUT FOR POLICE' subjects were asked "To what extent are you on the lookout for police cars when driving after a few drinks". Subjects were asked to provide their answer on a scale from (1) 'never' to (5) 'always'.

For the variable '12 MONTHS' subjects were asked "In the last 12 months, how often have you driven when you thought you might have drunk over the legal limit?" Subjects were asked to provide their answer on a scale from (1) 'never', (2) 'once or twice', (3) '3 to 5 times', (4) '6 to 10 times', (5) 'about once a month', (6) 'about once a week', (7) 'more often'.

Subjects were asked how much the following people (a) "yourself" (the variable 'OWN LEGAL LIMIT'), (b) "the average man" (the variable 'AVERAGE MAN LEGAL LIMIT'), and (c) "the average woman" (the variable 'AVERAGE WOMAN LEGAL

LIMIT'), can drink without exceeding the legal limit.

Subjects were asked how much the following people (a) "yourself" (the variable 'NOT AFFECT 1'), (b) "the average man" (the variable 'NOT AFFECT 2'), and (c) "the average woman" (the variable 'NOT AFFECT 3'), can drink on an average occasion without it affecting their driving.

APPENDIX C3.

**THE EXAMINATION OF GROUP DIFFERENCES ACROSS
DRIVING OFFENCE, BEHAVIOUR AND ATTITUDE VARIABLES.**

**DETAILS OF DISCRIMINANT FUNCTION ANALYSES
ON THE DRIVER QUESTIONNAIRE DATA.**

THE EXAMINATION OF GROUP DIFFERENCES ACROSS
DRIVING OFFENCE, BEHAVIOUR AND ATTITUDE VARIABLES:

DETAILS OF DISCRIMINANT FUNCTION ANALYSES

CONTENTS.

- 1) Contravention of speed limits.
- 2) Perceived importance of car features.
- 3) Reported driving behaviours.
- 4) Attitudes towards risk-taking and driving.
- 5) Perceived likelihood of an accident when engaging in certain driving behaviours.
- 6) Perceived seriousness of an accident when engaging in certain driving behaviours.
- 7) Seriousness of driving offences, likelihood of detection, and attitudes towards the police.
- 8) Attitudes towards drink-driving.

EXAMINATION OF ASSUMPTIONS.

A summary of the examination for univariate and multivariate outliers, and of the assumptions of normality, linearity and homoscedasticity for all the following discriminant function analyses is presented below.

An exploratory scatterplot of the residuals versus the predicted scores for each discriminant function analysis, indicated that the assumptions of normality, linearity and homoscedasticity were not violated. An initial inspection of the correlation matrices formed between the variables indicated that there were no strong inter-correlations between any of the variables. Thus no variables had to be excluded due to problems of multicollinearity (Tabachnick and Fidell, 1989). Univariate outliers were tested using the SPSS 'Frequencies' command: using this method no univariate outliers were identified ($p < 0.001$) and so no cases had to be excluded from future analyses. Multivariate outliers were tested among the independent variables using Mahalanobis's distance: using this procedure no multivariate outliers were identified ($p < 0.001$) and as such no cases had to be excluded from future analyses.

1) Contravention of Speed Limits.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 121 complete cases were left for analysis. This gave a subject to variables ratio of 24.2: 1.

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p = 0.1584$, with a chi-square of 14.332 (degrees of freedom = 10). Only the means and univariate analyses will be presented.

Table 20a. Means and Standard Deviations For Age Groups On 'Contravention of Speed Limit' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on a five-point scale, ranging from 1 (never) to 5 (always).

Variable	Age Group 1 (n=52)		Age Group 2 (n=34)	
	Mean	S.D	Mean	S.D
LIMIT30	3.354	1.426	3.640	1.319
LIMIT40	2.790	1.243	3.240	1.451
LIMIT50	2.209	1.161	2.680	1.375
LIMIT60	2.032	1.254	2.680	1.573
LIMIT70	1.903	1.327	2.240	1.362

Variable	Age Group 3 (n=35)	
	Mean	S.D
LIMIT30	4.210	1.272
LIMIT40	3.684	1.293
LIMIT50	3.052	1.471
LIMIT60	2.578	1.538
LIMIT70	2.263	1.661

Table 20b. Univariate F-Tests with 2 and 118 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
LIMIT30	0.94762	2.847	0.0626
LIMIT40	0.93221	3.745	0.0269
LIMIT50	0.93412	3.632	0.0299
LIMIT60	0.95421	2.471	0.0895
LIMIT70	0.98486	0.792	0.4558

b) By Sex:

A direct discriminant function analysis was also performed on sex, by reported contravention of speed limits. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 112 complete cases were left for analysis. This gave a subject to variables ratio of 22.4: 1.

Table 20d. Means and Standard Deviations For Males and Females On 'Contravention of Speed Limit' Variables.

In the tables below the means and standard deviations are presented for males and females by each variable.

Variable	Males (n=59)		Females (n=53)	
	Mean	S.D	Mean	S.D
LIMIT30	3.915	1.276	3.264	1.456
LIMIT40	3.423	1.328	2.735	1.242
LIMIT50	2.949	1.331	1.981	1.028
LIMIT60	2.779	1.532	1.773	1.012
LIMIT70	2.525	1.611	1.528	0.845

Table 20e. Univariate F-Tests with 1 and 110 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
LIMIT30	0.94538	6.355	0.0131
LIMIT40	0.93257	7.954	0.0057
LIMIT50	0.85781	18.23	0.0000
LIMIT60	0.87018	16.41	0.0001
LIMIT70	0.87129	16.25	0.0001

Table 20f. Canonical Discriminant Functions

	Function 1
Eigenvalue	0.18723
Canonical Correl.	0.3971224
% of variance*	100.00
Wilks Lambda	0.8422938
Chi-Square	18.450
Degrees of Freedom	5
Significance	0.0024

* indicates the percent of variance in the solution accounted for by each function.

Table 20g. Group Centroids

Group Centroids	Function 1
Males	0.40644
Females	-0.45245

Table 20h. Standardized Canonical Discriminant Function Coefficients.

(only values over 0.5 will be accepted).

Variable	Function 1
LIMIT30	0.19193
LIMIT40	-0.25319
LIMIT50	0.68539
LIMIT60	0.01352
LIMIT70	0.44331

Table 20i. Structure Matrix.

Correlations between discriminating variables and
discriminant functions.

Variable	Function 1
-----	-----
LIMIT50	0.94092
LIMIT60	0.89265
LIMIT70	0.88823
LIMIT40	0.62143
LIMIT30	0.55547
-----	-----

Table 20J. Pooled Within-Groups Correlation Matrix.

	LIMIT30	LIMIT40	LIMIT50	LIMIT60	LIMIT70
-----	-----	-----	-----	-----	-----
LIMIT30	1.000				
LIMIT40	0.820	1.000			
LIMIT50	0.622	0.747	1.000		
LIMIT60	0.452	0.566	0.816	1.000	
LIMIT70	0.312	0.443	0.709	0.848	1.000
-----	-----	-----	-----	-----	-----

Table 20k. Classification Matrix.

Actual Group	N	Predicted Group Females	Membership Males
-----	-----	-----	-----
Females	53	36 67.9%	17 32.1%
Males	59	25 42.4%	34 57.6%
-----	-----	-----	-----

Overall, 62.50% of cases were correctly classified.

2) The Perceived Importance of Car Features.

a) By Age.

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 122 complete cases were left for analysis. This gave a subject to variables ratio of 17.4: 1.

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p=0.2230$, with a chi-square of 17.654 (degrees of freedom = 14). Only the means and univariate analyses will be presented.

Table 21a. Means and Standard Deviations For Age Groups On 'Importance Of Car Features' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on a five-point scale, ranging from 1 (not at all important) to 5 (extremely important).

Variable	Age Group 1 (n=55)		Age Group 2 (n=32)	
	Mean	S.D	Mean	S.D
MANUFACTURER	2.741	1.115	2.625	1.244
FUEL	4.000	0.905	3.666	0.916
PERFORMANCE	3.967	1.023	3.708	0.907
APPEARANCE	3.548	1.002	3.541	1.102
SAFETY	4.387	0.796	3.958	0.858
COST	4.241	0.823	3.916	0.928
SIZE	2.854	0.902	2.791	1.062

Variable	Age Group 3 (n=35)	
	Mean	S.D
MANUFACTURER	2.772	0.922
FUEL	3.681	1.249
PERFORMANCE	4.045	0.785
APPEARANCE	3.909	0.867
SAFETY	4.454	0.738
COST	3.727	1.202
SIZE	3.045	1.090

Table 21b. Univariate F-Tests with 2 and 119 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
MANUFACTURER	0.99763	0.124	0.8830
FUEL	0.97321	1.445	0.2404
PERFORMANCE	0.98399	0.854	0.4287
APPEARANCE	0.97856	1.150	0.3204
SAFETY	0.94650	2.968	0.0558
COST	0.94844	2.854	0.0621
SIZE	0.99183	0.4325	0.6501

b) By Sex:

A direct discriminant function analysis was also performed on sex by 'important factors when buying a car'. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 114 complete cases were left for analysis. This gave a subject to variables ratio of 16.28: 1.

Table 21d. Means and Standard Deviations For Males and Females On 'Importance Of Car Features' Variables.

In the tables below the means and standard deviations are presented for males and females by each variable. All variables were measured on a five-point scale, ranging from 1 (not at all important) to 5 (extremely important).

Variable	Females (n=55)		Males (n=59)	
	Mean	S.D	Mean	S.D
MANUFACTURER	2.690	1.086	2.813	1.106
FUEL	4.072	0.899	3.661	1.027
PERFORMANCE	3.927	1.069	3.864	0.918
APPEARANCE	3.472	1.086	3.779	0.891
SAFETY	4.509	0.766	4.000	0.909
COST	4.127	0.963	4.050	0.936
SIZE	3.072	0.997	2.711	0.910

Table 21e. Univariate F-Tests with 1 and 112 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
MANUFACTURER	0.99683	0.3561	0.5519
FUEL	0.95604	5.150	0.0252
PERFORMANCE	0.99898	0.1139	0.7364
APPEARANCE	0.97617	2.734	0.1010
SAFETY	0.91532	10.36	0.0017
COST	0.99836	0.1844	0.6684
SIZE	0.96487	4.078	0.0458

Table 21f. Canonical Discriminant Functions

	Function 1
Eigenvalue	0.16421
Canonical Correl.	0.3755634
% of variance*	100.00
Wilks Lambda	0.8589521
Chi-Square	16.497
Degrees of Freedom	7
Significance	0.0209

* indicates the percent of variance in the solution accounted for by each function.

Table 21g. Group Centroids

Group Centroids	Function 1
Males	-0.38780
Females	0.41601

Table 21h. Standardized Canonical Discriminant Function Coefficients.

Variables	Function 1
MANUFACTURER	-0.17195
FUEL	0.25639
PERFORMANCE	0.10862
APPEARANCE	-0.35869
SAFETY	0.63758
COST	-0.00740
SIZE	0.45817

Table 21i. Structure Matrix. Correlations between discriminating variables and discriminant functions.

Variables	Function 1
SAFETY	0.75058
FUEL	0.52917
SIZE	0.47087
APPEARANCE	-0.38558
MANUFACTURER	-0.13914
COST	0.10014
PERF	0.07869

Table 21j. Pooled Within-Groups Correlation Matrix.

	MANUF	FUEL	PERF	APPEAR	SAFE	COST	SIZE
MANF	1.000						
FUEL	0.004	1.000					
PERF	0.198	0.042	1.000				
APPEAR	0.161	-0.123	0.391	1.000			
SAFETY	0.035	0.251	0.181	-0.066	1.000		
COST	-0.293	0.247	-0.114	-0.091	-0.151	1.000	
SIZE	0.094	0.144	0.037	0.069	0.021	0.151	1.000

Table 21k. Classification Matrix.

Actual Group	N	Predicted Group Membership Females	Membership Males
Females	55	40 72.7%	15 27.3%
Males	59	23 39.0%	36 61.0%

Overall, 66.67% of cases were correctly classified.

3) Reported Driving Behaviours.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 123 complete cases were left for analysis. This gave a subject to variables ratio of 17.57: 1.

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p=0.0750$, with a chi-square of 22.131 (degrees of freedom = 14). Only the means and univariate analyses will be presented.

Table 22a. Means and Standard Deviations For Age Groups On 'Reported Driving Behaviour' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on a five-point scale, except for 60MPH-COUNTRY LANE, and 60MPH SPEED LIMIT, which were both measured on 12-point scales. Full details of the measurement of the variables employed below, are given in Appendix C2.

Variable	Age Group 1 (n=53)		Age Group 2 (n=34)	
	Mean	S.D	Mean	S.D
60MPH SPEED LIMIT	5.014	2.047	5.846	1.993
GAP AT 45MPH	4.397	1.676	4.423	1.747
60MPH-COUNTRY LANE	3.058	1.819	3.307	1.871
OVERTAKE AT 40MPH	2.073	1.225	2.076	1.440
CUT-IN-FRONT	1.750	1.189	1.538	0.706
MOTORWAY	4.647	3.811	2.076	2.448
OVERTAKE NEAR BEND	1.926	1.538	1.653	1.093

Variable	Age Group 3 (n=36)	
	Mean	S.D
60MPH SPEED LIMIT	5.409	2.174
GAP AT 45MPH	4.227	1.342
60MPH-COUNTRY LANE	3.500	2.632
OVERTAKE AT 40MPH	2.545	1.223
CUT-IN-FRONT	1.681	0.779
MOTORWAY	2.590	3.018
OVERTAKE NEAR BEND	2.454	1.895

Table 22b. Univariate F-Tests with 2 and 120 Degrees of Freedom.

Variable Significance	Wilks Lambda	F	
60MPH SPEED LIMIT	0.97266	1.588	0.2088
GAP AT 45MPH	0.99812	0.1067	0.8989
60MPH-COUNTRY LANE	0.99207	0.4518	0.6377
OVERTAKE AT 40MPH	0.97895	1.215	0.3006
CUT-IN-FRONT	0.99302	0.3971	0.6732
MOTORWAY	0.89362	6.726	0.0017
OVERTAKE NEAR BEND	0.97098	1.689	0.1894

b) By Sex:

A direct discriminant function analysis was also performed on sex by reported driving behaviours. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 122 complete cases were left for analysis. This gave a subject to variables ratio of 17.43: 1.

Table 22d. Means and Standard Deviations For Males and Females On 'Reported Driving Behaviour' Variables.

In the tables below the means and standard deviations are presented for males and females by each variable. All variables were measured on a five-point scale, except for 60MPH-COUNTRY LANE, and 60MPH SPEED LIMIT, which were both measured on 12-point scales. Full details of the measurement of the variables employed below, are given in Appendix C2.

Variable	Females (n=58)		Males (n=64)	
	Mean	S.D	Mean	S.D
60MPH SPEED LIMIT	4.482	1.749	5.031	2.181
GAP AT 45MPH,	4.362	1.672	4.421	1.571
60MPH-COUNTRY LANE	2.379	1.268	4.000	2.253
OVERTAKE AT 40MPH	1.931	1.197	2.312	1.295
CUT-IN-FRONT	1.517	0.681	1.890	1.248
MOTORWAY	4.362	3.805	2.828	3.114
OVERTAKE NEAR BEND	1.896	1.552	2.031	1.490

Table 22e. Univariate F-Tests with 1 and 120 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
60MPH SPEED LIMIT	0.86672	18.45	0.0000
GAP AT 45MPH	0.99965	0.041	0.8390
60MPH-COUNTRY LANE	0.83742	23.30	0.0000
OVERTAKE AT 40MPH	0.97693	2.834	0.0949
CUT-IN-FRONT	0.96711	4.081	0.0456
MOTORWAY	0.95253	5.981	0.0159
OVERTAKE NEAR BEND	0.99801	0.2389	0.6259

Table 22f. Canonical Discriminant Functions

	Function 1
Eigenvalue	0.27335
Canonical Correl.	0.4633279
% of variance*	100.00
Wilks Lambda	0.7853273
Chi-Square	28.153
Degrees of Freedom	7
Significance	0.0002

* indicates the percent of variance in the solution accounted for by each function.

Table 22g. Group Centroids

Group Centroids	Function 1
Males	-0.54469
Females	0.49363

Table 22h. Standardized Canonical Discriminant Function Coefficients.

No.	Variables	Function 1.
1)	60MPH SPEED LIMIT	0.32068
2)	GAP AT 45MPH	0.16733
3)	60MPH-COUNTRY LANE	0.61658
4)	OVERTAKE AT 40MPH	0.04275
5)	CUT-IN-FRONT	0.18061
6)	MOTORWAY	-0.35634
7)	OVERTAKE NEAR BEND	0.06432

Table 22i. Pooled Within-Groups Correlation Matrix.

The table below has used variable numbers (as shown in the previous table) instead of variable names for the sake of brevity.

	1	2	3	4	5	6	7
1	1.000						
2	-0.175	1.000					
3	0.595	-0.127	1.000				
4	0.208	-0.111	0.207	1.000			
5	0.175	-0.049	0.157	0.328	1.000		
6	-0.140	-0.049	-0.040	-0.011	-0.014	1.000	
7	0.010	-0.005	0.074	0.179	0.125	0.162	1.000

Table 22j. Structure Matrix. Correlations between discriminating variables and discriminant functions.

Variables	Function 1
60MPH-COUNTRY LANE	0.84274
60MPH SPEED LIMIT	0.75005
MOTORWAY	-0.42699
CUT-IN-FRONT	0.35274
OVERTAKE AT 40MPH	0.29393
OVERTAKE NEAR BEND	0.08534
GAP AT 45MPH	0.03534

Table 22k Classification Matrix.

Actual Group	N	Predicted Group Females	Membership Males
Females	58	46 79.3%	12 20.7%
Males	64	23 35.9%	41 64.1%

Overall, 71.31% of cases were correctly classified.

4) Attitudes Towards Risk And Driving.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

No cases had to be removed from the analysis due to missing data, so 125 complete cases were included. This gave a subject to variables ratio of 20.83: 1.

Results from the discriminant function analysis showed that the first discriminant function was significant. The significance level for the first function was $p=0.037$, with a chi-square of 22.045 (degrees of freedom = 12).

Table 23b. Means and Standard Deviations For Age Groups On 'Attitudes Towards Risk and Driving' Meta-Variables.

In the tables below the means and standard deviations are presented for each age group by each meta-variable. All variables were measured on a five-point scale (details are given in Appendix C2).

Variable	Age Group 1 (n=55)		Age Group 2 (n=34)	
	Mean	S.D	Mean	S.D
RISK MOTIVATION	2.457	0.800	2.630	0.730
RECKLESS DRIVING	2.000	0.685	2.463	0.908
DRIVING CONFIDENCE	2.645	0.570	2.652	0.680
ATTITUDES TO DRINK-DRIVING	1.542	0.942	1.369	0.677
ATTITUDES TO OTHER DRIVERS	2.242	0.942	1.978	0.775
COMPARATIVE DRIVING SPEED	2.958	0.675	3.086	0.388

Variable	Age Group 3 (n=36)	
	Mean	S.D
RISK MOTIVATION	2.784	0.653
RECKLESS DRIVING	2.172	0.804
DRIVING CONFIDENCE	2.793	0.603
ATTITUDES TO DRINK-DRIVING	1.344	0.720
ATTITUDES TO OTHER DRIVERS	2.379	0.830
COMPARATIVE DRIVING SPEED	3.156	0.684

Table 23c. Univariate F-Tests with 2 and 122 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
RISK MOTIVATION	0.96651	1.455	0.2392
RECKLESS DRIVING	0.95150	2.141	0.1239
DRIVING CONFIDENCE	0.98559	0.614	0.5436
ATTITUDES TO DRINK-DRIVING	0.98727	0.542	0.5837
ATTITUDES TO OTHER DRIVERS	0.96804	1.387	0.2556
COMPARATIVE DRIVING SPEED	0.98067	0.828	0.4406

Table 23d. Canonical Discriminant Functions

	Function 1	Function 2
Eigenvalue	0.18164	0.10915
Canonical Correl.	0.3920703	0.3136983
% of variance*	62.46	100.00
Wilks Lambda	0.7630013	0.9015934
Chi-Square	22.045	8.4427
Degrees of Freedom	12	5
Significance	0.037	0.1335

* indicates the cumulative percent of variance in the solution accounted for by each function.

Table 23e. Group Centroids

Group Centroids	Function 1	Function 2
17 years	-0.50771	-0.04092
18 years	0.40463	-0.44143
19 years	0.29184	0.39948

Table 23f. Structure Matrix.

Correlations between discriminating variables and discriminant functions.

Variables	Function 1	Function 2
RECKLESS DRIVING	0.45009	-0.36040
RISK MOTIVATION	0.36516	0.30912
COMPARATIVE DRIVING SPEED	0.29996	0.17556
ATTITUDES TO DRINK-DRIVING	-0.25880	-0.08197
ATTITUDES TO OTHER DRIVERS	-0.10368	0.53345
DRIVING CONFIDENCE	0.16008	0.30211

Table 23g. Rotated Standardized Canonical Discriminant Function Coefficients.

No.	Variables	Function 1	Function 2
1)	RISK MOTIVATION	0.54912	0.52023
2)	RECKLESS DRIVING	0.61549	-0.71633
3)	DRIVING CONFIDENCE	0.76131	0.50719
4)	ATTITUDES TO DRINK-DRIVING	-0.62314	-0.27586
5)	ATTITUDES TO OTHERS	-0.62119	0.70183
6)	COMPARATIVE DRIVING SPEED	0.58311	0.17545

Table 23h. Pooled Within-Groups Correlation Matrix.

The table below has used variable numbers (as shown in the previous table) instead of variable names, for the sake of brevity.

	1	2	3	4	5	6
1)	1.000					
2)	0.325	1.000				
3)	-0.257	-0.205	1.000			
4)	0.334	0.242	0.176	1.000		
5)	0.268	0.415	-0.114	0.152	1.000	
6)	0.321	0.378	-0.506	-0.014	0.508	1.000

Table 23i. Classification Matrix.

Actual Group	N	Predicted Group Membership		
		17 years	18 years	19 years
17 years	55	39 70.9%	5 9.1%	11 20.0%
18 years	34	13 38.2%	11 32.4%	10 29.4%
19 years	36	15 41.7%	5 13.9%	16 44.4%

Overall, 51.72% of cases were correctly classified.

b) By Sex:

A direct discriminant function analysis was also performed on sex by attitudes towards risk and driving. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 124 complete cases were left for analysis. This gave a subject to variables ratio of 20.6: 1.

Table 23k. Means and Standard Deviations For Males and Females On 'Attitudes Towards Risk and Driving' Variables.

In the tables below the means and standard deviations are presented for males and females by each meta-variable. All variables were measured on a five-point scale (details are given in Appendix C2).

Variable	Females (n=59)		Males (n=65)	
	Mean	S.D	Mean	S.D
RISK MOTIVATION	2.225	0.674	2.934	0.637
RECKLESS DRIVING	1.891	0.672	2.391	0.861
DRIVING CONFIDENCE	2.970	0.553	2.452	0.558
ATTITUDES TO DRINK-DRIVING	1.312	0.722	1.521	0.868
ATTITUDES TO OTHER DRIVERS	2.087	0.706	2.303	0.974
COMPARATIVE DRIVING SPEED	2.734	0.542	3.343	0.539

Table 23L. Univariate F-Tests with 1 and 122 Degrees of Freedom.

Variable Significance	Wilks Lambda		F
RISK MOTIVATION	0.76043	26.46	0.0000
RECKLESS DRIVING	0.90408	8.912	0.0037
DRIVING CONFIDENCE	0.83676	16.39	0.0001
ATTITUDES TO DRINK-DRIVING	0.98464	1.311	0.2556
ATTITUDES TO OTHER DRIVERS	0.98356	1.404	0.2394
COMPARATIVE DRIVING SPEED	0.75695	26.97	0.0000

Table 23m. Canonical Discriminant Functions

	Function 1
Eigenvalue	0.72210
Canonical Correl.	0.6475447
% of variance*	100.00
Wilks Lambda	0.5806858
Chi-Square	44.027
Degrees of Freedom	6
Significance	0.0000

* indicates the percent of variance in the solution accounted for by each function.

Table 23n. Group Centroids

Group Centroids	Function 1
Males	0.78314
Females	-0.90061

Table 23p. Structure Matrix.

Correlations between discriminating variables and discriminant functions.

Variables	Function 1
COMPARATIVE DRIVING SPEED	0.66683
RISK MOTIVATION	0.66051
DRIVING CONFIDENCE	-0.51976
RECKLESS DRIVING	0.38330
ATTITUDE TO OTHER DRIVERS	0.15214
ATTITUDE TO DRINK-DRIVING	0.14699

Table 23q. Standardized Canonical Discriminant Function Coefficients.

No.	Variables	Function 1
1)	RISK MOTIVATION	0.58121
2)	RECKLESS DRIVING	0.14571
3)	DRIVING CONFIDENCE	-0.29816
4)	ATTITUDES TO DRINK-DRIVING	0.14839
5)	ATTITUDES TO OTHER DRIVERS	-0.40996
6)	COMPARATIVE DRIVING SPEED	0.66858

Table 23r. Pooled Within-Groups Correlation Matrix.

The table below has used variable numbers (as shown in the previous table) instead of variable names, for the sake of brevity.

	1	2	3	4	5	6
1)	1.000					
2)	0.198	1.000				
3)	-0.048	-0.100	1.000			
4)	0.278	0.175	0.233	1.000		
5)	0.227	0.325	-0.058	0.123	1.000	
6)	0.132	0.298	-0.355	-0.103	0.518	1.000

Table 23s. Classification Matrix.

Actual Group	N	Predicted Group Membership	
		Females	Males
Females	59	49 83.1%	10 16.9%
Males	65	11 16.9%	54 83.1%
Ungrouped Cases	1	0 0.0%	1 100.0%

Overall, 82.56% of cases were correctly classified.

5) The Perceived Likelihood Of An Accident While Undertaking Certain Driving Behaviours and Manoeuvres.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

Some cases had to be removed from the analysis due to missing data, so 83 complete cases were included. This gave a subject to variables ratio of 13.8: 1.

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p=0.8159$, with a chi-square of 7.596 (degrees of freedom = 12). Only the means and univariate analyses will be presented.

Table 24a. Means and Standard Deviations For Age Groups On 'The Perceived Likelihood Of Accident' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on a five-point scale, ranging from 1 (not very likely) to 5 (very likely).

Variable	Age Group 1 (n=30)		Age Group 2 (n=26)	
	Mean	S.D	Mean	S.D
45MPH IN A 30 LIMIT	2.900	0.994	2.577	0.987
CLOSE FOLLOWING DISTANCE	1.733	0.739	1.923	1.093
OVERTAKING AT 40MPH	3.100	1.155	3.231	1.305
CUT-IN	3.266	0.944	3.385	1.134
OVERTAKE ON INSIDE	3.266	0.907	2.885	1.423
OVERTAKE-BEND	3.533	1.074	3.731	1.218

Variable	Age Group 3 (n=27)	
	Mean	S.D
45 MPH IN A 30 LIMIT	2.666	0.961
CLOSE FOLLOWING DISTANCE	1.852	0.662
OVERTAKING AT 40 MPH	2.963	0.979
CUT-IN	3.407	0.931
OVERTAKE ON INSIDE	3.259	1.195
OVERTAKE-BEND	3.482	1.014

Table 24b. Univariate F-Tests with 2 and 80 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
45MPH IN A 30 LIMIT	0.97990	0.8205	0.4439
CLOSE FOLLOWING DISTANCE	0.99101	0.3630	0.6967
OVERTAKING AT 40MPH	0.99114	0.3578	0.7004
CUT-IN	0.99594	0.1631	0.8498
OVERTAKE ON THE INSIDE	0.97760	0.9165	0.4041
OVERTAKE-BEND	0.99065	0.3774	0.6869

b) By Sex:

A direct discriminant function analysis was also performed on sex by the perceived likelihood of an accident while undertaking certain driving behaviours and manoeuvres. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 82 complete cases were left for analysis. This gave a subject to variables ratio of 13.7: 1.

Results from the discriminant function analysis showed that the discriminant function was not significant. The

significance level for the discriminant function was $p=0.1083$ with a chi-square of 10.412 (degrees of freedom = 6).

Table 24c. Means and Standard Deviations For Males and Females On 'Perceived Likelihood Of Accident' Variables.

In the tables below the means and standard deviations are presented for males and females by each variable. All variables were measured on a five-point scale, ranging from 1 (not very likely) to 5 (very likely).

Variable	Females (n=34)		Males (n=48)	
	Mean	S.D	Mean	S.D
45MPH IN A 30 LIMIT	3.088	0.933	2.479	0.945
CLOSE FOLLOWING DISTANCE	1.882	0.879	1.792	0.824
OVERTAKING AT 40MPH	3.235	1.182	3.042	1.091
CUT-IN	3.500	0.961	3.250	1.021
OVERTAKE ON INSIDE	3.176	1.058	3.146	1.271
OVERTAKE-BEND	3.823	1.114	3.417	1.068

Table 24d. Univariate F-Tests with 1 and 80 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
45MPH IN A 30 LIMIT	0.90546	8.353	0.0050
CLOSE FOLLOWING DISTANCE	0.99716	0.2279	0.6344
OVERTAKING AT 40MPH	0.99274	0.5850	0.4466
CUT-IN	0.98459	1.252	0.2666
OVERTAKE ON INSIDE	0.99983	0.1323E-01	0.9087
OVERTAKE-BEND	0.96635	2.786	0.0990

6) The Perceived Seriousness Of Accident-Involvement
While Engaging In Certain Driving Behaviours.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here. Some cases had to be removed from the analysis due to missing data, so 79 complete cases were included. This gave a subject to variables ratio of 13.2: 1.

Table 25a. Means and Standard Deviations For Age Groups
On 'Perceived Seriousness Of
Accident-Involvement' Variables.

In the tables below the means and standard deviations are presented for each age group by each variable. All variables were measured on a five-point scale, ranging from 1 (not very serious) to 5 (very serious).

Variable	Age Group 1 (n=27)		Age Group 2 (n=24)	
	Mean	S.D	Mean	S.D
45MPH	3.807	0.981	3.625	0.923
GAP	2.307	0.884	2.416	1.017
40MPH	4.346	0.845	4.416	0.717
CUTTING-IN	3.885	0.908	4.000	0.885
MOTORWAY-OVERTAKE	4.115	1.033	4.208	0.658
BEND-OVERTAKE	4.423	0.757	4.166	0.816

Variable	Age Group 3 (n=28)	
	Mean	S.D
45MPH	3.428	0.959
GAP	2.464	1.201
40MPH	4.000	1.018
CUTTING-IN	3.857	0.932
MOTORWAY-OVERTAKE	3.892	1.286
BEND-OVERTAKE	3.964	0.999

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p=0.5654$, with a chi-square of 10.578 (degrees of freedom = 12). Only the means and univariate analyses have been presented.

Table 25b. Univariate F-Tests with 2 and 76 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
45MPH	0.97095	1.137	0.3262
GAP	0.99711	0.1103	0.8957
40MPH	0.95702	1.706	0.1884
CUTTING-IN	0.99239	0.2912	0.7482
MOTORWAY-OVERTAKE	0.98438	0.6029	0.5498
BEND-OVERTAKE	0.95459	1.808	0.1710

b) By Sex:

A direct discriminant function analysis was also performed on sex by perceived seriousness of accidents through certain driving behaviours and manouvres. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here. After the removal of cases with missing data from the analysis, 78 complete cases were left for analysis. This gave a subject to variables ratio of 13.1: 1.

Results from the discriminant function analysis showed that the significance level for the discriminant function was $p=0.1888$ with a chi-square of 8.739 (degrees of freedom = 6).

Table 25c. Means and Standard Deviations For Males and Females On 'Perceived Seriousness Of Accident-Involvement' Variables.

In the tables below the means and standard deviations are presented for males and females by each variable. All variables were measured on a five-point scale, ranging from 1 (not very serious) to 5 (very serious).

Variable	Females (n=32)		Males (n=46)	
	Mean	S.D	Mean	S.D
45MPH	3.871	0.991	3.456	0.911
GAP	2.483	1.028	2.347	1.058
40MPH	4.129	0.991	4.347	0.795
CUTTING-IN	3.935	0.963	3.913	0.865
MOTWORWAY-OVERTAKE	4.097	1.012	4.087	1.029
BEND-OVERTAKE	4.129	0.991	4.239	0.794

Table 25d. Univariate F-Tests with 1 and 76 Degrees of Freedom.

Variable	Wilks Lambda	F	Significance
45MPH	0.95293	3.754	0.0564
GAP	0.99473	0.4029	0.5275
40MPH	0.98408	1.229	0.2711
CUTTING-IN	0.99292	0.5423	0.4638
MOTORWAY-OVERTAKE	0.99986	0.1079E-01	0.9176
BEND-OVERTAKE	0.99577	0.3228	0.5716

7) Attitudes Towards Driving Offences and The Police.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 123 complete cases were included. This gave a subject to variables ratio of 41: 1.

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p=0.0751$, with a chi-square of 11.462 (degrees of freedom = 6). Due to the lack of significance only the means and univariate analyses will be presented.

Table 26a. Means and Standard Deviations For Age Groups On 'Driving Offence' and 'Police' Variables.

In the tables below the means and standard deviations are presented for each age group by each meta-variable. All variables were measured on a five-point scale (full details are given in Appendix C2).

Variable	Age Group 1 (n=53)		Age Group 2 (n=34)	
	Mean	S.D	Mean	S.D
SERIOUSNESS OF OFFENCES	3.568	0.552	3.832	0.532
PERCEIVED LIKELIHOOD OF DETECTION	2.984	0.563	2.994	0.822
ATTITUDES TOWARDS THE POLICE	3.462	0.815	3.634	0.990

Variable	Age Group 3 (n=36)	
	Mean	S.D
SERIOUSNESS OF OFFENCES	3.557	0.533
PERCEIVED LIKELIHOOD OF DETECTION	3.012	0.571
ATTITUDES TOWARDS THE POLICE	3.222	0.599

Table 26b. Univariate F-Tests with 2 and 120 Degrees of Freedom.

Variable	Wilks Lambda	F	Signif.
SERIOUSNESS OF OFFENCES	0.94671	2.702	0.0722
PERCEIVED LIKELIHOOD OF DETECTION	0.99970	0.014	0.9859
ATTITUDES TOWARDS THE POLICE	0.91440	4.493	0.0136

b) By Sex:

A direct discriminant function analysis was also performed on sex by the perceived seriousness of driving offences, perceived likelihood of detection, and attitudes towards the police. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 122 complete cases were left for analysis. This gave a subject to variables ratio of 40.66: 1.

Results from the discriminant function analysis showed that the discriminant function was not significant, with $p=0.3284$ with a chi-square of 3.4419 (degrees of freedom = 3).

Table 26c. Means and Standard Deviations For Males and Females On 'Driving Offence' and 'Police' Variables.

In the tables below the means and standard deviations are presented for males and females by each meta-variable. All variables were measured on a five-point scale (full details are given in Appendix C2).

Variable	Females (n=57)		Males (n=65)	
	Mean	S.D	Mean	S.D
SERIOUSNESS OF OFFENCES	3.735	0.536	3.560	0.551
PERCEIVED LIKELIHOOD OF DETECTION	3.168	0.740	2.843	0.500
ATTITUDES TOWARDS THE POLICE	3.433	0.868	3.446	0.791

Table 26d. Univariate F-Tests with 1 and 120 Degrees of Freedom.

Variable	Wilks	Lambda	F	Signif.
SERIOUSNESS OF OFFENCES	0.97443		2.519	0.1158
PERCEIVED LIKELIHOOD OF DETECTION	0.98650		1.313	0.2546
ATTITUDES TOWARDS THE POLICE	0.99996		0.004	0.9493

On the basis of the variables included in the analysis it was not possible to significantly discriminate between the sexes.

8) Attitudes Towards Drink-Driving.

a) By Age:

Details Of The Discriminant Function Analysis:

Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

The variables HOME, AWAY were measured on a five-point scale ranging from less often, 1-3 times a month, 1-2 times a week, 3-5 times a week, 6-7 times a week, to more often. The variables DD-LIKELIHOOD and AVERAGE DRIVER -DD were measured on five-point scales ranging from less likely (1) to more likely (5), and the variable LOOK OUT FOR POLICE from never (1) to always (5). The variables INTEND TO DRIVE, OWN LEGAL LIMIT, AVERAGE MAN LEGAL LIMIT, AVERAGE WOMAN LEGAL LIMIT, NOT AFFECT 1, NOT AFFECT 2 and NOT AFFECT 3 were measured in units of alcohol. The variable 12 MONTHS was measured on a seven-point scale ranging from never (1) to more often (7). Full details of these variables, their meanings and scales are given in Appendix C2.

After removal of cases with missing data, 123 complete cases were included. This gave a subject to variables ratio of 9.46: 1.

Results from the discriminant function analysis showed that neither of the discriminant functions were significant. The significance level for the first function was $p=0.3864$, with a chi-square of 27.443 (degrees of freedom = 26). Only the means and univariate analyses will be presented.

**Table 27a. Means and Standard Deviations For Age Groups
On 'Attitudes To Drink-Driving' Variables.**

In the tables below the means and standard deviations are presented for each age group by each variable.

Variable	Age Group 1 (n=55)		Age Group 2 (n=33)	
	Mean	S.D	Mean	S.D
HOME	2.167	0.917	2.500	0.946
AWAY	2.79	0.977	2.750	1.164
DD-LIKELIHOOD	1.416	0.717	1.450	0.826
AVERAGE DRIVER-DD	2.167	0.868	2.350	0.670
INTEND TO DRIVE	1.458	1.911	1.050	1.317
POLICE	2.250	1.700	2.550	1.700
12 MONTHS	1.250	1.03	1.500	0.366
OWN LEGAL-LIMIT	3.041	1.805	2.500	1.235
AVERAGE MAN LEGAL-LIMIT	4.120	1.296	3.800	1.239
AVERAGE WOMAN LEGAL-LIMIT	2.292	0.807	2.450	1.395
NOT AFFECT 1	2.417	1.816	1.850	1.694
NOT AFFECT 2	3.042	1.574	2.700	1.894
NOT AFFECT 3	1.625	0.824	1.273	1.600

Variable	Age Group 3 (n=35)	
	Mean	S.D
HOME	2.421	0.768
AWAY	2.789	1.228
DD-LIKELIHOOD	1.736	1.046
AVERAGE DRIVER-DD	2.316	0.749
INTEND TO DRIVE	1.421	1.644
POLICE	2.158	1.344
12 MONTHS	1.368	0.597
OWN LEGAL-LIMIT	2.684	1.827
AVERAGE MAN LEGAL-LIMIT	4.316	1.916
AVERAGE WOMAN LEGAL-LIMIT	2.421	1.071
NOT AFFECT 1	2.105	2.258
NOT AFFECT 2	3.157	2.035
NOT AFFECT 3	1.842	1.214

Table 27b. Univariate F-Tests with 2 and 120 Degrees of Freedom.

Variable	Wilks Lambda	F	Signif.
HOME	0.98441	0.950	0.3896
AWAY	0.98701	0.789	0.4564
DD-LIKELIHOOD	0.99395	0.365	0.6946
AVERAGE DRIVER-DD	0.99669	0.199	0.8196
INTEND TO DRIVE	0.99048	0.576	0.5632
POLICE	0.97586	1.484	0.2308
12 MONTHS	0.98910	0.661	0.5181
OWN LEGAL-LIMIT	0.97538	1.515	0.2240
AVERAGE MAN LEGAL-LIMIT	0.99195	0.487	0.6156
AVERAGE WOMAN LEGAL-LIMIT	0.99187	0.492	0.6128
NOT AFFECT 1	0.99884	0.069	0.9327
NOT AFFECT 2	0.98246	1.071	0.3459
NOT AFFECT 3	0.98299	1.038	0.3572

b) By Sex:

A direct discriminant function analysis was also performed on sex by attitudes towards drink-driving. Information on variables in the analysis and textual descriptions of the results tables that have been provided in the main results section are not repeated here.

After the removal of cases with missing data from the analysis, 122 complete cases were left for analysis. This gave a subject to variables ratio of 9.38: 1.

On the basis of the variables included in the analysis it was not possible to significantly discriminate between the sexes. Results from the discriminant function analysis showed that the discriminant function was not significant, with a chi-square of 20.913 (degrees of freedom = 13), $p=0.0747$.

Table 27c. Means and Standard Deviations For Males and Females on 'Attitudes To Drink-Driving' Variables.

In the tables below the means and standard deviations are presented for males and females by each variable.

Variable	Females (n=59)		Males (n=63)	
	Mean	S.D	Mean	S.D
HOME	2.050	0.825	2.500	0.890
AWAY	2.500	1.000	2.901	1.143
DD-LIKELIHOOD	1.300	0.657	1.595	0.912
AVERAGE DRIVER-DD	2.200	0.834	2.286	0.741
INTEND TO DRIVE	0.550	0.944	1.714	1.785
POLICE	1.800	1.473	2.547	1.611
12 MONTHS	1.050	0.223	1.357	0.879
OWN LEGAL LIMIT	1.650	1.461	3.309	1.473
AV. MAN LEGAL LIMIT	3.950	2.064	4.142	1.159
AV. WOMAN LEGAL LIMIT	1.800	0.895	2.642	1.078
NOT AFFECT 1	1.100	0.912	2.666	2.067
NOT AFFECT 2	2.650	1.725	3.119	1.863
NOT AFFECT 3	1.300	0.923	1.857	1.138

Table 27d. Univariate F-Tests with 1 and 120 Degrees of Freedom.

Variable	Wilks Lambda	F	Signif.
HOME	0.99339	0.799	0.3732
AWAY	0.98795	1.464	0.2287
DD-LIKELIHOOD	0.94043	7.601	0.0067
AVERAGE DRIVER-DD	0.95229	6.012	0.0157
INTEND TO DRIVE	0.96867	3.881	0.0512
POLICE	0.99037	1.167	0.2823
12 MONTHS	0.97409	3.192	0.0765
OWN LEGAL LIMIT	0.98966	1.253	0.2651
AVERAGE MAN LEGAL LIMIT	0.98447	1.894	0.1714
AVERAGE WOMAN LEGAL LIMIT	0.98599	1.705	0.1942
NOT AFFECT 1	0.95575	5.556	0.0200
NOT AFFECT 2	0.97492	3.086	0.0815
NOT AFFECT 3	0.97425	3.172	0.0774

APPENDIX C4.

**THE EXAMINATION OF GROUP DIFFERENCES
ACROSS RATINGS OF SKILL FOR 'SELF' AND 'OTHERS'.**

**DETAILS OF MEANS, STANDARD DEVIATIONS AND ANALYSIS OF
VARIANCE TESTS ON THE DRIVER QUESTIONNAIRE DATA.**

APPENDIX C4.

The table below presents the means and standard deviations associated with the repeated measures analysis of variance tests (detailed in Chapter 4, Section 4.5) performed on a set of eight variables relating to the perception of ones' own and 'others' driving skills in four different skill scenarios. The classification scheme used for the age groups throughout Appendix C4 is: Group 1 = 17 years, Group 2 = 18 years, Group 3 = 19 years.

Table 28b. Cell Means and Standard Deviations For The Eight 'Self' and 'Other' Skill Variables.

Variable: SELF ABILITY 1

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	3.564	.783	53
F	3.542	.833	24
M	3.586	.733	29
AGE GROUP 2	3.519	.693	31
F	3.250	.754	12
M	3.789	.631	19
AGE GROUP 3	3.667	.446	34
F	3.333	.483	21
M	4.000	.408	13
For entire sample	3.576	.697	118

Variable: SELF ABILITY 2

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	3.661	.764	53
F	3.667	.816	24
M	3.655	.721	29
AGE GROUP 2	3.607	.777	31
F	3.583	.793	12
M	3.632	.761	19
AGE GROUP 3	3.652	.527	34
F	3.381	.590	21
M	3.923	.494	13
For entire sample	3.627	.714	118

Variable: SELF ABILITY 3

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	3.179	.928	53
F	3.083	.974	24
M	3.276	.882	29
AGE GROUP 2	3.456	.829	31
F	3.333	.888	12
M	3.579	.769	19
AGE GROUP 3	3.441	.943	34
F	3.190	1.030	21
M	3.692	.855	13
For entire sample	3.322	.914	118

Variable: SELF ABILITY 4

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	3.172	.998	53
F	3.000	1.022	24
M	3.345	.974	29
AGE GROUP 2	3.339	.946	31
F	3.417	.900	12
M	3.263	.991	19
AGE GROUP 3	3.667	.837	34
F	3.333	.966	21
M	4.000	.707	13
For entire sample	3.339	.972	118

Variable: OTHERS ABILITY 1

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	3.086	.845	53
F	3.000	.885	24
M	3.172	.805	29
AGE GROUP 2	3.011	.726	31
F	2.917	.793	12
M	3.105	.658	19
AGE GROUP 3	3.062	.675	34
F	3.048	.590	21
M	3.077	.760	13
For entire sample	3.068	.748	118

Variable: OTHERS ABILITY 2

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	3.117	.919	53
F	2.958	.955	24
M	3.276	.882	29
AGE GROUP 2	3.026	.612	31
F	3.000	.603	12
M	3.053	.621	19
AGE GROUP 3	2.89	.759	43
F	2.857	.655	21
M	2.923	.862	13
For entire sample	3.034	.795	118

Variable: OTHERS ABILITY 3

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	2.833	.831	53
F	2.667	.816	24
M	3.000	.845	29
AGE GROUP 2	2.917	.706	31
F	2.833	.835	12
M	3.000	.577	19
AGE GROUP 3	2.692	.823	34
F	3.000	.775	21
M	2.385	.870	13
For entire sample	2.847	.802	118

Variable: OTHERS ABILITY 4

FACTOR	Mean	Std. Dev.	N
AGE GROUP 1	2.882	.923	53
F	2.625	.970	24
M	3.138	.875	29
AGE GROUP 2	2.985	.888	31
F	2.917	.996	12
M	3.053	.780	19
AGE GROUP 3	2.689	.865	34
F	2.762	.768	21
M	2.615	.961	13
For entire sample	2.873	.892	118

The table below presents the means and standard deviations for the two mean 'self-other' components, associated with the repeated measures analysis of variance tests performed on a set of variables relating to the perception of ones' own and 'others' driving skills in four different skill scenarios.

Table 28c. Means and Standard Deviations For The Two Mean 'Self-Other' Components.

Variable	Mean	S.D	N

Mean ratings for 'self skill' variables.	3.4661	.6585	118
Mean ratings for 'others skill' variables.	2.9563	.6164	120

The table below presents the results of paired t-tests, employed to provide post-hoc comparisons between the four 'skill scenarios', associated with the repeated measures analysis of variance tests performed on a set of variables relating to the perception of ones' own and 'others' driving skills in four different skill scenarios.

The 'skill scenarios' are: SCENARIO 1 (perceiving potential hazards), SCENARIO 2 (avoiding potential hazards), SCENARIO 3 (judging safe gaps in the traffic in which to make manoeuvres), and SCENARIO 4 (judging when it is safe to overtake).

Table 28d. Post Hoc Comparisons Between The Four Skill Scenarios: The Application Of T-Tests.

Paired samples t-test: SCENARIO 1
SCENARIO 2

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SCENARIO 1	119	3.3277	.539	.049
SCENARIO 2	119	3.3319	.542	.050

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr. Prob.	t Value	Degrees of Freedom	2-Tail Prob.
-.0042	.502	.046	.568 .000	-.09	118	.927

Paired samples t-test: SCENARIO 1
SCENARIO 3

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SCENARIO 1	120	3.3292	.536	.049
SCENARIO 3	120	3.0792	.622	.057

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr. Prob.	t Value	Degrees of Freedom	2-Tail Prob.
.2500	.635	.058	.406 .000	4.31	119	.000

Paired samples t-test: SCENARIO 1
SCENARIO 4

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SCENARIO 1	120	3.3292	.536	.049
SCENARIO 4	120	3.1125	.656	.060

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr. Prob.	t Value	Degrees of Freedom	2-Tail Prob.
.2167	.679	.062	.365 .000	3.50	119	.001

Paired samples t-test: SCENARIO 2
SCENARIO 3

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SCENARIO 2	120	3.3250	.545	.050
SCENARIO 3	120	3.0750	.627	.057

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr. Prob.	t Value	Degrees of Freedom	2-Tail Prob.
.2500	.594	.054	.494 .000	4.61	119	.000

Paired samples t-test: SCENARIO 2
SCENARIO 4

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SCENARIO 2	120	3.3250	.545	.050
SCENARIO 4	120	3.1042	.658	.060

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr. Prob.	t Value	Degrees of Freedom	2-Tail Prob.
.2208	.695	.063	.345 .000	3.48	119	.001

Paired samples t-test: SCENARIO 3
SCENARIO 4

Variable	Number of Cases	Mean	Standard Deviation	Standard Error
SCENARIO 3	121	3.0702	.627	.057
SCENARIO 4	121	3.1074	.656	.060

(Difference) Mean	Standard Deviation	Standard Error	2-Tail Corr. Prob.	t Value	Degrees of Freedom	2-Tail Prob.
-.0372	.589	.054	.580 .000	-.69	120	.488

As can be seen from the above table SCENARIO's 1 and 2 were significantly different (at $P \leq 0.01$) from SCENARIO's 3 and 4. There were no significant differences between SCENARIO's 1 and 2, or between SCENARIOs 3 and 4.

APPENDIX D1.

**THE EXAMINATION OF GROUP DIFFERENCES ACROSS VARIABLES
MEASURING THE PERCEIVED SERIOUSNESS OF 15 DRIVING OFFENCES:**

**DETAILS OF MEANS, STANDARD DEVIATIONS AND
ANALYSIS OF VARIANCE AND TUKEY HSD TESTS.**

APPENDIX D1.

The table below indicates that there was a significant multivariate developmental group-sex interaction effect (at the $p < 0.01$ level) when examining all 15 'seriousness of offence' variables simultaneously.

**Table 29ci. Multivariate Test of Significance On
 'Driving Offence Variables' By The
 Interaction Of Developmental Group and Sex.**

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
-----	-----	-----	-----	-----	-----
Wilks	.91049	1.49886	60.00	3698.84	.008

The table below presents details of analysis of variance tests on 'seriousness of offences' variables, by the interaction of developmental group and sex.

**Table 29cii. Analysis Of Variance On 'Seriousness Of
 Offences' By The Interaction Of
 Developmental Group and Sex.**

Variable	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F(4,961)	Sig. of F
-----	-----	-----	-----	-----	-----	-----
OFFENCE1	4.23842	1059.32897	1.05961	1.10003	.96325	.427
OFFENCE2	.23359	848.87862	.05840	.88149	.06625	.992
OFFENCE3	11.97165	1174.65679	2.99291	1.21979	2.45363	.044
OFFENCE4	11.34837	1243.05646	2.83709	1.29082	2.19791	.067
OFFENCE5	5.00939	798.48446	1.25235	.82916	1.51037	.197
OFFENCE6	1.49116	898.81813	.37279	.93335	.39941	.809
OFFENCE7	5.59242	1163.78952	1.39810	1.20850	1.15689	.328
OFFENCE8	7.69370	832.86901	1.92343	.86487	2.22395	.065
OFFENCE9	4.01905	567.99455	1.00476	.58982	1.70351	.147
OFFENCE10	14.65603	1027.17743	3.66401	1.06664	3.43508	.008
OFFENCE11	13.39009	1230.36715	3.34752	1.28030	2.61464	.034
OFFENCE12	4.05369	970.38012	1.01342	1.00766	1.00571	.403
OFFENCE13	5.08038	1083.44537	1.27010	1.12507	1.12890	.341
OFFENCE14	.55757	803.31442	.13939	.83418	.16710	.955
OFFENCE15	1.80917	414.87031	.45229	.43081	1.04987	.380
-----	-----	-----	-----	-----	-----	-----

From the above table it can be seen that there were significant developmental group-sex interaction effects ($p < 0.01$) on only one out of the 15 'offence variables' (driving above the speed limit in town). The means for this variable indicate that the greatest difference was between 17-18 year old male drivers who perceived the lowest seriousness and 17-18 year old male non-drivers and

11-12 year old females who perceived the highest seriousness.

The tables below present the means, standard deviations and details related to Tukey Tests (where appropriate) for the variables measuring the perceived seriousness of 15 driving offences. These variables were employed in analysis of variance tests examining for any developmental group or sex effects across these 15 driving offence variables. All variables were measured on a 5-point scale ranging from 1 (not very serious) to 5 (very serious).

The classification scheme used for the developmental groups throughout this appendix is:

1 = 11-12 years, 2 = 13-14 years, 3 = 15-16 years,
4 = 17-18 years (non-drivers), 5 = 17-18 years (drivers).

1) OFFENCE1: the perceived seriousness of 'not stopping at a pedestrian crossing'.

Table 29d. Group Means and Standard Deviations For The Variable OFFENCE1.

	Mean	Std. Dev.	N
-----	-----	-----	-----
Females	4.176	.975	476
Males	4.028	1.114	495
DEV. GROUP 1	4.266	.992	221
F	4.419	.896	105
M	4.112	1.078	116
DEV. GROUP 2	4.047	1.043	268
F	4.190	.951	121
M	3.905	1.119	147
DEV. GROUP 3	3.968	1.069	220
F	3.974	.995	117
M	3.961	1.154	103
DEV. GROUP 4	4.064	1.097	148
F	4.114	1.038	79
M	4.014	1.157	69
DEV. GROUP 5	4.167	1.051	114
F	4.185	1.047	54
M	4.150	1.055	60
For entire sample	4.091	1.055	971
-----	-----	-----	-----

- 2) OFFENCE2: the perceived seriousness of 'driving too fast on roundabouts'.

Table 29ei. Group Means and Standard Deviations For
The Variable OFFENCE2.

	Mean	Std. Dev.	N
Females	3.712	.879	476
Males	3.494	.989	495
DEV. GROUP 1	4.118	.883	221
F	4.210	.829	105
M	4.026	.937	116
DEV. GROUP 2	3.859	.924	268
F	3.950	.835	121
M	3.769	1.014	147
DEV. GROUP 3	3.574	.922	220
F	3.692	.876	117
M	3.456	.968	103
DEV. GROUP 4	3.553	.922	148
F	3.671	.930	79
M	3.435	.915	69
DEV. GROUP 5	2.910	1.080	114
F	3.037	1.009	54
M	2.783	1.151	60
For entire sample	3.694	1.005	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE2 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29eii. One-Way Analysis Of Variance On OFFENCE2 By Developmental Groups.

Analysis of Variance						
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.	
Between Groups	4	120.9733	30.2433	34.0598	.0000	
Within Groups	1044	927.0191	.8879			
Total	1048	1047.9924				

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	244	4.1107	.8935	.0572	3.9980 To	4.2233
Grp 2	294	3.8163	.9422	.0549	3.7082 To	3.9245
Grp 3	232	3.5905	.9214	.0605	3.4713 To	3.7097
Grp 4	156	3.5705	.9166	.0734	3.4255 To	3.7155
Grp 5	123	2.9431	1.0962	.0988	2.7474 To	3.1388
Total	1049	3.6959	1.0000	.0309	3.6353 To	3.7565

Dev. Group 5 4 3 2 1

Grp 5					
Grp 4	*				
Grp 3	*				
Grp 2	*				
Grp 1	*	*	*	*	*

(*) Denotes pairs of groups significantly different at the p<.05 level

- 3) OFFENCE3: the perceived seriousness of 'parking on double yellow lines'.

Table 29fi. Group Means and Standard Deviations For The Variable OFFENCE3.

	Mean	Std. Dev.	N

Females	2.619	1.028	476
Males	2.536	1.162	495
DEV. GROUP 1	3.060	1.176	221
F	3.267	1.077	105
M	2.853	1.274	116
DEV. GROUP 2	2.678	1.209	268
F	2.587	1.202	121
M	2.769	1.217	147
DEV. GROUP 3	2.493	2.000	220
F	2.598	.872	117
M	2.388	1.122	103
DEV. GROUP 4	2.458	0.968	148
F	2.481	.959	79
M	2.435	.977	69
DEV. GROUP 5	2.200	1.041	114
F	2.167	.986	54
M	2.233	1.095	60
For entire sample	2.635	1.137	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE3 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29fii. One-Way Analysis Of Variance On OFFENCE3 By Developmental Groups.

Analysis of Variance						
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.	
Between Groups	4	67.7304	16.9326	13.5409	.0000	
Within Groups	1044	1305.4974	1.2505			
Total	1048	1373.2278				

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	242	3.0331	1.2012	.0772	2.8810 To	3.1852
Grp 2	296	2.6892	1.2315	.0716	2.5483 To	2.8301
Grp 3	232	2.5129	1.0107	.0664	2.3822 To	2.6437
Grp 4	156	2.4615	.9597	.0768	2.3097 To	2.6133
Grp 5	123	2.2276	1.0387	.0937	2.0422 To	2.4130
Total	1049	2.6416	1.1447	.0353	2.5722 To	2.7109

Dev. Group 5 4 3 2 1					
Grp 5					
Grp 4					
Grp 3					
Grp 2	*				
Grp 1	* * * *				

(*) Denotes pairs of groups significantly different at the p< .05 level

- 4) OFFENCE4: the perceived seriousness of 'parking on the pavement'.

Table 29qi. Group Means and Standard Deviations For The Variable OFFENCE4.

	Mean	Std. Dev.	N
Females	2.798	1.099	476
Males	2.678	1.163	495
DEV. GROUP 1	3.214	1.208	221
F	3.419	1.108	105
M	3.009	1.309	116
DEV. GROUP 2	2.871	1.191	268
F	2.851	1.216	121
M	2.891	1.165	147
DEV. GROUP 3	2.666	1.076	220
F	2.838	1.050	117
M	2.495	1.101	103
DEV. GROUP 4	2.411	.997	148
F	2.329	.970	79
M	2.493	1.024	69
DEV. GROUP 5	2.528	1.126	114
F	2.556	1.110	54
M	2.500	1.142	60
For entire sample	2.792	1.170	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE4 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29gii. One-Way Analysis Of Variance On OFFENCE4 By Developmental Groups.

Analysis of Variance					
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	78.7847	19.6962	14.9195	.0000
Within Groups	1036	1367.6879	1.3202		
Total	1040	1446.4726			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	245	3.2245	1.2325	.0787	3.0694	To 3.3796
Grp 2	292	2.8801	1.1997	.0702	2.7420	To 3.0183
Grp 3	230	2.6957	1.0952	.0722	2.5534	To 2.8379
Grp 4	153	2.4248	1.0176	.0823	2.2623	To 2.5874
Grp 5	121	2.5289	1.1036	.1003	2.3303	To 2.7276
Total	1041	2.8127	1.1793	.0366	2.7410	To 2.8844

Dev. Group 4 5 3 2 1

Grp 4
Grp 5
Grp 3
Grp 2 * *
Grp 1 * * * *

(*) Denotes pairs of groups significantly different at the p< .05 level

- 5) OFFENCE5: the perceived seriousness of 'not indicating when turning right'.

Table 29hi. Group Means and Standard Deviations For The Variable OFFENCE5.

	Mean	Std. Dev.	N
Females	4.091	.862	476
Males	3.951	.948	495
DEV. GROUP 1	4.296	.872	221
F	4.429	.783	105
M	4.164	.960	116
DEV. GROUP 2	4.087	.887	268
F	4.058	.849	121
M	4.116	.925	147
DEV. GROUP 3	3.890	.892	220
F	4.043	.855	117
M	3.738	.928	103
DEV. GROUP 4	4.012	.869	148
F	4.038	.792	79
M	3.986	.947	69
DEV. GROUP 5	3.819	1.089	114
F	3.889	1.160	54
M	3.750	1.019	60
For entire sample	4.048	.925	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE5 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29hii. One-Way Analysis Of Variance On OFFENCE5 By Developmental Groups.

Analysis of Variance					
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	17.8351	4.4588	5.2447	.0003
Within Groups	1042	885.8574	.8502		
Total	1046	903.6925			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	245	4.2204	.9323	.0596	4.1031	To	4.3377
Grp 2	295	4.0814	.9036	.0526	3.9778	To	4.1849
Grp 3	231	3.9134	.8902	.0586	3.7980	To	4.0288
Grp 4	152	4.0000	.8612	.0699	3.8620	To	4.1380
Grp 5	124	3.8306	1.0647	.0956	3.6414	To	4.0199
Total	1047	4.0353	.9295	.0287	3.9790	To	4.0917

Dev. Group 5 3 4 2 1							

Grp 5							
Grp 3							
Grp 4							
Grp 2							
Grp 1 * *							

(*) Denotes pairs of groups significantly different at the p< .05 level

- 6) OFFENCE6: the perceived seriousness of 'failing to give way to other cars at junctions'.

Table 29j. Group Means and Standard Deviations For The Variable OFFENCE6.

	Mean	Std. Dev.	N

Females	3.938	.963	476
Males	3.880	.967	495
DEV. GROUP 1	3.938	1.015	221
F	3.971	1.060	105
M	3.905	.969	116
DEV. GROUP 2	3.786	.960	268
F	3.851	.928	121
M	3.721	.992	147
DEV. GROUP 3	3.790	.921	220
F	3.872	.886	117
M	3.709	.956	103
DEV. GROUP 4	4.006	.942	148
F	4.013	.913	79
M	4.000	.970	69
DEV. GROUP 5	4.024	1.004	114
F	3.981	1.090	54
M	4.067	.918	60
For entire sample	3.883	.969	971

7) OFFENCE7: the perceived seriousness of 'driving through red traffic lights'.

Table 29ki. Group Means and Standard Deviations For The Variable OFFENCE7.

	Mean	Std. Dev.	N

Females	3.933	1.013	476
Males	3.732	1.172	495
DEV. GROUP 1	4.009	1.124	221
F	4.210	.978	105
M	3.810	1.271	116
DEV. GROUP 2	3.908	1.153	268
F	3.917	1.137	121
M	3.898	1.169	147
DEV. GROUP 3	3.658	1.019	220
F	3.744	.939	117
M	3.573	1.099	103
DEV. GROUP 4	3.752	1.009	148
F	3.924	.888	79
M	3.580	1.130	69
DEV. GROUP 5	3.835	1.156	114
F	3.870	1.150	54
M	3.800	1.162	60
For entire sample	3.842	1.109	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE7 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p<0.05$).

Table 29kii. One-Way Analysis Of Variance On OFFENCE7 By Developmental Groups.

Analysis of Variance					
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	15.9379	3.9845	3.2291	.0120
Within Groups	1047	1291.9205	1.2339		
Total	1051	1307.8584			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	246	3.9797	1.1726	.0748	3.8324	To	4.1269
Grp 2	295	3.8881	1.1625	.0677	3.7549	To	4.0213
Grp 3	232	3.6379	1.0227	.0671	3.5056	To	3.7702
Grp 4	155	3.7548	1.0087	.0810	3.5948	To	3.9149
Grp 5	124	3.8306	1.1385	.1022	3.6283	To	4.0330
Total	1052	3.8279	1.1155	.0344	3.7605	To	3.8954

Dev. Group	3	4	5	2	1

Grp 3					
Grp 4					
Grp 5					
Grp 2					
Grp 1		*			

(*) Denotes pairs of groups significantly different at the p< .05 level

- 8) OFFENCE8: the perceived seriousness of 'following the car in front too closely'.

Table 291i. Group Means and Standard Deviations For The Variable OFFENCE8.

	Mean	Std. Dev.	N
Females	3.865	.869	476
Males	3.794	.980	495
DEV. GROUP 1	4.102	.953	221
F	4.248	.830	105
M	3.957	1.075	116
DEV. GROUP 2	3.735	.995	268
F	3.661	1.021	121
M	3.810	.968	147
DEV. GROUP 3	3.715	.909	220
F	3.829	.823	117
M	3.602	.994	103
DEV. GROUP 4	3.815	.828	148
F	3.848	.818	79
M	3.783	.838	69
DEV. GROUP 5	3.779	.874	114
F	3.741	.782	54
M	3.817	.965	60
For entire sample	3.834	.943	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE8 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 291ii. One-Way Analysis Of Variance On OFFENCE8 By Developmental Groups.

Analysis of Variance						
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.	
Between Groups	4	16.7274	4.1819	4.7406	.0009	
Within Groups	1041	918.2975	.8821			
Total	1045	935.0249				

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	242	4.0537	.9860	.0634	3.9289	To 4.1786
Grp 2	293	3.7543	.9971	.0583	3.6396	To 3.8689
Grp 3	232	3.7241	.9125	.0599	3.6061	To 3.8422
Grp 4	156	3.8013	.8302	.0665	3.6700	To 3.9326
Grp 5	123	3.7886	.8801	.0794	3.6315	To 3.9457
Total	1046	3.8279	.9459	.0292	3.7705	To 3.8853

Dev. Group 3 2 5 4 1

Grp 3
Grp 2
Grp 5
Grp 4
Grp 1 * *

(*) Denotes pairs of groups significantly different at the p< .05 level

- 9) OFFENCE9: the perceived seriousness of 'overtaking when approaching a bend'.

Table 29m. Group Means and Standard Deviations For The Variable OFFENCE9.

	Mean	Std. Dev.	N

Females	4.508	.671	476
Males	4.352	.846	495
DEV. GROUP 1	4.473	.793	221
F	4.619	.656	105
M	4.328	.930	116
DEV. GROUP 2	4.329	.781	268
F	4.331	.757	121
M	4.327	.804	147
DEV. GROUP 3	4.359	.752	220
F	4.504	.611	117
M	4.214	.893	103
DEV. GROUP 4	4.454	.741	148
F	4.532	.676	79
M	4.377	.806	69
DEV. GROUP 5	4.536	.691	114
F	4.556	.634	54
M	4.517	.748	60
For entire sample	4.413	.774	971

- 10) OFFENCE10: the perceived seriousness of 'driving above the speed limit in town'.

Table 29n. Group Means and Standard Deviations For The Variable OFFENCE10.

	Mean	Std. Dev.	N

Females	3.450	1.001	476
Males	3.291	1.059	495
DEV. GROUP 1	3.399	1.085	221
F	3.610	1.052	105
M	3.190	1.118	116
DEV. GROUP 2	3.298	1.055	268
F	3.355	1.056	121
M	3.435	1.054	147
DEV. GROUP 3	3.298	1.020	220
F	3.325	.981	117
M	3.272	1.059	103
DEV. GROUP 4	3.545	.943	148
F	3.481	.959	79
M	3.609	.927	69
DEV. GROUP 5	3.216	.998	114
F	3.481	.885	54
M	2.950	1.111	60
For entire sample	3.373	1.042	971

- 11) OFFENCE11: the perceived seriousness of 'driving above the speed limit on motorways'.

Table 29pi. Group Means and Standard Deviations For
The Variable OFFENCE11.

	Mean	Std. Dev.	N

Females	3.724	1.034	476
Males	3.135	1.214	495
DEV. GROUP 1	3.977	1.104	221
F	4.248	.978	105
M	3.707	1.230	116
DEV. GROUP 2	3.598	1.166	268
F	3.843	1.088	121
M	3.354	1.243	147
DEV. GROUP 3	3.329	1.037	221
F	3.521	.952	117
M	3.136	1.121	103
DEV. GROUP 4	3.231	1.154	148
F	3.418	1.008	79
M	3.043	1.300	69
DEV. GROUP 5	3.013	1.204	114
F	3.593	1.237	54
M	2.433	1.170	60
For entire sample	3.490	1.205	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE11 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29pii. One-Way Analysis Of Variance On OFFENCE11
By Developmental Groups.

Analysis of Variance					
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	96.2630	24.0658	17.4335	.0000
Within Groups	1048	1446.6961	1.3804		
Total	1052	1542.9592			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	245	3.9306	1.1662	.0745	3.7839 To 4.0774
Grp 2	296	3.5709	1.1968	.0696	3.4340 To 3.7078
Grp 3	232	3.3362	1.0605	.0696	3.1990 To 3.4734
Grp 4	156	3.2179	1.1601	.0929	3.0345 To 3.4014
Grp 5	124	3.0000	1.3495	.1212	2.7601 To 3.2399
Total	1053	3.4834	1.2111	.0373	3.4101 To 3.5566

Dev. Group	5	4	3	2	1

Grp 5					
Grp 4					
Grp 3					
Grp 2	*	*			
Grp 1	*	*	*	*	

(*) Denotes pairs of groups significantly different
at the p< .05 level

- 12) OFFENCE12: the perceived seriousness of 'turning in a road where U-turns are not allowed'.

Table 29qi. Group Means and Standard Deviations For The Variable OFFENCE12.

OFFENCE 12	Mean	Std. Dev.	N
-----	-----	-----	-----
Females	3.859	.967	476
Males	3.811	1.029	495
DEV. GROUP 1	4.194	.946	221
F	4.276	.872	105
M	4.112	1.020	116
DEV. GROUP 2	3.730	1.088	268
F	3.719	1.090	121
M	3.741	1.086	147
DEV. GROUP 3	3.698	.964	221
F	3.795	.915	117
M	3.602	1.013	103
DEV. GROUP 4	3.814	.869	148
F	3.861	.843	79
M	3.768	.894	69
DEV. GROUP 5	3.741	1.130	114
F	3.648	1.168	54
M	3.833	1.092	60
For entire sample	3.844	1.019	971
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Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE12 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29qii. One-Way Analysis Of Variance On OFFENCE12
By Developmental Groups.

Analysis of Variance					
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	31.2532	7.8133	7.5559	.0000
Within Groups	1041	1076.4638	1.0341		
Total	1045	1107.7170			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	244	4.1434	.9896	.0634	4.0187	To	4.2682
Grp 2	291	3.7182	1.1031	.0647	3.5909	To	3.8455
Grp 3	232	3.7112	.9617	.0631	3.5868	To	3.8356
Grp 4	156	3.7949	.8851	.0709	3.6549	To	3.9349
Grp 5	123	3.7886	1.1107	.1001	3.5904	To	3.9869
Total	1046	3.8356	1.0296	.0318	3.7731	To	3.8980

Dev. Group 3 2 5 4 1

Grp 3
Grp 2
Grp 5
Grp 4
Grp 1 * * * *

(*) Denotes pairs of groups significantly different at the p< .05 level

- 13) OFFENCE13: the perceived seriousness of 'driving without a licence'.

Table 29ri. Group Means and Standard Deviations For The Variable OFFENCE13.

	Mean	Std. Dev.	N

Females	4.185	.944	476
Males	3.866	1.155	495
DEV. GROUP 1	4.269	.990	221
F	4.419	.875	105
M	4.121	1.105	116
DEV. GROUP 2	3.842	1.125	268
F	4.132	1.032	121
M	3.551	1.217	147
DEV. GROUP 3	4.034	.998	221
F	4.145	.922	117
M	3.922	1.073	103
DEV. GROUP 4	4.126	.979	148
F	4.266	.828	79
M	3.986	1.131	69
DEV. GROUP 5	3.857	1.185	114
F	3.963	1.098	54
M	3.750	1.271	60
For entire sample	4.021	1.086	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE13 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29rii. One-Way Analysis Of Variance On OFFENCE13
By Developmental Groups.

Analysis of Variance						
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.	
Between Groups	4	30.2837	7.5709	6.5648	.0000	
Within Groups	1047	1207.4729	1.1533			
Total	1051	1237.7567				

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	245	4.2571	.9975	.0637	4.1316	To 4.3827
Grp 2	295	3.8339	1.1648	.0678	3.7004	To 3.9674
Grp 3	233	4.0129	1.0106	.0662	3.8824	To 4.1433
Grp 4	156	4.1282	1.0078	.0807	3.9688	To 4.2876
Grp 5	123	3.8293	1.1853	.1069	3.6177	To 4.0408
Total	1052	4.0152	1.0852	.0335	3.9496	To 4.0809

Dev. Group 5 2 3 4 1

Grp 5
Grp 2
Grp 3
Grp 4 *
Grp 1 * *

(*) Denotes pairs of groups significantly different at
the $p < .05$ level

- 14) OFFENCE14: the perceived seriousness of 'driving when having drunk slightly over the legal limit'.

Table 29ti. Group Means and Standard Deviations For The Variable OFFENCE14.

	Mean	Std. Dev.	N

Females	4.369	.816	476
Males	4.009	.989	495
DEV. GROUP 1	4.329	.868	221
F	4.505	.798	105
M	4.155	.938	116
DEV. GROUP 2	4.026	.968	268
F	4.174	.882	121
M	3.878	1.053	147
DEV. GROUP 3	4.228	.868	221
F	4.359	.771	117
M	4.097	.965	103
DEV. GROUP 4	4.452	.750	148
F	4.570	.614	79
M	4.333	.886	69
DEV. GROUP 5	4.137	1.094	114
F	4.241	1.098	54
M	4.033	1.089	60
For entire sample	4.215	.934	971

Tukey HSD Procedure.

The table below presents details of a one-way analysis of variance performed on the variable OFFENCE14 as part of a Tukey HSD test, in order to provide specific details on significant differences between the developmental groups (at $p < 0.05$).

Table 29tiii. One-Way Analysis Of Variance On OFFENCE14 By Developmental Groups.

Analysis of Variance						
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.	
Between Groups	4	22.3602	5.5900	6.4601	.0000	
Within Groups	1044	903.3901	.8653			
Total	1048	925.7502				

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	244	4.2910	.9125	.0584	4.1759 To	4.4061
Grp 2	294	4.0034	.9931	.0579	3.8894 To	4.1174
Grp 3	232	4.2198	.8822	.0579	4.1057 To	4.3339
Grp 4	155	4.4387	.7736	.0621	4.3160 To	4.5615
Grp 5	124	4.1774	1.0672	.0958	3.9877 To	4.3671
Total	1049	4.2031	.9399	.0290	4.1461 To	4.2600

Dev. Group 2 5 3 1 4	
Grp 2	
Grp 5	
Grp 3	
Grp 1	*
Grp 4	*

(*) Denotes pairs of groups significantly different at the p< .05 level

15) OFFENCE15: The perceived seriousness of 'driving when having drunk a lot over the legal limit'.

Table 29u. Group Means and Standard Deviations For The Variable OFFENCE15.

	Mean	Std. Dev.	N

Females	4.869	.544	476
Males	4.753	.714	495
DEV. GROUP 1	4.841	.506	221
F	4.924	.331	105
M	4.759	.680	116
DEV. GROUP 2	4.732	.750	268
F	4.851	.628	121
M	4.612	.872	147
DEV. GROUP 3	4.841	.592	221
F	4.846	.677	117
M	4.835	.507	103
DEV. GROUP 4	4.895	.463	148
F	4.949	.316	79
M	4.841	.609	69
DEV. GROUP 5	4.747	.841	114
F	4.778	.816	54
M	4.717	.865	60
For entire sample	4.804	.662	971

APPENDIX E1.

**THE EXAMINATION OF GROUP DIFFERENCES
ACROSS HAZARD EVALUATION, RISK-TAKING
AND RISK-PERCEPTION 'RATING' VARIABLES:**

**DETAILS OF MEANS, STANDARD DEVIATIONS AND ANALYSIS OF
VARIANCE TESTS ON THE INTERACTIVE VIDEO DATA.**

APPENDIX E1

The tables below present the means, standard deviations and details related to Tukey tests (where appropriate) for the following variables from Interactive Video Results Sections 2b and 2c: PERCEIVED DANGEROUSNESS OF ACTIONS, PREFERRED DRIVING SPEED, CHOSEN DECELERATION, ACCIDENT-LIKELIHOOD, SERIOUS, ACCIDENT-FOR-AVERAGE DRIVER and ACCIDENT-FOR-SELF. These variables were employed in analyses examining (a) group differences across hazard evaluation and risk-taking 'rating' variables, and (b) group differences across risk perception 'rating' variables.

The classification scheme used for the developmental groups throughout Appendix E1 is:

1 = 11-12 years, 2 = 13-14 years, 3 = 15-16 years,
4 = 17-18 years (non-drivers), 5 = 17-18 years (drivers).

1) THE PERCEIVED DANGEROUSNESS OF ACTIONS

The constituent variables for 'PERCEIVED DANGEROUSNESS' were measured on a three-point scale (1 = not dangerous, 2 = dangerous, 3 = very dangerous).

Table 32b. Group Means and Standard Deviations For The Variable 'The Perceived Dangerousness Of Actions'.

	Mean	Std Dev	Cases
Total Population	2.21	.4298	203
Female	2.25	.4126	88
Male	2.18	.4418	115
DEV.GROUP 1.00	2.31	.4483	44
F	2.26	.4161	23
M	2.37	.4849	21
DEV.GROUP 2.00	2.31	.3858	53
F	2.39	.4058	22
M	2.25	.3651	31
DEV.GROUP 3.00	2.20	.4304	48
F	2.21	.3751	22
M	2.20	.4797	26
DEV.GROUP 4.00	2.11	.3913	22
F	2.32	.2782	7
M	2.02	.4061	15
DEV.GROUP 5.00	1.99	.4138	36
F	2.02	.4648	14
M	1.97	.3880	22

The table below presents details of a one-way analysis of variance performed on the variable 'perceived dangerousness of actions' as part of a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 32c. One-Way Analysis Of Variance On 'The Perceived Dangerousness Of Actions' By Developmental Groups.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	3.0155	.7539	4.3525	.0021
Within Groups	198	34.2948	.1732		
Total	202	37.3103			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	44	2.3125	.4483	.0676	2.1762 To 2.4488
Grp 2	53	2.3113	.3858	.0530	2.2050 To 2.4176
Grp 3	48	2.2031	.4304	.0621	2.0781 To 2.3281
Grp 4	22	2.1136	.3913	.0834	1.9401 To 2.2871
Grp 5	36	1.9861	.4138	.0690	1.8461 To 2.1261
Total	203	2.2069	.4298	.0302	2.1474 To 2.2664

Dev. Group	5	4	3	2	1
Grp 5					
Grp 4					
Grp 3					
Grp 2		*			
Grp 1		*			

(*) Denotes pairs of groups significantly different at the $p < .05$ level.

2) PREFERRED DRIVING SPEED

The meta-variable 'PREFERRED DRIVING SPEED' is a mean of four variables measuring subjects' chosen speeds across four different situations.

Table 33b. Group Means and Standard Deviations For The Variable 'Preferred Driving Speed'.

	Mean	Std Dev	Cases
Total Population	29.50	6.9668	203
Female	29.75	6.4528	88
Male	29.31	7.3434	115
DEV.GROUP 1.00	27.51	6.7172	44
F	27.83	7.3419	23
M	27.21	6.1055	21
DEV.GROUP 2.00	30.12	7.8293	53
F	31.65	7.5374	22
M	29.04	8.0006	31
DEV.GROUP 3.00	27.33	6.4865	48
F	27.73	5.4386	22
M	27.00	7.3603	26
DEV.GROUP 4.00	28.96	4.7426	22
F	30.18	4.7599	7
M	28.38	4.7351	15
DEV.GROUP 5.00	34.24	6.1487	36
F	32.86	4.3108	14
M	35.11	6.9798	22

The table below presents details of a one-way analysis of variance performed on the variable 'preferred driving speed' as part of a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 33c. One-Way Analysis Of Variance On 'Preferred Driving Speed' By Developmental Groups.

Analysis of Variance						
Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.	
Between Groups	4	1052.5132	263.1283	5.8708	.0002	
Within Groups	198	10353.3964	44.8199			
Total	202	11405.9097				

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean	
Grp 1	44	27.7450	6.7172	.9500	25.8360 To 29.6540	
Grp 2	53	30.2292	7.8293	1.0108	28.2067 To 32.2517	
Grp 3	48	27.8491	6.4865	.8517	26.1436 To 29.5547	
Grp 4	22	28.9300	4.7426	.9485	26.9723 To 30.8877	
Grp 5	36	33.5407	6.1487	.9377	31.6484 To 35.4330	
Total	203	29.5837	6.9668	.4535	28.6902 To 30.4771	

Dev. Group	1	3	4	2	5

Grp 1					
Grp 3					
Grp 4					
Grp 2					
Grp 5		*	*		

(*) Denotes pairs of groups significantly different at the $p < .05$ level.

3) CHOSEN DECELERATION

The variable 'CHOSEN DECELERATION' is the difference between two variables measuring subjects' chosen speeds. This variable measures subjects' chosen deceleration when they approach a potentially hazardous area.

Table 34b. Group Means and Standard Deviations For The Variable 'Chosen Deceleration'.

	Mean	Std Dev	Cases

Total Population	-8.08	9.8489	203
Female	-6.53	8.3778	88
Male	-9.27	10.7629	115
DEV.GROUP 1.00	-6.30	6.9289	44
F	-6.09	7.8764	23
M	-6.52	5.8995	21
DEV.GROUP 2.00	-6.58	8.5281	53
F	-6.36	8.7454	22
M	-6.74	8.5119	31
DEV.GROUP 3.00	-6.56	11.7644	48
F	-4.55	8.2991	22
M	-8.27	14.2277	26
DEV.GROUP 4.00	-9.77	9.9666	22
F	-6.43	11.2599	7
M	-11.33	9.3345	15
DEV.GROUP 5.00	-13.47	10.2869	36
F	-10.71	7.5498	14
M	-15.23	11.4105	22

The table below presents details of a one-way analysis of variance performed on the variable 'chosen deceleration' as part of a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 34c. One-Way Analysis Of Variance On The Variable 'Chosen Deceleration' by Developmental Groups.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	1434.1717	358.5429	3.8773	.0045
Within Groups	198	21360.8622	92.4713		
Total	202	22795.0339			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	44	-6.1000	6.9289	.9799	-8.0692	To	-4.1308
Grp 2	53	-5.8167	8.5281	1.1010	-8.0197	To	-3.6136
Grp 3	48	-7.1897	11.7644	1.5447	-10.2830	To	-4.0964
Grp 4	22	-9.2000	9.9666	1.9933	-13.3140	To	-5.0860
Grp 5	36	-12.5814	10.2869	1.5687	-15.7472	To	-9.4156
Total	203	-7.8051	9.8489	.6411	-9.0681	To	-6.5420

Dev Group	5	4	3	1	2
Grp 5					
Grp 4					
Grp 3		*			
Grp 1		*			
Grp 2		*			

(*) Denotes pairs of groups significantly different at the $p < .05$ level

4) ACCIDENT LIKELIHOOD

The variable 'ACCIDENT LIKELIHOOD' (how likely subjects thought they would be to have an accident if they overtook a parked lorry in the face of oncoming traffic) was measured on a 5-point scale from 1 = very unlikely to 5 = very likely.

Table 35b. Group Means and Standard Deviations For The Variable 'Accident-Likelihood'.

		Mean	Std Dev	Cases

Total Population		3.42	1.0866	236
Female		3.50	1.1326	100
Male		3.36	1.0518	136
DEV.GROUP 1.00		3.56	1.1980	50
F		3.50	1.3638	26
M		3.63	1.0135	24
DEV.GROUP 2.00		3.50	.9655	60
F		3.57	.9451	23
M		3.46	.9887	37
DEV.GROUP 3.00		3.57	1.0940	58
F		3.70	1.1373	27
M		3.45	1.0595	31
DEV.GROUP 4.00		3.24	1.0520	25
F		3.63	1.0607	8
M		3.06	1.0290	17
DEV.GROUP 5.00		3.05	1.0680	43
F		3.00	.9661	16
M		3.07	1.1410	27

5) SERIOUS

The variable 'SERIOUS' (subjects' perceptions of the likelihood of an overtaking accident being serious) was measured on a 5-point scale where 1 = very unlikely to 5 = very likely.

Table 35c. Group Means and Standard Deviations For The Variable 'Serious'.

	Mean	Std Dev	Cases
-----	-----	-----	-----
Total Population	3.69	.9381	236
Female	3.75	.8572	100
Male	3.64	.9939	136
DEV.GROUP 1.00	3.72	.9906	50
F	3.73	.9616	26
M	3.71	1.0417	24
DEV.GROUP 2.00	3.78	.8654	60
F	3.87	.7570	23
M	3.73	.9324	37
DEV.GROUP 3.00	3.78	.8386	58
F	3.93	.7299	27
M	3.65	.9146	31
DEV.GROUP 4.00	3.76	.9256	25
F	3.75	.8864	8
M	3.76	.9701	17
DEV.GROUP 5.00	3.35	1.0665	43
F	3.31	.9465	16
M	3.37	1.1485	27
-----	-----	-----	-----

6) ACCIDENT FOR AVERAGE DRIVER

The variable 'ACCIDENT-FOR-AVERAGE DRIVER' (subjects' ratings of how likely they think the 'average' driver would be to have an accident when a cyclist swerves off of the pavement into the road in front of their car) was measured on a 5-point scale from 1 = very unlikely to 5 = very likely.

Table 36b. Group Means and Standard Deviations For The Variable 'Accident-For-Average Driver'.

		Mean	Std Dev	Cases

Total Population		3.20	1.1318	220
Female		3.30	1.1549	93
Male		3.13	1.1126	127
DEV.GROUP	1.00	3.25	1.2379	48
F		3.50	1.0847	24
M		3.00	1.3513	24
DEV.GROUP	2.00	3.56	.9182	55
F		3.64	1.0486	22
M		3.52	.8337	33
DEV.GROUP	3.00	3.30	1.0751	54
F		3.29	.9991	24
M		3.30	1.1492	30
DEV.GROUP	4.00	3.09	1.1509	22
F		3.75	.8864	8
M		2.71	1.1387	14
DEV.GROUP	5.00	2.59	1.1175	41
F		2.27	1.2799	15
M		2.77	.9923	26

A two-way analysis of variance test was performed on the variable 'accident-for-average driver' in order to clarify any developmental group, sex or interaction effects. As it can be seen from the table below (Table 36c), there were significant developmental group effects. Table 36d presents details related to a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 36c. **Two-way Analysis Of Variance Test On The Variable 'Accident-For-Average Driver' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	24.843	5	4.969	4.233	.001
DEV.GROUP	23.197	4	5.799	4.941	.001
SEX	1.199	1	1.199	1.021	.313
2-way Interactions	9.860	4	2.465	2.100	.082
D.GROUP SEX	9.860	4	2.465	2.100	.082
Explained	34.702	9	3.856	3.285	.001
Residual	246.498	210	1.174		
Total	281.200	219	1.284		

The table below presents details of a one-way analysis of variance performed on the variable 'accident-for-average driver' as part of a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 36d. One-way Analysis Of Variance On The Variable 'Accident-For-Average Driver' By Developmental Groups.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	23.7302	5.9325	4.9647	.0008
Within Groups	215	258.1070	1.1949		
Total	219	281.8371			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	48	3.2653	1.2379	.1768	2.9097 To 3.6209
Grp 2	55	3.5636	.9182	.1238	3.3154 To 3.8119
Grp 3	54	3.2963	1.0751	.1463	3.0029 To 3.5897
Grp 4	22	3.0909	1.1509	.2454	2.5806 To 3.6012
Grp 5	41	2.5854	1.1175	.1745	2.2326 To 2.9381
Total	220	3.2036	1.1318	.0761	3.0536 To 3.3537

Dev. Group	5	4	1	3	2
Grp 5					
Grp 4					
Grp 1		*			
Grp 3		*			
Grp 2		*			

(*) Denotes pairs of groups significantly different at the $p < .05$ level

7) ACCIDENT-FOR-SELF

The variable 'ACCIDENT-FOR-SELF' (the perceived likelihood of oneself being involved in an accident when a cyclist pulls straight out into the path of the subject's car) was measured on a five-point scale where 1 = very unlikely to 5 = very likely.

Table 36e. Group Means and Standard Deviations For The Variable 'Accident-For-Self'.

		Mean	Std Dev	Cases

Total Population		2.20	.5805	220
Female		2.12	.5075	93
Male		2.27	.6230	127
DEV.GROUP	1.00	1.96	.5819	48
F		1.88	.5367	24
M		2.04	.6241	24
DEV.GROUP	2.00	2.07	.6041	55
F		2.18	.5885	22
M		2.00	.6124	33
DEV.GROUP	3.00	2.24	.5116	54
F		2.08	.2823	24
M		2.37	.6149	30
DEV.GROUP	4.00	2.36	.4924	22
F		2.25	.4629	8
M		2.43	.5136	14
DEV.GROUP	5.00	2.54	.5049	41
F		2.40	.5071	15
M		2.62	.4961	26

A two-way analysis of variance test was performed on the variable 'accident-for-self' in order to clarify any developmental group, sex or interaction effects. As it can be seen from the table below (Table 36f), there were significant developmental group effects. Table 36g presents details related to a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 36f. **Two-way Analysis Of Variance Test On The Variable 'Accident-For-Self' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	9.769	5	1.954	6.582	.000
DEV.GROUP	8.570	4	2.142	7.217	.000
SEX	.755	1	.755	2.545	.112
2-way Interactions	1.688	4	.422	1.422	.228
D.GROUP SEX	1.688	4	.422	1.422	.228
Explained	11.457	9	1.273	4.288	.000
Residual	62.338	210	.297		
Total	73.795	219	.337		

The table below presents details of a one-way analysis of variance performed on the variable 'accident-for-self' as part of a Tukey Test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 36g. One-Way Analysis Of Variance On The Variable 'Accident-For-Self' By Developmental Groups.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	9.0133	2.2533	7.4784	.0000
Within Groups	215	64.7822	.3013		
Total	219	73.7955			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	48	1.9583	.5819	.0840	1.7894 To 2.1273
Grp 2	55	2.0727	.6041	.0815	1.9094 To 2.2360
Grp 3	54	2.2407	.5116	.0696	2.1011 To 2.3804
Grp 4	22	2.3636	.4924	.1050	2.1453 To 2.5819
Grp 5	41	2.5366	.5049	.0788	2.3772 To 2.6959
Total	220	2.2045	.5805	.0391	2.1274 To 2.2817

Dev. Group	1	2	3	4	5
Grp 1					
Grp 2					
Grp 3					
Grp 4		*			
Grp 5		*	*		

(*) Denotes pairs of groups significantly different at the $p < .05$ level.

APPENDIX E2.

**THE EXAMINATION OF GROUP DIFFERENCES ACROSS
HAZARD PERCEPTION AND RISK-TAKING 'INTERACTIVE' VARIABLES:**

**DETAILS OF MEANS, STANDARD DEVIATIONS AND ANALYSIS OF
VARIANCE TESTS ON THE INTERACTIVE VIDEO DATA.**

THE EXAMINATION OF GROUP DIFFERENCES ACROSS HAZARD PERCEPTION AND RISK-TAKING 'INTERACTIVE' VARIABLES.

Details of Analysis of Variance Tests, Means and Standard Deviations.

CONTENTS.

i) OVERTAKING STRATEGIES.

- 1) Overtaking on double white lines.
- 2) Overtaking frequency.
- 3) Overtaking in the face of oncoming traffic.
- 4) Overtaking approaching a bend.
- 5) Overtaking on a single white line.
- 6) Overtaking on or near a brow of a hill.
- 7) Overtaking approaching a roundabout.
- 8) Overtaking at or approaching a junction.
- 9) Overtaking in a safe location.

**ii) HAZARD PERCEPTION AND RESPONSE:
Emergency Braking variables.**

- 1) "Woman with a dog " scene.
- 2) "Cyclist" scene.
- 3) "Avoid collision with two cars" scene.
- 4) "Zebra Crossing" scene.
- 5) "Avoid collision on dual-carriageway" scene.

The classification scheme used for the developmental groups throughout Appendix E2 is:

1 = 11-12 years, 2 = 13-14 years, 3 = 15-16 years,
4 = 17-18 years (non-drivers), 5 = 17-18 years (drivers).

i) OVERTAKING STRATEGIES.

1) OVERTAKING ON DOUBLE WHITE LINES

The meta-variable 'DOUBLE WHITE LINES' (the act of overtaking on double white lines) was the sum of three dichotomous variables.

Table 37b. Group Means and Standard Deviations For The Meta-Variable 'Double White Lines'.

		Mean	Std Dev	Cases

Total Population		1.02	.8988	236
Female		1.05	.9829	100
Male		1.00	.8344	136
DEV.GROUP	1.00	1.33	.8715	50
F		1.36	.9414	26
M		1.29	.8065	24
DEV.GROUP	2.00	1.18	1.0167	60
F		1.30	1.1455	23
M		1.11	.9364	37
DEV.GROUP	3.00	0.86	.8261	58
F		0.89	.9337	27
M		0.84	.7347	31
DEV.GROUP	4.00	0.88	.8813	25
F		0.38	.5175	8
M		1.12	.9275	17
DEV.GROUP	5.00	0.74	.7268	43
F		0.81	.8342	16
M		0.70	.6688	27

The table below presents details of a one-way analysis of variance performed on the meta-variable 'double white lines', as part of a Tukey test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 37c. One-Way Analysis Of Variance On 'Double White Lines' By Developmental Groups.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	11.9215	2.9804	3.8694	.0046
Within Groups	231	177.9259	.7702		
Total	235	189.8475			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	50	1.3400	.8715	.1233	1.0923 To 1.5877
Grp 2	60	1.1833	1.0167	.1313	.9207 To 1.4460
Grp 3	58	.8621	.8261	.1085	.6449 To 1.0793
Grp 4	25	.8800	.8813	.1763	.5162 To 1.2438
Grp 5	43	.7442	.7268	.1108	.5205 To .9679
Total	236	1.0254	.8988	.0585	.9102 To 1.1407

Dev.Group	5	3	4	2	1
Grp 5					
Grp 3					
Grp 4					
Grp 2					
Grp 1	*	*			

(*) Denotes pairs of groups significantly different at the $p < .05$ level.

2) OVERTAKING FREQUENCY

The variable 'OVER-TAKING FREQUENCY' (subjects' overtaking frequencies across three overtaking scenes) is the sum of three overtaking frequency variables. The variable represents a frequency value out of a possible maximum of fifteen.

Table 38b. Group Means and Standard Deviations For The
Meta-Variable 'Overtaking Frequency'.

		Mean	Std Dev	Cases
-----		-----		
Total Population		5.10	3.2833	203
Female		5.52	3.4731	88
Male		4.78	3.1389	115
DEV.GROUP	1.00	6.23	2.9372	44
F		6.61	3.1819	23
M		5.81	2.7104	21
DEV.GROUP	2.00	5.70	3.6083	53
F		6.00	3.5459	22
M		5.48	3.6942	31
DEV.GROUP	3.00	4.90	3.1985	48
F		6.05	3.5013	22
M		3.92	2.8090	26
DEV.GROUP	4.00	4.68	3.4244	22
F		3.00	3.3274	7
M		5.47	3.4800	15
DEV.GROUP	5.00	3.39	2.4594	36
F		3.43	3.1517	14
M		3.36	2.0064	22
-----		-----		

The table below presents details of a one-way analysis of variance performed on the meta-variable 'overtaking frequency', as part of a Tukey test analysis in order to provide specific details on significant differences between the individual developmental groups (at $p < 0.05$).

Table 38c. One-Way Analysis Of Variance On 'Overtaking Frequency' By Developmental Groups.

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	4	223.8793	55.9698	5.5982	.0003
Within Groups	198	2309.5105	9.9979		
Total	202	2533.3898			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean
Grp 1	44	6.2300	2.9372	.4154	5.3253 To 6.9947
Grp 2	53	5.7833	3.6083	.4658	4.8512 To 6.7155
Grp 3	48	4.8414	3.1985	.4200	3.9004 To 5.5824
Grp 4	22	4.6800	3.4244	.6849	3.2665 To 6.0935
Grp 5	36	3.3621	2.4594	.3751	2.6152 To 4.1290
Total	203	5.0508	3.2833	.2137	4.6298 To 5.4719

Dev.Group	5	4	3	2	1
Grp 5					
Grp 4					
Grp 3					
Grp 2		*			
Grp 1		*			

(*) Denotes pairs of groups significantly different at the $p < .05$ level.

3) OVERTAKING IN THE FACE OF ONCOMING TRAFFIC

The meta-variable 'ONCOMING TRAFFIC' (the act of overtaking in the face of oncoming traffic) was the sum of three dichotomous variables.

Table 39a. Group Means and Standard Deviations For The Meta-Variable 'Oncoming Traffic'.

		Mean	Std Dev	Cases

Total Population		.84	.6451	235
Female		.86	.6557	99
Male		.83	.6389	136
DEV.GROUP	1.00	.96	.6701	49
F		1.04	.7114	25
M		.88	.6124	24
DEV.GROUP	2.00	.97	.6881	60
F		.96	.7674	23
M		.97	.6449	37
DEV.GROUP	3.00	.78	.5936	58
F		.89	.5064	27
M		.68	.6525	31
DEV.GROUP	4.00	.80	.5774	25
F		.63	.5175	8
M		.88	.6002	17
DEV.GROUP	5.00	.65	.6127	43
F		.50	.5164	16
M		.74	.6559	27

A two-way analysis of variance test was performed on the variable 'oncoming traffic' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39b. **Two-way Analysis Of Variance Test On The Variable 'Oncoming Traffic' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	3.488	5	.698	1.788	.116
DEV. GROUP	3.444	4	.861	2.207	.069
SEX	.018	1	.018	.047	.828
2-way Interactions	1.907	4	.477	1.222	.302
DEV. GROUP SEX	1.907	4	.477	1.222	.302
Explained	5.394	9	.599	1.536	.136
Residual	87.780	225	.390		
Total	93.174	234	.398		

4) OVERTAKING ON OR APPROACHING A BEND

The variable 'BEND' (the act of overtaking on or approaching a bend) was the sum of two dichotomous variables.

Table 39c. Group Means and Standard Deviations For The
Meta-Variable 'Bend'.

		Mean	Std Dev	Cases

Total Population		.27	.5182	235
Female		.32	.5898	99
Male		.23	.4549	136
DEV.GROUP	1.00	.33	.5628	49
F		.32	.5711	25
M		.33	.5647	24
DEV.GROUP	2.00	.35	.5469	60
F		.39	.5830	23
M		.32	.5299	37
DEV.GROUP	3.00	.22	.5312	58
F		.33	.6794	27
M		.13	.3408	31
DEV.GROUP	4.00	.28	.4583	25
F		.25	.4629	8
M		.29	.4697	17
DEV.GROUP	5.00	.14	.4130	43
F		.25	.5774	16
M		.07	.2669	27

A two-way analysis of variance test was performed on the variable 'BEND' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39d. Two-way Analysis Of Variance Test On The Variable 'Bend' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
-----	-----	-----	-----	-----	-----
Main Effects	1.888	5	.378	1.472	.200
DEV. GROUP	1.367	4	.342	1.332	.259
SEX	.491	1	.491	1.916	.168
2-way Interactions	.498	4	.125	.485	.746
DEV. GROUP SEX	.498	4	.125	.485	.746
Explained	2.386	9	.265	1.033	.414
Residual	57.725	225	.257		
Total	60.111	234	.257		
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5) OVERTAKING ON A SINGLE WHITE LINE

The variable 'SINGLE WHITE LINE' (the act of overtaking on a single white line) is the sum of three dichotomous variables.

Table 39e. Group Means and Standard Deviations For The
Meta-Variable 'Single White Line'.

		Mean	Std Dev	Cases

Total Population		1.27	.9897	236
Female		1.40	1.0050	100
Male		1.17	.9703	136
DEV.GROUP	1.00	1.48	.9947	50
F		1.58	.9021	26
M		1.38	1.0959	24
DEV.GROUP	2.00	1.38	.9758	60
F		1.26	1.0098	23
M		1.46	.9602	37
DEV.GROUP	3.00	1.26	1.0689	58
F		1.67	1.0377	27
M		0.90	.9783	31
DEV.GROUP	4.00	1.16	.9434	25
F		1.13	.9910	8
M		1.18	.9510	17
DEV.GROUP	5.00	0.93	.8562	43
F		1.00	1.0328	16
M		0.89	.7511	27

A two-way analysis of variance test was performed on the variable 'single white line' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39f. **Two-way Analysis Of Variance Test On The Variable 'Single White Line' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
<hr/>					
Main Effects	10.608	5	2.122	2.258	.050
DEV. GROUP	7.536	4	1.884	2.005	.095
SEX	2.361	1	2.361	2.513	.114
2-way Interactions	7.257	4	1.814	1.931	.106
DEV. GROUP SEX	7.257	4	1.814	1.931	.106
Explained	17.865	9	1.985	2.113	.029
Residual	212.317	226	.939		
Total	230.182	235	.979		
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6) OVERTAKING ON OR APPROACHING A BROW OF HILL

The variable 'BROW OF HILL' (the act of overtaking on or approaching the brow of a hill) was the sum of three dichotomous variables.

Table 39g. Group Means and Standard Deviations For The
Meta-Variable 'Brow Of Hill'.

		Mean	Std Dev	Cases
-----		-----	-----	-----
Total Population		0.83	1.0103	236
Female		1.02	1.0729	100
Male		0.68	.9405	136
DEV.GROUP	1.00	1.18	1.0039	50
F		1.27	1.0414	26
M		1.08	.9743	24
DEV.GROUP	2.00	0.85	1.0222	60
F		0.87	1.0998	23
M		0.84	.9864	37
DEV.GROUP	3.00	0.81	1.0166	58
F		1.22	1.0500	27
M		0.45	.8500	31
DEV.GROUP	4.00	0.76	.9695	25
F		0.88	1.1260	8
M		0.71	.9196	17
DEV.GROUP	5.00	0.44	.9077	43
F		0.56	1.0308	16
M		0.37	.8389	27
-----		-----	-----	-----

A two-way analysis of variance test was performed on the variable 'Brow Of Hill' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39h. Two-way Analysis Of Variance Test On The Variable 'Brow Of Hill' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	17.722	5	3.544	3.682	.003
DEV. GROUP	11.209	4	2.802	2.911	.022
SEX	4.953	1	4.953	5.145	.024
2-way Interactions	4.588	4	1.147	1.192	.315
DEV. GROUP SEX	4.588	4	1.147	1.192	.315
Explained	22.310	9	2.479	2.575	.008
Residual	217.567	226	.963		
Total	239.877	235	1.021		

7) OVERTAKING APPROACHING A ROUNDABOUT

The dichotomous variable 'ROUNDABOUT' (the act of overtaking approaching a roundabout) was represented on only one of the three overtaking scenes, and hence is the result of only one variable.

Table 39i. Group Means and Standard Deviations For The
Meta-Variable 'Roundabout'.

		Mean	Std Dev	Cases

Total Population		.33	.4704	235
Female		.35	.4805	99
Male		.31	.4637	136
DEV.GROUP	1.00	.39	.4923	49
F		.32	.4761	25
M		.46	.5090	24
DEV.GROUP	2.00	.40	.4940	60
F		.39	.4990	23
M		.41	.4977	37
DEV.GROUP	3.00	.31	.4667	58
F		.41	.5007	27
M		.23	.4250	31
DEV.GROUP	4.00	.36	.4899	25
F		.38	.5175	8
M		.35	.4926	17
DEV.GROUP	5.00	.16	.3735	43
F		.25	.4472	16
M		.11	.3203	27

A two-way analysis of variance test was performed on the variable 'Roundabout' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39j. **Two-way Analysis Of Variance Test On The Variable 'Roundabout' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
<hr/>					
Main Effects	1.793	5	.359	1.641	.150
DEV. GROUP	1.678	4	.419	1.920	.108
SEX	.089	1	.089	.408	.523
2-way Interactions	.820	4	.205	.939	.442
DEV. GROUP SEX	.820	4	.205	.939	.442
Explained	2.613	9	.290	1.329	.223
Residual	49.157	225	.218		
Total	51.770	234	.221		
<hr/>					

8) OVERTAKING AT OR APPROACHING A JUNCTION

The dichotomous variable 'JUNCTION' (the act of overtaking at or approaching a junction) was represented on only one of the three overtaking scenes, and hence is the result of only one variable.

Table 39k. Group Means and Standard Deviations For The
Meta-Variable 'Junction'.

		Mean	Std Dev	Cases

Total Population		.49	.5010	235
Female		.47	.5021	99
Male		.50	.5018	136
DEV.GROUP	1.00	.57	.4986	49
F		.56	.5038	25
M		.58	.5036	24
DEV.GROUP	2.00	.60	.4940	60
F		.65	.4870	23
M		.57	.5022	37
DEV.GROUP	3.00	.47	.5032	58
F		.48	.5092	27
M		.45	.5059	31
DEV.GROUP	4.00	.28	.4583	25
F		.00	.0000	8
M		.41	.5073	17
DEV.GROUP	5.00	.40	.4947	43
F		.31	.4787	16
M		.44	.5064	27

A two-way analysis of variance test was performed on the variable 'Junction' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39L. **Two-way Analysis Of Variance Test On The Variable 'Junction' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	2.661	5	.532	2.180	.057
DEV. GROUP	2.624	4	.656	2.687	.032
SEX	.087	1	.087	.358	.550
2-way Interactions	1.131	4	.283	1.158	.330
DEV. GROUP SEX	1.131	4	.283	1.158	.330
Explained	3.792	9	.421	1.726	.084
Residual	54.932	225	.244		
Total	58.723	234	.251		

9) OVERTAKING IN A SAFE LOCATION

The dichotomous variable 'SAFE1' (the act of overtaking in a safe location, i.e., on a straight, clear stretch of road with no oncoming traffic, hills, single or double white lines, roundabouts, junctions or bends), was represented on only one of the three overtaking scenes, and hence is the result of only one variable.

Table 39m. Group Means and Standard Deviations For The Meta-Variable 'Safe1'.

		Mean	Std Dev	Cases

Total Population		.77	.4210	236
Female		.73	.4462	100
Male		.80	.4004	136
DEV.GROUP	1.00	.84	.3703	50
F		.85	.3679	26
M		.83	.3807	24
DEV.GROUP	2.00	.77	.4265	60
F		.78	.4217	23
M		.76	.4350	37
DEV.GROUP	3.00	.79	.4086	58
F		.78	.4237	27
M		.81	.4016	31
DEV.GROUP	4.00	.64	.4899	25
F		.50	.5345	8
M		.71	.4697	17
DEV.GROUP	5.00	.74	.4415	43
F		.16	.5164	16
M		.27	.3203	27

A two-way analysis of variance test was performed on the variable 'Safe1' to examine for any significant developmental group, sex or interaction effects. As it can be seen from the table below, there were no significant effects at all (at $p < 0.01$).

Table 39n. **Two-way Analysis Of Variance Test On The Variable 'Safe1' By Developmental Group and Sex.**

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
<hr/>					
Main Effects	1.154	5	.231	1.333	.251
DEV. GROUP	.860	4	.215	1.241	.294
SEX	.427	1	.427	2.464	.118
2-way Interactions	1.347	4	.337	1.944	.104
DEV. GROUP SEX	1.347	4	.337	1.944	.104
Explained	2.501	9	.278	1.604	.115
Residual	39.143	226	.173		
Total	41.644	235	.177		
<hr/>					

ii) HAZARD PERCEPTION AND RESPONSE:
Emergency Braking Variables.

1) "WOMAN WITH A DOG" Scene

The variable 'WOMAN WITH A DOG' is a dichotomous variable measuring whether subjects' chose to brake when a woman with a dog ran out into the road straight in front of their car.

Table 40a. Group Means and Standard Deviations For The
Variable 'Woman With A Dog'.

		Mean	Std Dev	Cases

Total Population		.74	.4410	234
Female		.73	.4462	98
Male		.74	.4388	136
DEV.GROUP	1.00	.65	.4849	49
F		.60	.5038	25
M		.71	.4643	24
DEV.GROUP	2.00	.75	.4367	60
F		.78	.4217	23
M		.73	.4502	37
DEV.GROUP	3.00	.77	.4207	57
F		.69	.4653	26
M		.84	.3739	31
DEV.GROUP	4.00	.84	.3742	25
F		.88	.3536	8
M		.82	.3930	17
DEV.GROUP	5.00	.72	.4539	43
F		.88	.3416	16
M		.63	.4921	27

A two-way analysis of variance test was performed on the variable 'Woman With A Dog' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p<0.01$).

Table 40b. Two-Way Analysis Of Variance Test On The Variable 'Woman With A Dog' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.700	5	.140	.725	.606
AGES	.697	4	.174	.901	.464
SEX	.000	1	.000	.001	.976
2-way Interactions	1.106	4	.276	1.430	.225
AGES SEX	1.106	4	.276	1.430	.225
Explained	1.806	9	.201	1.038	.410
Residual	43.293	224	.193		
Total	45.098	233	.194		

2) "CYCLIST" Scene

The variable 'CYCLIST' is a dichotomous variable measuring whether subjects' chose to brake when a cyclist swerved off of the pavement straight in front of their car.

Table 38c. Group Means and Standard Deviations For The Variable 'Cyclist'.

		Mean	Std Dev	Cases

Total Population		.94	.2445	234
Female		.94	.2387	98
Male		.93	.2495	136
DEV.GROUP	1.00	.98	.1414	49
F		.96	.1961	25
M		1.00	.0000	24
DEV.GROUP	2.00	.92	.2787	60
F		.96	.2085	23
M		.89	.3148	37
DEV.GROUP	3.00	.93	.2556	57
F		.88	.3203	26
M		.97	.1796	31
DEV.GROUP	4.00	.88	.3317	25
F		1.00	.0000	8
M		.82	.3930	17
DEV.GROUP	5.00	.95	.2131	43
F		.94	.2500	16
M		.96	.1925	27

A two-way analysis of variance test was performed on the variable 'Cyclist' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p < 0.01$).

Table 40d. Two-Way Analysis Of Variance Test On The Variable 'Cyclist' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.209	5	.042	.696	.627
AGES	.208	4	.052	.864	.486
SEX	.000	1	.000	.001	.981
2-way Interactions	.352	4	.088	1.464	.214
AGES SEX	.352	4	.088	1.464	.214
Explained	.562	9	.062	1.037	.411
Residual	13.477	224	.060		
Total	14.038	233	.060		

3) "AVOID COLLISION WITH TWO CARS" Scene

The variable 'TWO CARS' is a dichotomous variable measuring whether subjects' chose to brake when two cars, one after the other, pulled out into the path of their car.

Table 40e. Group Means and Standard Deviations For The Variable 'Two Cars'.

		Mean	Std Dev	Cases

Total Population		.92	.2727	234
Female		.93	.2564	98
Male		.91	.2847	136
DEV.GROUP	1.00	.96	.1979	49
F		.96	.1961	25
M		.96	.2041	24
DEV.GROUP	2.00	.95	.2198	60
F		.96	.2085	23
M		.95	.2292	37
DEV.GROUP	3.00	.89	.3072	57
F		.92	.2669	26
M		.87	.3408	31
DEV.GROUP	4.00	.88	.3317	25
F		.88	.3536	8
M		.88	.3321	17
DEV.GROUP	5.00	.88	.3244	43
F		.88	.3416	16
M		.89	.3203	27

A two-way analysis of variance test was performed on the variable 'Two Cars' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p < 0.01$).

Table 40f. Two-Way Analysis Of Variance Test On The Variable 'Two Cars' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.271	5	.054	.709	.618
AGES	.255	4	.064	.833	.505
SEX	.009	1	.009	.123	.726
2-way Interactions	.033	4	.008	.107	.980
AGES SEX	.033	4	.008	.107	.980
Explained	.304	9	.034	.441	.912
Residual	17.153	224	.077		
Total	17.457	233	.075		

4) "ZEBRA CROSSING" Scene

The variable 'CROSSING' is a dichotomous variable measuring whether subjects' chose to brake when a woman holding a baby ran out onto a zebra crossing in front of their car.

Table 40g. Group Means and Standard Deviations For The Variable 'Crossing'.

		Mean	Std Dev	Cases

Total Population		.93	.2601	234
Female		.94	.2410	98
Male		.92	.2737	136
DEV.GROUP	1.00	.90	.3058	49
F		.88	.3317	25
M		.92	.2823	24
DEV.GROUP	2.00	.93	.2515	60
F		1.00	.0000	23
M		.89	.3148	37
DEV.GROUP	3.00	.91	.2854	57
F		.88	.3258	26
M		.94	.2497	31
DEV.GROUP	4.00	1.00	.0000	25
F		1.00	.0000	8
M		1.00	.0000	17
DEV.GROUP	5.00	.93	.2578	43
F		1.00	.0000	16
M		.89	.3203	27

A two-way analysis of variance test was performed on the variable 'Crossing' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p<0.01$).

Table 40h. Two-Way Analysis Of Variance Test On The Variable 'Crossing' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.229	5	.046	.673	.644
AGES	.207	4	.052	.761	.552
SEX	.039	1	.039	.576	.449
2-way Interactions	.304	4	.076	1.117	.350
AGES SEX	.304	4	.076	1.117	.350
Explained	.533	9	.059	.870	.553
Residual	15.232	224	.068		
Total	15.765	233	.068		

5) "AVOID A COLLISION ON A DUAL-CARRIAGEWAY" Scene

The variable 'D-CARRIAGEWAY' is a dichotomous variable measuring whether subjects' chose to brake when on a dual-carriageway a car in the right-hand lane pulls across straight in front of their car.

Table 40i. Group Means and Standard Deviations For The Variable 'D-Carriageway'.

		Mean	Std Dev	Cases

Total Population		.27	.4439	234
Female		.27	.4423	98
Male		.27	.4467	136
DEV.GROUP	1.00	.22	.4216	49
F		.24	.4359	25
M		.21	.4149	24
DEV.GROUP	2.00	.30	.4621	60
F		.30	.4705	23
M		.30	.4634	37
DEV.GROUP	3.00	.19	.3955	57
F		.27	.4466	26
M		.13	.3408	31
DEV.GROUP	4.00	.36	.4899	25
F		.25	.4629	8
M		.41	.5073	17
DEV.GROUP	5.00	.33	.4741	43
F		.25	.4472	16
M		.37	.4921	27

A two-way analysis of variance test was performed on the variable 'D-Carriageway' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p < 0.01$).

Table 40j. Two-Way Analysis Of Variance Test On The Variable 'D-Carriageway' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.831	5	.166	.835	.526
AGES	.829	4	.207	1.040	.387
SEX	.003	1	.003	.013	.909
2-way Interactions	.576	4	.144	.723	.577
AGES SEX	.576	4	.144	.723	.577
Explained	1.408	9	.156	.785	.630
Residual	44.631	224	.199		
Total	46.038	233	.198		

APPENDIX E3.

**THE CREATION OF 'ROAD
ENVIRONMENT AWARENESS' META-VARIABLES:
STATISTICS TABLES FOR RELIABILITY ANALYSES
ON THE INTERACTIVE VIDEO DATA.**

APPENDIX E3.

RELIABILITY ANALYSES ON 'ROAD ENVIRONMENT AWARENESS' VARIABLES.

All of the verbal commentary variables employed in the following six reliability analyses are dichotomous, in that subjects were either aware, or not aware, of the various aspects of the road environment around them and the associated task demands (behaviours and observations). The assigned values to these component variables are either 0 (no reported awareness) or 1 (reported awareness). The situation that each component variable refers to is described alongside the variable label.

1) AWARENESS OF ROAD TRAFFIC SIGNS.

The following variables were included in the reliability analysis that created the meta-variable 'road traffic signs'.

1. HSIGN - an elevated sign for an approaching roundabout.
2. HSIG2 - an elevated motorway sign.
3. ONROAD - a road sign or directions, actually painted on the road.
4. UPHIGH - another elevated road or directions sign at the side of the road.
5. NO - an elevated sign indicating 'No Right Turn'.
6. SLOW - a 'SLOW' sign painted on the road at the bottom of a bridge.

Table 41b. Results of 'Road Traffic Signs' Reliability Analysis.

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	ALPHA IF ITEM DELETED
HSIGN	.9322	.7784	.1319	.2500
HSIG2	1.2373	.9477	.1698	.2266
ONROAD	1.2458	.9351	.2134	.2035
UPHIGH	1.1949	.8810	.2031	.1951
NO	1.2458	1.0372	.0269	.3066
SLOW	.8178	.8220	.0678	.3171

N OF CASES = 236.0
ALPHA = 0.2857

N OF ITEMS = 6

ALPHA
WITHOUT 'SLOW' = 0.3171

N OF ITEMS = 5

The above variables were used to compute the meta-variable 'TRAFFIC SIGNS AND MARKINGS', to provide a measure of subjects' awareness of visible road traffic signs, across five different situations (the variable 'SLOW' was dropped).

2) AWARENESS OF NON-INTERACTING ROAD USERS

The following variables were included in the reliability analysis that created the meta-variable 'non-interacting road users'.

1. CARA - acknowledgement of cars ahead, as the subject's car approaches a roundabout.
2. CARB - awareness of other cars beside the subject's car, while waiting to enter a roundabout.
3. CARBE - acknowledgement of following cars as the subject's car exited from a roundabout.
4. POL - awareness of a police car on the left.
5. PARK2 - awareness of parked cars, specifically, on both sides of the road.
6. LORRY2 - awareness of a parked lorry on the left-hand side of the road, causing an obstruction.
7. CHANG - awareness of cars changing lanes in the one-way system.
8. PULL - awareness that cars may pull out into the road from the side roads or parked spaces.
9. PARK3 - awareness of parked cars.
10. FRONT - awareness of cars in front and an acknowledgement of a need to keep a safe distance from them.
11. PED2 - recognition of the need to watch out for pedestrians, children or animals.
12. PED1 - awareness of pedestrians crossing the road.

Table 41c. Results of 'Non-Interacting Road Users' Reliability Analysis.

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	ALPHA IF ITEM DELETED
CARA	2.6271	1.6136	.1602	.2279
CARB	2.4788	1.4421	.2436	.1689
CARBE	2.7542	1.8457	.0300	.2866
POL	2.7924	1.9014	.0014	.2920
PARK2	2.8432	1.9115	.1226	.2691
LORRY2	2.7839	1.8127	.1180	.2569
CHANG	2.8051	1.9023	.0188	.2858
PULL	2.4746	1.5696	.1276	.2453
PARK3	2.5551	1.5587	.1675	.2212
FRONT	2.8432	1.9625	-.0414	.2907
PED2	2.5169	1.6550	.0672	.2815
PED1	1.9407	1.9028	-.0242	.3030

N OF CASES = 236.0

N OF ITEMS = 12

ALPHA = 0.2811

ALPHA

WITHOUT PED1 = 0.3030

N OF ITEMS = 11.

The above variables were used to compute the meta-variable 'AWARENESS OF NON-INTERACTING ROAD USERS', to provide a measure of subjects' awareness of other visible road users whose position and behaviours meant that subjects were not interacting with them, across eleven different situations (e.g., parked cars, cars in front or following behind). The variable PED1 was not included in the creation of the meta-variable AWARENESS OF NON-INTERACTING ROAD USERS.

3) AWARENESS OF INTERACTING ROAD USERS

The following variables were included in the reliability analysis that created the meta-variable 'interacting road users'.

1. CAROT - awareness of a BMW car overtaking the subject's car in the right-hand lane of a slip road approaching a motorway.

2. RED - awareness of a red car ahead of the subject's car on the motorway overtaking a slow-moving lorry.
3. PASS - awareness of cars to the right of the subject's car in the second lane of the motorway, which are overtaking.
4. REV - awareness of a Renault reversing out of a parking space on the right-hand side of the road, right into the path of the subject's car.
5. FIESTA2 - recognition of the need to brake sharply as the Fiesta in front indicated, and braked sharply ready to drive into a parking space.
6. DOOR - awareness of a parked car on the left-hand side of the road, with its door wide open.
7. JUNCT2 - awareness of a car waiting to turn right (in a junction box at the bottom of a bridge), across the path of the subject's car.

Table 41d. Results of 'Interacting Road Users' Reliability Analysis.

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	ALPHA IF ITEM DELETED
CAROT	1.8305	1.9541	.0003	.4864
RED	1.6483	1.5822	.2267	.4251
PASS	1.6568	1.6221	.1931	.4404
REV	1.6017	1.6194	.1525	.4616
FIESTA2	1.2500	1.4564	.2394	.4196
DOOR	1.5763	1.4282	.3243	.3727
JUNCT2	1.5720	1.4203	.3293	.3697

N OF CASES = 236.0

N OF ITEMS = 7

ALPHA = .4670

The above variables were used to compute the meta-variable 'AWARENESS OF INTERACTING ROAD USERS', to provide a measure of subjects' awareness of other road users whose position and behaviours meant that subjects were interacting with them, across seven different situations (e.g., cars pulling out, overtaking or obstructing the subject's car).

4) AWARENESS OF ROAD LAYOUT.

The following variables were included in the reliability analysis that created the meta-variable 'road layout'.

1. BUS - awareness of a bus stop with a layby on the left.
2. JUNCT1 - awareness of filter lanes for cars turning left or right off of the main road.
3. BRIDGE - acknowledgement of the need to drive slowly as going over the bridge.
4. TRLT - awareness of pedestrian traffic lights on a semi-rural A road.
5. LITS1 - awareness of pedestrian traffic lights in a one-way traffic system in a town.

Table 41e. Results of 'Road Layout' Reliability Analysis.

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	ALPHA IF ITEM DELETED
BUS	1.3983	.8705	.1049	.2296
JUNCT1	1.4068	.9062	.0303	.2614
BRIDGE	1.1102	.6772	.0607	.2767
TRLT	1.0381	.5390	.2294	.0550
LITS1	.7924	.5993	.1553	.1604

N OF CASES = 236.0

N OF ITEMS = 5

ALPHA = .2480

The above five variables were used to compute the meta-variable 'ROAD LAYOUT', to provide a measure of subjects' awareness of road layout across four different situations (e.g., a bridge, a layby, pedestrian traffic lights and junctions).

5) AWARENESS OF REQUIRED ACTIONS/BEHAVIOURS.

The following variables were included in the reliability analysis that created the meta-variable 'required actions/behaviours'.

1. APPR - to show caution in terms of speed on the approach to joining a motorway, while observing motorway traffic for a suitable gap.
2. SIGR - to signal intentions to enter the first lane of the motorway.
3. SPEED - adjust the speed of the car to match that of others in the same motorway lane.
4. MID - move into the middle lane in order to overtake a slow-moving lorry.
5. CORRL - get into the correct lane as the road splits into three lanes at a roundabout.
6. CORRL2 - get into the correct lane as the left and right-hand lanes in the one-way system split and go in different directions.
7. SBOUT - reduce speed as approaching a roundabout.
8. SIGON1 - signal as entering a roundabout.
9. SIGOFF - signal before exiting from a roundabout.

Table 41f. Results of 'Required Actions/Behaviours' Reliability Analysis.

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	ALPHA IF ITEM DELETED
APPR	2.0890	2.3793	.1084	.4807
SIGR	2.1610	2.3059	.1991	.4439
SPEED	2.1949	2.3363	.1989	.4440
MID	2.1144	2.2549	.2120	.4391
CORRL	2.1483	2.2375	.2461	.4258
CORRL2	2.2288	2.4325	.1451	.4619
SBOUT	1.8008	2.2963	.1461	.4677
SIGON1	2.3475	2.5085	.2512	.4411
SIGOFF	2.1695	2.1158	.3672	.3788
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N OF CASES =	236.0	ALPHA =	.4727	N OF ITEMS = 9

The above nine variables were used to compute the meta-variable 'REQUIRED ACTIONS/BEHAVIOURS', to provide a measure of subjects' awareness of the required actions, behaviours or manoeuvres a safe driver should make, given

the current traffic situation around him/her and his/her current course, across nine different situations (e.g., getting into the correct lane when approaching a roundabout, signalling before making a manoeuvre).

6) AWARENESS OF REQUIRED OBSERVATIONS BEFORE ACTION

The following variables were included in the reliability analysis that created the meta-variable 'required observations before action'.

- 1. SLIP - look for cars behind as driving along a slip road prior to joining a motorway.
- 2. RTBHD - looking at traffic on the motorway, to the right and behind, as approaching the motorway on the slip road.
- 3. BEHIND - observation of cars behind, using the rear-view mirror.
- 4. GAP2 - looking for a clear space before joining the motorway.
- 5. GAP1 - looking to the right, to check for a clear space, before entering a roundabout.
- 6. PULL2 - observation of cars pulling out from side roads or parking spaces.

Table 41g. Results of 'Required Observations Before Action' Reliability Analysis.

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	ALPHA IF ITEM DELETED
SLIP	1.9619	1.2539	.1370	.2883
RTBHD	1.3432	1.0094	.1636	.2575
BEHIND	1.9958	1.3745	-.0454	.3443
GAP2	1.5169	.9316	.2066	.2173
GAP1	1.6102	.8857	.2734	.1525
PULL2	1.6780	1.0959	.0605	.3439

N OF CASES = 236.0 N OF ITEMS = 6
ALPHA = 0.3140

ALPHA
WITHOUT PULL2 = 0.3439 N OF ITEMS = 5

The above five variables (excluding the variable PULL2) were used to compute the meta-variable 'REQUIRED OBSERVATIONS BEFORE ACTION', to provide a measure of subjects' awareness of the required observations a safe driver should make before undertaking an action or manoeuvre, across five different situations (e.g., looking for a clear gap before entering a roundabout or joining a motorway).

APPENDIX E4.

**THE EXAMINATION OF GROUP DIFFERENCES
ACROSS 'ROAD ENVIRONMENT AWARENESS' META-VARIABLES:**

**DETAILS OF ANALYSIS OF VARIANCE TESTS, MEANS AND
STANDARD DEVIATIONS ON THE INTERACTIVE VIDEO DATA.**

APPENDIX E4.

THE EXAMINATION OF GROUP DIFFERENCES ACROSS 'ROAD ENVIRONMENT AWARENESS' META-VARIABLES: Details Of Analysis Of Variance Tests, Means and Standard Deviations.

The classification scheme used for the developmental groups throughout Appendix E4 is:

1 = 11-12 years, 2 = 13-14 years, 3 = 15-16 years,
4 = 17-18 years (non-drivers), 5 = 17-18 years
(drivers).

1) AWARENESS OF ROAD TRAFFIC SIGNS

The variable 'ROAD TRAFFIC SIGNS' is a mean of five variables indicating subjects' awareness of visible road traffic signs, both those high up and those painted on the road, across five different situations (e.g., 'no entry' signs, 'slow' signs and speed limit signs). The means tables below indicate what percentage of visible road traffic signs were noticed and reported by subjects.

Table 42b. Group Means and Standard Deviations For The Variable 'Road Traffic Signs'.

		Mean	Std Dev	Cases

Total Population		.16	.1813	236
Female		.15	.1925	100
Male		.17	.1730	136
DEV.GROUP	1.00	.22	.2280	50
F		.15	.1985	26
M		.28	.2426	24
DEV.GROUP	2.00	.15	.1501	60
F		.13	.1663	23
M		.16	.1401	37
DEV.GROUP	3.00	.18	.1971	58
F		.21	.2282	27
M		.15	.1630	31
DEV.GROUP	4.00	.16	.1528	25
F		.13	.1832	8
M		.18	.1393	17
DEV.GROUP	5.00	.10	.1336	43
F		.10	.1461	16
M		.10	.1285	27

A two-way analysis of variance test was performed on the variable 'Road Traffic Signs' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p < 0.01$), but there was a significant developmental group effect at $p < 0.05$. The table of means (Table 42b) indicate that 11-12 year olds had the highest awareness of road traffic signs while 17-18 year old had the lowest.

Table 42c. Two-Way Analysis Of Variance Test On The Variable 'Road Traffic Signs' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F

Main Effects	.360	5	.072	2.294	.046
DEV.GROUP	.344	4	.086	2.741	.029
SEX	.036	1	.036	1.142	.286
2-way Interactions	.266	4	.066	2.116	.080
DEV.GROUP SEX	.266	4	.066	2.116	.080
Explained	.626	9	.070	2.215	.022
Residual	7.100	226	.031		
Total	7.727	235	.033		

2) AWARENESS OF NON-INTERACTING ROAD USERS

The variable 'NON-INTERACTING ROAD USERS' is a mean of eleven variables indicating subjects' awareness of other visible road users whose position and behaviours meant that subjects were not interacting with them, across eleven different situations (e.g., parked cars, cars in front or following behind). The means table below indicates what percentage of visible (but, non-interacting) road users were noticed and reported by subjects.

Table 42d. Group Means and Standard Deviations For The Variable 'Non-Interacting Road Users'.

		Mean	Std Dev	Cases

Total Population		.18	.1254	236
Female		.15	.1218	100
Male		.19	.1256	136
DEV.GROUP	1.00	.15	.1141	50
F		.16	.1319	26
M		.14	.0928	24
DEV.GROUP	2.00	.17	.1298	60
F		.15	.1087	23
M		.18	.1413	37
DEV.GROUP	3.00	.20	.1255	58
F		.18	.1261	27
M		.22	.1238	31
DEV.GROUP	4.00	.17	.1154	25
F		.10	.1133	8
M		.20	.1043	17
DEV.GROUP	5.00	.19	.1345	43
F		.13	.1191	16
M		.22	.1318	27

A two-way analysis of variance test was performed on the variable 'Non-Interacting Road Users' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects at $p < 0.01$, but there was a significant sex effect at $p < 0.05$. The table of means (Table 42d) indicates that males were more aware of non-interacting road users than females were, while the 11-12 year olds had the lowest awareness of other non-interacting road users out of all the developmental groups: there was little variation in awareness between developmental groups 2 to 5.

Table 42e. Two-Way Analysis Of Variance Test On The Variable 'Non-Interacting Road Users' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.182	5	.036	2.414	.037
DEV.GROUP	.085	4	.021	1.404	.233
SEX	.096	1	.096	6.351	.012
2-way Interactions	.100	4	.025	1.650	.163
DEV.GROUP SEX	.100	4	.025	1.650	.163
Explained	.282	9	.031	2.074	.033
Residual	3.414	226	.015		
Total	3.696	235	.016		

3) INTERACTING ROAD USERS.

The variable 'INTERACTING ROAD USERS' is a mean of seven variables indicating subjects' awareness of other road users whose position and behaviours meant that subjects were interacting with them, across seven different situations (e.g., cars pulling out, overtaking or obstructing the subject's car). The means table below indicates what percentage of visible interacting road users were noticed and reported by subjects.

Table 42f. Group Means and Standard Deviations For The Variable 'Interacting Road Users'.

		Mean	Std Dev	Cases

Total Population		.27	.2010	236
Female		.20	.1650	100
Male		.31	.2119	136
DEV.GROUP	1.00	.21	.1761	50
F		.15	.1244	26
M		.29	.1976	24
DEV.GROUP	2.00	.24	.1948	60
F		.20	.1543	23
M		.25	.2160	37
DEV.GROUP	3.00	.28	.1957	58
F		.20	.1548	27
M		.35	.2016	31
DEV.GROUP	4.00	.30	.1886	25
F		.30	.1609	8
M		.29	.2050	17
DEV.GROUP	5.00	.32	.2356	43
F		.22	.2331	16
M		.38	.2206	27

Table 42a in the Interactive Video Results Section 4b presents details of the significant analysis of variance on 'awareness of interacting road users' by developmental group and sex.

4) ROAD LAYOUT.

The variable 'ROAD LAYOUT' is a mean of five variables indicating subjects' awareness of road layout across four different situations (e.g., a bridge, a layby, pedestrian traffic lights and junctions). The means table below indicates what percentage of road layout designs/structures were noticed and reported by subjects.

Table 42g. Group Means and Standard Deviations For The Variable 'Road Layout'.

		Mean	Std Dev	Cases

Total Population		.29	.1944	236
Female		.27	.1869	100
Male		.30	.1993	136
DEV.GROUP	1.00	.26	.1871	50
F		.24	.1878	26
M		.29	.1863	24
DEV.GROUP	2.00	.29	.1928	60
F		.26	.2039	23
M		.31	.1862	37
DEV.GROUP	3.00	.29	.1914	58
F		.32	.1594	27
M		.26	.2141	31
DEV.GROUP	4.00	.26	.2123	25
F		.25	.2563	8
M		.26	.1970	17
DEV.GROUP	5.00	.33	.1994	43
F		.25	.1713	16
M		.38	.2025	27

A two-way analysis of variance test was performed on the variable 'Road Layout' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p < 0.01$). The table of means (Table 42g) indicates that there are very slight differences between the developmental groups, and the sexes. An examination by developmental-sex groups, indicates that 17-18 year old male drivers have the highest awareness of all, with results showing 38%.

Table 42h. Two-Way Analysis Of Variance Test On The Variable 'Road layout' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F

Main Effects	.188	5	.038	1.005	.416
DEV.GROUP	.124	4	.031	.825	.510
SEX	.057	1	.057	1.517	.219
2-way Interactions	.227	4	.057	1.517	.198
DEV.GROUP SEX	.227	4	.057	1.517	.198
Explained	.416	9	.046	1.233	.276
Residual	8.466	226	.037		
Total	8.882	235	.038		

5) REQUIRED ACTIONS/BEHAVIOURS.

The variable 'REQUIRED ACTIONS/BEHAVIOURS' is a mean of nine variables indicating subjects' awareness of the required actions, behaviours or manoeuvres a safe driver should make, given the current traffic situation around him/her and his/her current course, across nine different situations (e.g., getting into the correct lane when approaching a roundabout, signalling before making a manoeuvre, and speeding up to join the flow of traffic when moving into the second lane on a motorway). The means table below indicates what percentage of required actions, behaviours or manoeuvres were reported by subjects.

Table 42i. Group Means and Standard Deviations For The Variable 'Required Actions/Behaviours'.

		Mean	Std Dev	Cases

Total Population		.27	.1844	236
Female		.23	.1829	100
Male		.29	.1818	136
DEV.GROUP	1.00	.23	.1529	50
F		.20	.1103	26
M		.26	.1848	24
DEV.GROUP	2.00	.24	.1939	60
F		.19	.2125	23
M		.27	.1785	37
DEV.GROUP	3.00	.26	.1947	58
F		.23	.1821	27
M		.29	.2044	31
DEV.GROUP	4.00	.29	.1898	25
F		.33	.2449	8
M		.27	.1623	17
DEV.GROUP	5.00	.35	.1673	43
F		.30	.1847	16
M		.38	.1518	27

A two-way analysis of variance test was performed on the variable 'Required Actions/Behaviour' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects at $p < 0.01$, but there were both significant developmental group and sex effects at $p < 0.05$. The table of means (Table 42i) indicates that as age increases and driving experience is obtained (from Developmental Group 1 to 5) so does a reported awareness of the required actions or behaviours. Results ranged from 23% with 11-12 years old, to 35% with 17-18 year old drivers. The 17-18 year old male drivers had the highest reported awareness of all groups, with results indicating 38%.

Table 42j. Two-Way Analysis Of Variance Test On The Variable 'Required Actions/Behaviours' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.598	5	.120	3.703	.003
DEV.GROUP	.383	4	.096	2.964	.021
SEX	.175	1	.175	5.432	.021
2-way Interactions	.092	4	.023	.713	.584
DEV.GROUP SEX	.092	4	.023	.713	.584
Explained	.690	9	.077	2.374	.014
Residual	7.297	226	.032		
Total	7.987	235	.034		

6) REQUIRED OBSERVATIONS BEFORE ACTION

The variable 'REQUIRED OBSERVATIONS BEFORE ACTION' is a computation of five variables indicating subjects' awareness of the required observations a safe driver should make before undertaking an action or manoeuvre, across five different situations (e.g., looking for a clear gap before entering a roundabout or joining a motorway). The means table below indicates what percentage of required observations were made and reported by subjects.

Table 42k. Group Means and Standard Deviations For The Variable 'Required Observations Before Action'.

		Mean	Std Dev	Cases
Total Population		.34	.2094	236
Female		.30	.2155	100
Male		.36	.2019	136
DEV.GROUP	1.00	.31	.1947	50
F		.27	.2187	26
M		.35	.1588	24
DEV.GROUP	2.00	.31	.1820	60
F		.29	.1576	23
M		.32	.1964	37
DEV.GROUP	3.00	.34	.2126	58
F		.33	.2427	27
M		.35	.1860	31
DEV.GROUP	4.00	.41	.2676	25
F		.42	.2712	8
M		.40	.2739	17
DEV.GROUP	5.00	.36	.2163	43
F		.27	.2049	16
M		.41	.2111	27

A two-way analysis of variance test was performed on the variable 'Required Observations Before Action' in order to examine for any developmental group, sex or interaction effects. As can be seen from the table below there were no significant developmental group, sex or interaction effects (at $p < 0.01$). The table of means (Table 42k) indicates that as age increases (from Developmental Group 1 to 4), so does the reported awareness of required observations before actions, until Developmental Group 5 (17-18 year old drivers) when the level of awareness drops down again. Results range from 31% at ages 11-12 years, to 41% for 17-18 year old non-drivers, and then down to 36% for 17-18 year old drivers. While females reported awareness score was 30%, their male counterparts had results of 36%.

Table 42L. Two-Way Analysis Of Variance Test On The Variable 'Required Observations Before Action' By Developmental Group and Sex.

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.396	5	.079	1.828	.108
DEV.GROUP	.200	4	.050	1.154	.332
SEX	.165	1	.165	3.814	.052
2-way Interactions	.123	4	.031	.710	.586
DEV.GROUP SEX	.123	4	.031	.710	.586
Explained	.519	9	.058	1.331	.222
Residual	9.782	226	.043		
Total	10.301	235	.044		