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# THE PSYCHOLOGY OF DRIVERS

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This brief perspective is focused primarily on people whose occupation is driving, rather than on the recreational or casual motorist.

A perspective by:

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## **INTRODUCTION**

We have all at one time or another wondered what 'makes people tick'. In broad terms, psychology is the study of human differences, in fact it concentrates on factors that make a person unique.

Psychology covers a wide range of human factors including;

Intelligence  
Attitude  
Aptitude and Abilities  
Interests  
Motivations  
Personality

Probably the most well known measure is the IQ test, which claims to measure intelligence (although there is a lot of controversy surrounding the 'fairness' of traditional IQ test).

The psychology of drivers is probably little different to that of other groups of people, in fact we would expect to find a 'normal' range of psychological traits in our commercial driving population. In other words drivers probably represent a good cross section of the population.

If however we are faced with a trainee selection exercise, we could summarise the 'best' potential drivers as being;

*"An emotionally balanced, mature and responsible person who is well organised, cautious, courteous and quick to learn. They should be realistic, contented and have a positive attitude towards their work and a background of social integration."*

We would tend to avoid;

*"A dullard who is aggressive and impatient, who is rather immature, shows few personal disciplines, is unobservant, selfish and is discontented. They show little initiative, need constant support and have a history of anti-social behaviour"*

## **ANALYSING THE JOB**

If we look closely at the commercial driving job, whilst it is difficult to make generalisations because of the quite diverse range of products carried or services offered, we could identify a number of key factors common to all drivers. Lets look at some of the psychological factors.

**A) Intelligence**

Good drivers cannot be too dull.

Besides the minimum levels of intelligence needed to learn the technical skill complexities associated with driving, commercial drivers need to plan routes, loading factors, complete paperwork and a whole host of other mentally challenging tasks.

**B) Aptitude/Ability**

Good drivers should ideally have superior abilities which are associated with driving ability.

Some people are clearly more efficient and skilful at handling a vehicle. Eye-hand-foot coordination, anticipation, reaction times etc. 'Natural' aptitudes are more easily trained and levels of technical skill are higher.

**C) Attitude/Interest/Motivation**

Drivers who have an interest in their work and do not have unrealistic expectations about the job tend to be more satisfied (in a given working environment). Employers require a good work ethic which includes self-motivation and self-discipline.

Job satisfaction, industrial relations, job stress, staff turnover and efficiency are all products of attitudes, interest and motivation.

**D) Personality**

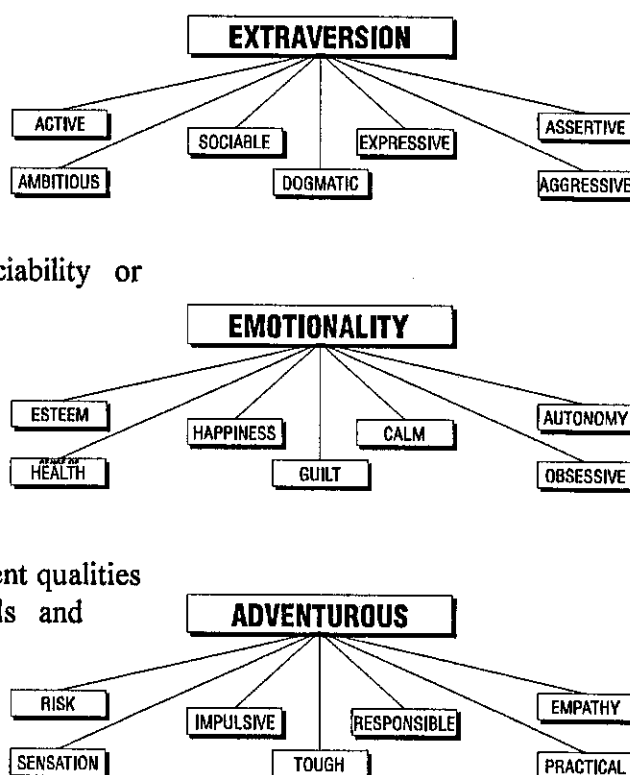
Most of us are familiar with the classical personality 'types' (sanguine, choleric, phlegmatic, melancholic). Modern thinking favours a 'trait' approach, which is the study of habitual behaviour patterns, like sociability or impulsiveness.

Personality could be defined as;

*"stable character traits that do not change over relatively short periods of time".*

In other words we are talking about consistent qualities rather than moods. Personality controls and modifies our behaviour.

**Dimension-Trait Chart**



**Figure 1 - Eysenckian Personality Model**

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One theory of personality which has been well researched and documented is the 'big three' model presented by Eysenck.

His model measures individuals on three major dimensions of personality, Extraversion/Introversion, Emotional Stability and Adventurousness (see Figure 1. below).

Each dimension may be divided into sub scales or traits and can be considered to be unique combination of these traits or characteristics.

Because Eysenck's work concentrates on 'trait' theory, employers are able to use these profiles to help predict employee behaviour.

### Eysenck Personality Profiler Two Dimensional Chart

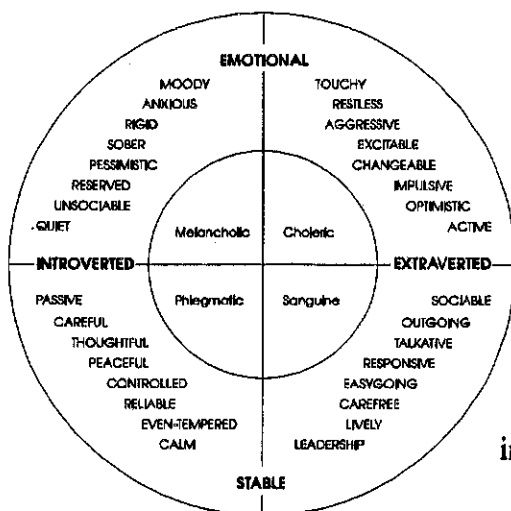


Figure 2 (left) shows the relationship between the classical personality 'types' and the modern 'trait' approach.

Whilst this is only a generalisation it is convenient and helpful for the novice to understand the basic concepts.

The short questionnaire at the end of this synopsis will provide the novice a quick insight into their own personality, although its brevity renders it largely useless in a selection exercise.

Figure 2 - The Personality Wheel

In essence the nature of the driving job is more suited to the cautious, stable introvert (as opposed to the adventurous, unstable extravert!). Although this is a generalisation rather than research findings.

The research however has shown that jobs requiring vigilance, long periods of solitary work, which have high levels of boredom, need high levels of concentration and self control particularly suit the stable introvert. Extraverts on the other hand seek sensation, change, get bored more easily and are more 'pushy'. They are better in the social domains and may be more prominent where the job has a higher content of interpersonal communication.

**HOW DO WE MEASURE THESE FACTORS?**

Psychometrics is a branch of psychology which concentrates on the measurement of these human characteristics. Objective measurement enables the user to make predictions about future behaviour and performance, even accident proneness.

Of course there are significant differences between journalistic playthings ("Are you are devil or a Dodo between the sheets?") and professionally developed questionnaires. A professionally developed questionnaire is based on many years of research and is carefully designed to meet rigorous statistical methodology.

Personality for example has been shown to predict;

- Trainability and learning styles
- Job stress and satisfaction
- High risk groups
- Performance

Personality can play an important role an organisation's effectiveness and efficiency.

Psychometricians however, tend to be purists who concentrate on statistical analysis and design rather than 'using' the tests. The branch of psychology called Industrial/Occupational psychology and specialist management consultants are the practitioners who have a range of tools available to assist the modern organisation with both selection, training and staff development.

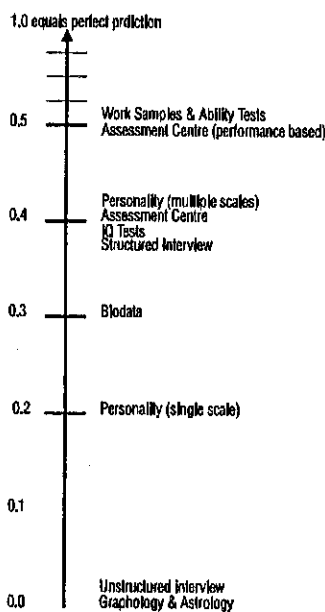
I/O consultants analyse the results of these tests hoping to find some predictive validity.

Predictive validity means that the test or questionnaire gives the employer a better chance of selecting the 'best' person for the job.

A question I am regularly asked is, "if you can measure an individual so accurately, can you tell me, is there such a thing as accident proneness?"

The answer is not so simple, but we can say that for sure there is a **higher risk group**. This last section briefly describes some of the personality factors often associated with this high risk group.

**PREDICTIVE VALIDITY TABLE**



$\$Value\ potential = Validity \times Score \times Differential \times No. \times Cost$

Where:  
 \$Value potential is the benefit in monetary terms of the selection  
 Validity is the predictive validity of the instrument  
 Score is the subjects percentage of optimum score  
 Differential is the difference in performance between high and low performers  
 No. is the number of positions to fill  
 Cost is the cost of the selection process

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**PERSONALITY & HIGH RISK GROUPS**

Because research has shown that there is a good correlation between personality and job performance, it has long been postulated there should be a similar correlation (association) between personality and accidents, or at least between personality and a high risk group. If there is such a correlation, how important is it?

Before we attempt to quantify any relationship, lets look at some of the more well known causes of accidents.

**'Hard' factors.**

<b>PHYSICAL</b>	<b>ENVIRONMENTAL</b>	<b>MECHANICAL</b>
posture/vision/hearing etc hypo/hyper glycaemia levels of stimulation levels of arousal distractions drugs and alcohol	weather road conditions traffic levels speed visibility time of day	wear and tear faults vehicle maintenance

**'Soft' factors.**

<b>DESIGN</b>	<b>TRAINING</b>	<b>PERSONNEL SELECTION</b>
optimum work place designs (eg. positioning of controls)	skills attitudes	intelligence aptitude attitude/motivation personality

Looking at some of the research findings, we see that;

**60-80% of accidents are caused by human factors**

**Over 60% of accident repeaters have records of other anti-social behaviour**

**Very low IQ ratings increase risk of accidents**

**Drivers control their own degree of risk**

Probably the most important statement is the last, drivers control their own degree of risk. In other words the individual makes the choice, high risk or low risk.

Probably the most notable of any statement made regarding driver personality was made by Tillman;

"a man drives  
as he lives"

Other research has pointed to driving being used for excitement, power, status, as a coping mechanism and even suicide!

It is because of this very fact that the research has shown that appropriate levels and types of training can reduce the accident rate of this high risk group. However the training must not only be aimed at technical skills but at changing ways of behaving; i.e. managing aggression, managing stress, creating independence, social adaptations etc.

### QUESTIONNAIRE

On the following page, there is a short questionnaire designed to give the novice an insight into their own personality.

We have included room for a colleague to answer how they see you. They should answer as they think you would answer.

The scoring key is located on the reverse side. Finally, remember this is not a 'real' test!

### MORE INFORMATION

For more information please contact:

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## QUESTIONNAIRE

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Please try the following short questionnaire, be honest, and to check how other people see you, ask them to rate you in the second column. I will give you the scoring key at the end of the lecture. The questionnaire is a very simple personality measure and is not designed for occupational use but is meant to help you understand the concepts.

Circle 'Y' for yes (more like me/them), 'N' for no (less like me/them).

		How you see yourself		How others see you	
1.	Do you sometimes feel happy, sometimes depressed without any apparent reason?	Y	N	Y	N
2.	Do you prefer action to planning for action?	Y	N	Y	N
3.	Does your mind often wander while you are trying to concentrate?	Y	N	Y	N
4.	Do you usually take the initiative in making new friends?	Y	N	Y	N
5.	Are you sometimes bubbling over with energy and at other times very sluggish?	Y	N	Y	N
6.	Are you inclined to be quick and sure in your actions?	Y	N	Y	N
7.	Do you have frequent ups and downs in mood either with or without apparent cause?	Y	N	Y	N
8.	Would you rate yourself as a lively individual?	Y	N	Y	N
9.	Are you inclined to be moody?	Y	N	Y	N
10.	Are you happiest when you get involved with some project that calls for rapid action?	Y	N	Y	N
11.	Are you frequently lost in thought even when you are supposed to be taking part in a conversation?	Y	N	Y	N
12.	Would you be very unhappy if you were prevented from making numerous social contacts?	Y	N	Y	N

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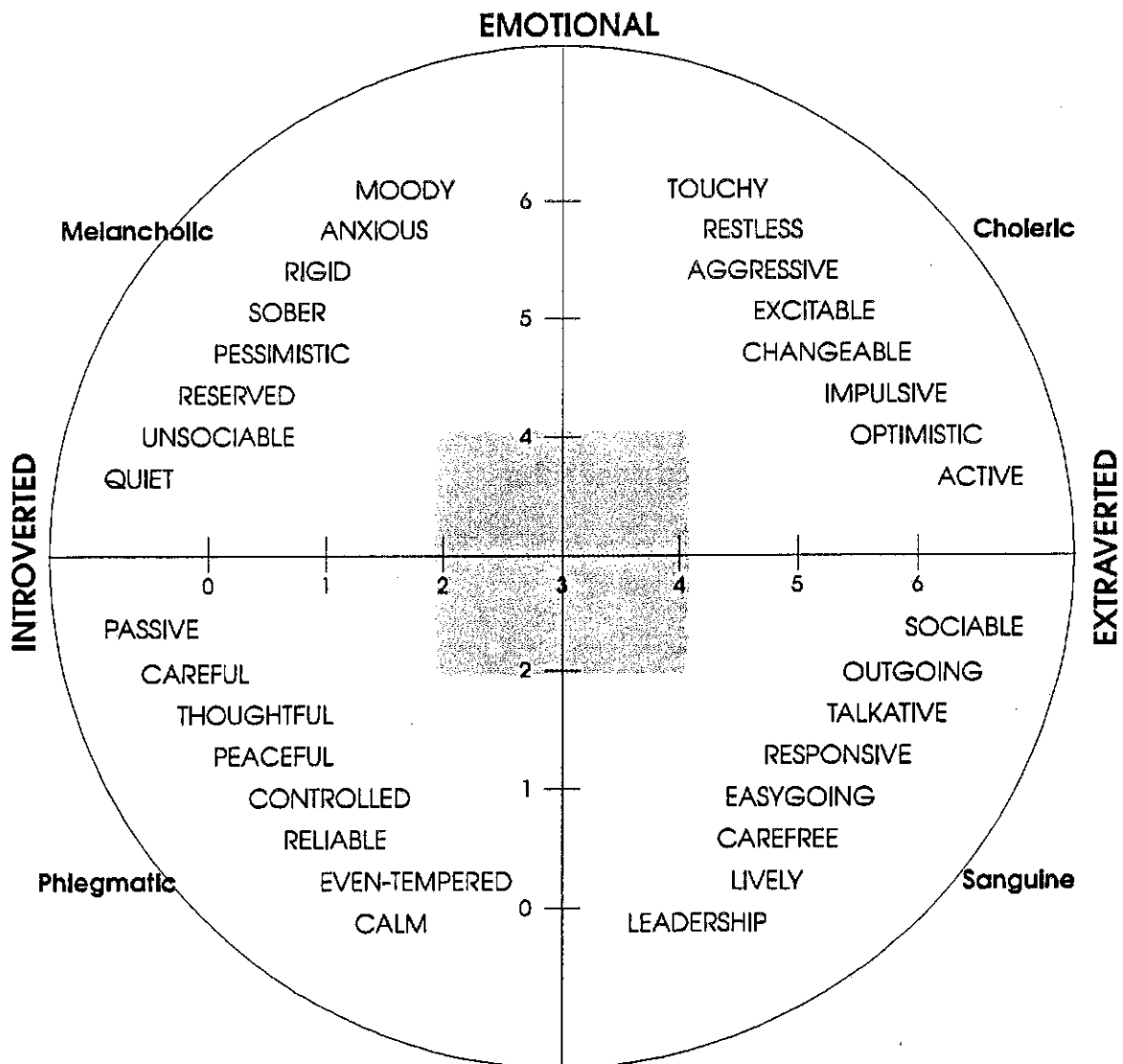
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**Extraversion/Introversion**

For the even numbered questions (2,4,6,8,10,12) you answered 'Y' (yes) to, score one point. 'N' responses score zero. The minimum score is 0, the maximum is 6. Plot this score on the chart below against the Ex/In axis. Use a square shape.

**Stable/Emotional**

For the odd numbered questions (1,3,5,7,9,11) you answered 'Y' (yes) to, score one point. 'N' responses score zero. The minimum score is 0, the maximum is 6. Plot this score on the chart below against the St/Em axis. Use a circle shape.



# **APPENDICES**

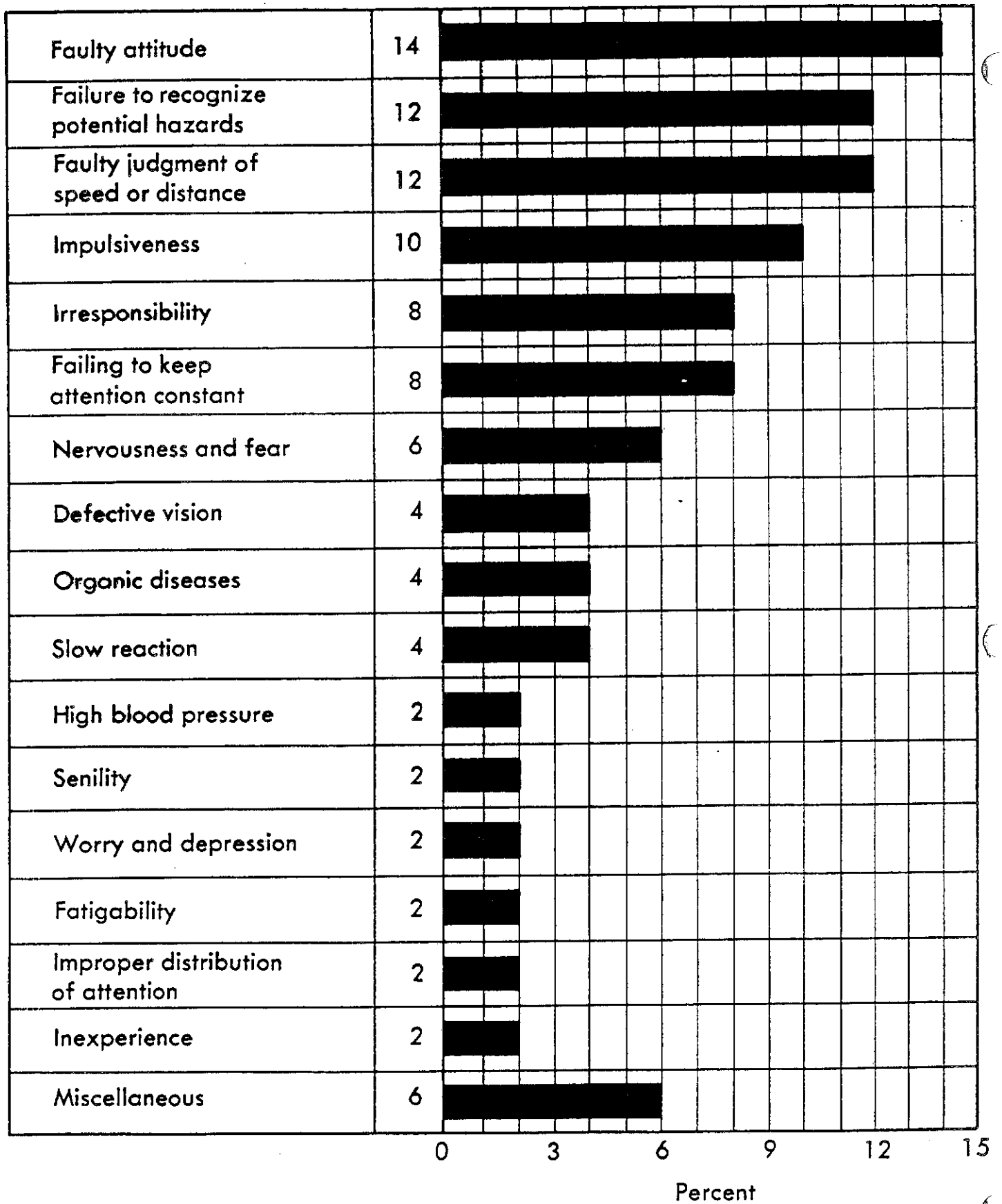
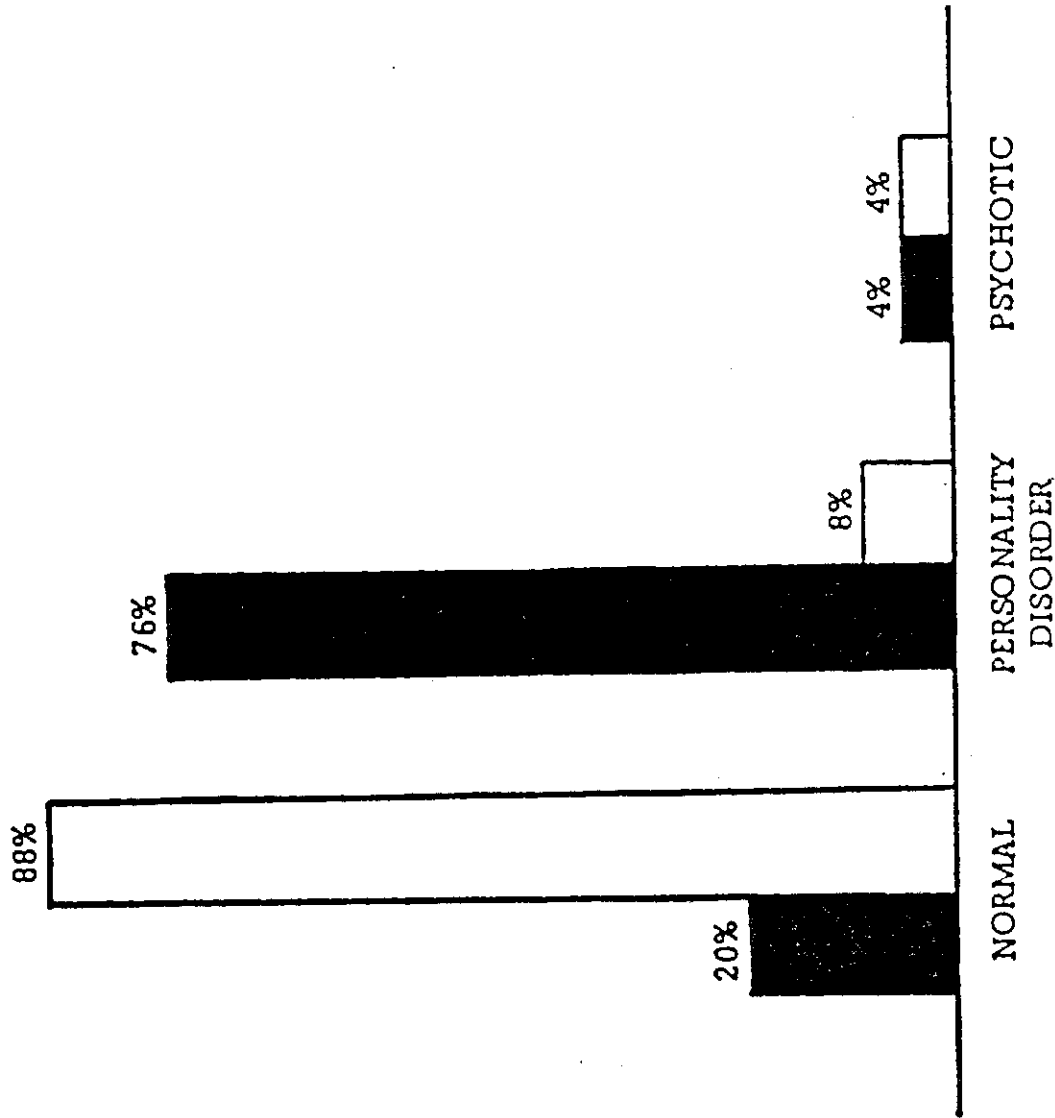
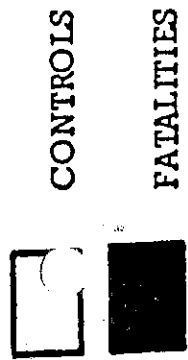


Figure 18.2. Primary causes of accidents. (Courtesy Metropolitan Life Insurance Company.)



**Figure 6-8.** Basic personality differences between fatally injured and control drivers. Reproduced from Finch and Smith [1970], Courtesy of Charles C. Thomas, Publisher.

# **PERSONALITY TRAITS ASSOCIATED WITH ACCIDENTS**

## **HIGH EXTRAVERSION**

more aggressive, more pushy, poorer vigilance, less trainable, less content

## **HIGH EMOTIONALITY**

nervous, easily distracted, poorer concentration, more suggestible, less confident, more imbalance

## **HIGH ADVENTUROUSNESS**

more risk taking, more impulsive, irresponsible, sensation seeking, more anti-social

# ACCIDENT PRONENESS STUDY

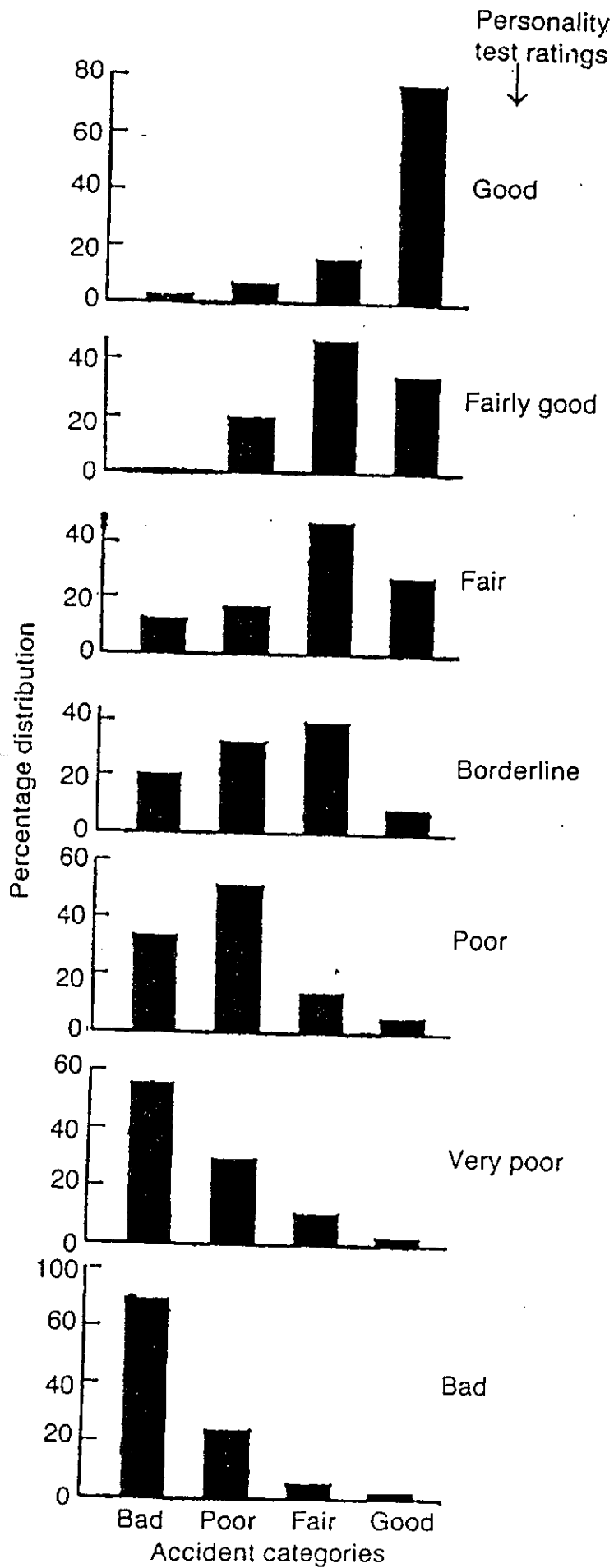


Fig. 8. Relation between personality test rating and number of driving accidents.

