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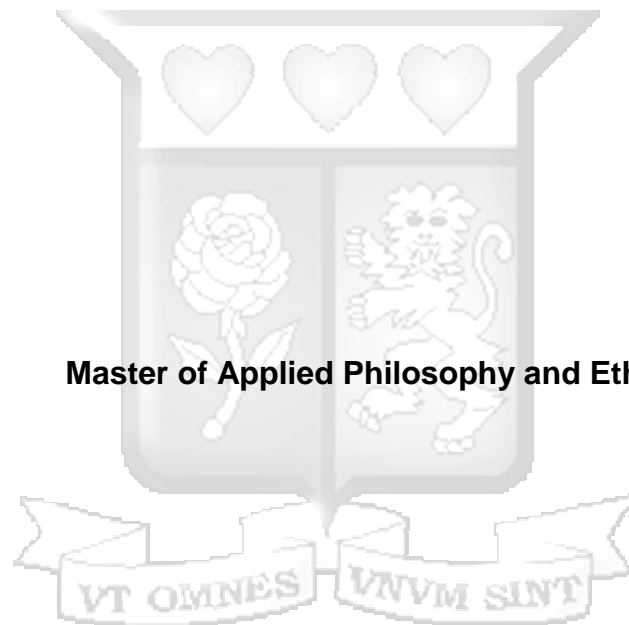
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An Assessment of Socially Responsible Behaviour of Motorists in Kenya

Njuguna, Paul Muiyuro



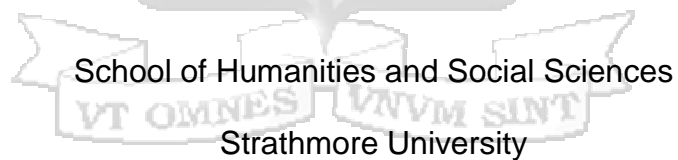
Master of Applied Philosophy and Ethics

2019

An Assessment of Socially Responsible Behaviour of Motorists in Kenya

Njuguna, Paul Muiyuro

Submitted in partial fulfilment of the requirements for the Degree of Master of
Applied Philosophy and Ethics at Strathmore University



School of Humanities and Social Sciences
Strathmore University

Nairobi, Kenya

June 2019

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Abstract

Road accidents are a major challenge globally and a cause of social and economic losses both in developed and developing countries. In Kenya close to 3,000 people die every year in road accidents, and the trend in recent years shows that the number is on the rise.

Implementation of road safety initiatives in Kenya is skewed towards authoritative enforcement of rules and the associated punishments intended to motivate adherence and deter 'deviant' behaviour by motorists. An approach to road safety where the motorist's actions are guided purely by the law is however inherently limited by the finite presence of law enforcers on the roads.

The purpose of the study was to investigate the relevance of Socially Responsible Behaviour (SRB) and virtue as a complement to the existing road safety efforts in Kenya, and how these could influence motorists' adherence to road safety requirements.

Data was collected from motorists using a mixed methodology, with both quantitative surveys and in-depth qualitative interviews to investigate the perceptions to dimensions such as personal responsibility, intrinsic motivation and the impact of an individual's actions on the society.

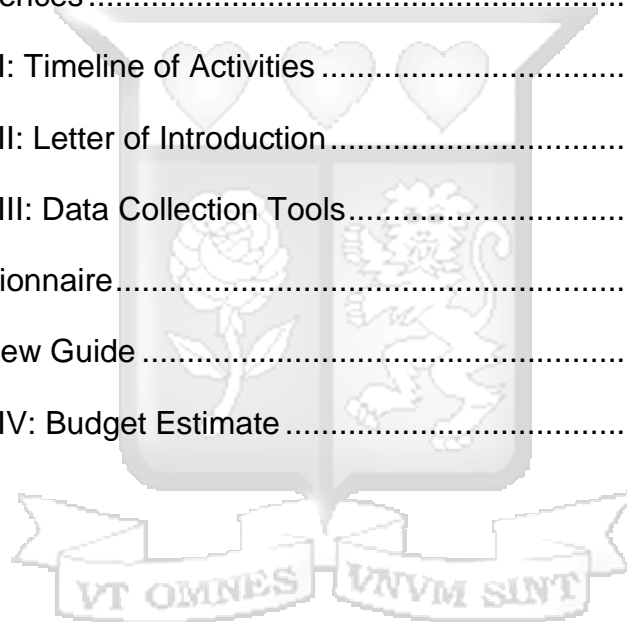
The outcomes of the study shed light on the applicability of a virtue-based approach towards road safety, and may be used by policy makers in the transport sector to integrate into the existing road safety framework.

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Definition of key concepts

Cognition: the mental processes through which humans gain knowledge and comprehension, including awareness, perception, reasoning and judgement.

Road Safety: any initiatives or measures put in place to prevent injury or death to road users.

Socially Responsible Behaviour: discretionary decisions and actions taken by individuals to enhance the well-being of society at large.

Values: principles, standards and ideals that an individual holds to be important, and which form a basis for judgements about what is good or bad.

Virtue ethics: an approach to ethics where the individual is central to their decisions to act, rather than rules about the acts or their consequences.



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List of Abbreviations

CIA	Central Intelligence Agency
CSR	Corporate Social Responsibility
GDP	Gross Domestic Product
ISR	Individual Social Responsibility
NE	Nicomachean Ethics
NTSA	National Transport and Safety Authority
PSR	Personal Social Responsibility
RQ	Research Question
RTDIs	Road Traffic Related Deaths and Injuries
SR	Social Responsibility
SRB	Socially Responsible Behaviour
WHO	World Health Organization



Acknowledgements

First and foremost, I thank the Almighty God for his providence and grace.

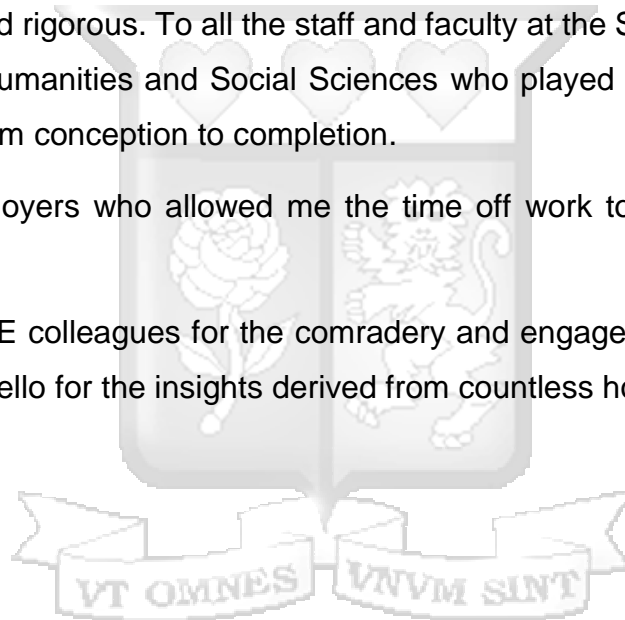
I extend my gratitude to my dear wife Peggy for her continuous encouragement and for being patient even when the need to study stole in to our time. And to our sons David and Daniel who inspired me in many ways, even if they don't know it yet.

To my nuclear and extended family for continuously showing interest in my progress and for their understanding when I could not make it for important events.

My gratitude to my supervisor Dr. Catherine Dean for being professional, objective and rigorous. To all the staff and faculty at the Strathmore University School of Humanities and Social Sciences who played a key role in guiding this work from conception to completion.

To my employers who allowed me the time off work to attend classes and exams.

To my MAPE colleagues for the comradery and engagement, and especially Dr. Polly Okello for the insights derived from countless hours of studying.



Chapter 1 : Introduction to the Study

1.0 Introduction

Road safety is an area of concern globally, regionally and locally, and road traffic accidents are a social problem that governments invest significant effort and resource to reduce. The purpose of this research was to examine socially responsible behaviour as a complementary approach to initiatives already in place, to assist with improvement of safety on Kenyan roads. The chapter is organized to include a background to the study, problem definition, research objectives, scope, significance, limitations and outcomes of the study.

1.1 Background to the Study

The first recorded pedestrian fatality caused by a car was reported in 1896 when Bridget Driscoll was hit and killed while crossing a road in London. The coroner who examined her body is quoted as saying that he hoped “such a thing would never happen again” (Fallon & O’Neill, 2005). Over a hundred years later and with millions of road traffic related deaths and injuries (RTDIs), road safety is a global concern.

Road traffic accidents claim more than 1.2 million lives annually, with millions more sustaining serious but non-fatal injuries and living with long-term adverse health consequences, as reported in the World Health Organization’s Global Status Report on Road Safety (2015). These accidents result in losses of up to 5% of GDP in low- to middle-income countries. Road accidents are the leading cause of (preventable) death globally among young people aged between 15 to 29 years, and ninth in rank across age groups (WHO, 2015).

90% of global road fatalities happen in low- and middle-income countries despite their relatively lower motorization, with Africa accounting for an estimated 246,719 fatalities annually, while the lowest rates are in the European Region, notably among its high-income countries (WHO, 2015), many of which have been successful at achieving and sustaining reductions in the absolute number of deaths despite increasing motorization.

Closer to home in Kenya, the National Transport and Safety Authority (NTSA) in the 2015 Road Safety Status Report (2016) reported an estimated 3,057 deaths from road

crashes in 2015, up 5% from 2,907 in 2014. An analysis of road user categories and their contribution to road fatalities in the same period showed private motorists as the highest growing category, increasing from 18% to 35% compared to public service vehicles whose contribution to fatalities decreased from 42% to 20% in the same period (NTSA, 2016). The economic cost of road crashes according to the NTSA report is estimated at 5.6% of the annual GDP which amounts to Ksh. 14 billion per annum (Ogendi et al., 2013).

The US Department of Transportation National Highway Traffic Safety Administration, in a survey of Motor Vehicle Crash Causation published in July 2008, attributed 93% of road traffic accidents to human factors broadly classified as “recognition errors, decision errors, performance errors, and non-performance errors” (p. 24). This is consistent with a study based on accident cause code classification by the Kenya Police (Odero, 2010) which indicates that 84.2% of car crashes are attributable to driver error. Ratemo (2015) states that Road Traffic Accidents in Kenya are largely caused by “behavioural and attitudinal problems” (p. 74) and show that in the year 2013 road accidents were primarily caused by “Driver & Motorist” (5,284 crashes) compared to factors such as vehicle defects, road defects and weather which contributed to 489, 131 and 73 crashes respectively (p. 72).

Some of the road safety initiatives implemented in Kenya and their enforcement effectiveness scored out of 10 (WHO, 2015) include: national speed limit (6), national drink-driving law (5), national motorcycle helmet law (4) and national seat-belt law (6). The Police Service in collaboration with the NTSA also uses roadblocks as a deterrent to errant behaviour and to enforce speed limits and drink-driving, although there is concern that these checks are an avenue for bribery (Ratemo, 2015).

Hope (2014) states that the culture of corruption has “grown roots in Kenyan society at large and become endemic” (p. 493) and that persistent corruption results in “weak governance institutions” (p. 500). The Kenya Police Service was ranked the most bribery-prone institution in the country (Transparency International, 2017). While it is probable that the state of corruption contributes to the road safety situation in Kenya, this research will not delve into it as it is a complex and weighty issue that cannot be comprehensively covered in this study.

According to the Kenya National Bureau of Statistics (Facts and Figures 2015), the population of Kenya in 2014 was 42.9 Million. The Kenya National Police Service annual report for the financial year 2015/16 indicates a total of 90,442 disciplined officers in the police force as at the end of June 2016. Using these statistics to calculate the police coverage, the ratio of police officers to citizens in Kenya is 210 officers to 100,000 citizens, or 429 civilians for every police officer (this includes all police formations – statistics specific to traffic police were not readily available). If compliance to road safety requirements was to rely solely on police enforcement this ratio would hinder their effectiveness.

The NTSA Status Report (2016) highlights some of the primary challenges that hinder fulfilment of their vision of a “sustainable and safe road transport system with zero crashes” - as a) behavioural and attitudinal aspects (drunk driving, speeding and disregard of the laws), b) insufficient funding for road safety, c) court outcomes that do not deter traffic offenders and d) inadequate enforcement to complement road safety education efforts (pp. 32 – 35).

While the NTSA report does not give statistics to quantify each of these challenges, it can be inferred from challenges a) and c) above that whereas individuals may be aware of the traffic laws and the consequences of breaking them, they choose not to obey the laws, and are not sufficiently deterred by the consequences of breaking the law.

Understanding the choices that people make whether or not to obey the law is a broad and complex issue that extends across many aspects of life, and this study will not attempt to provide exhaustive answers to those issues. Peter Koller in his article on Law, Morality and Virtue (2007) gives his opinion “whether and to what extent a well-functioning legal order is dependent on moral virtues” (p. 31). In the section headed “The Significance of Virtue in Law” (p. 42), Koller arrives at the conclusion that the sanctions used by a legal system, especially its “threats of force and punishment” (p. 43) are insufficient to provide individuals with the incentives to abide by the law. Koller’s view is that the role of laws and enforcement cannot, and indeed should not be a means for enforcing the inner principles, attitudes and virtues of the citizens, stating that “a legal order cannot sufficiently function without the support of corresponding civil virtues of its subjects supplementing the legal threats” (p. 44).

In a paper titled *Socially Responsible Behaviour: Developing Virtue in Organizations*, Schneider, et al. (2005) proposed that Socially Responsible Behaviour (SRB) is to be “understood as individual decisions and actions taken... that benefit society at large” (p. 6). They define SRB as “discretionary decisions and actions taken by individuals... to enhance societal well-being” (p. 11). Socially responsible people act based on a notion of “moral agency”, where responsible members of society “exercise choice, assume personal responsibility and are driven by a vision of the good life”, and are “intrinsically motivated, rather than by promises of rewards, threats or sanctions” (p. 15).

Schneider outlines four key assumptions about SRB, “that 1) it is based on choice and agency, 2) it is intrinsically motivated, 3) it is integrated into daily activities and decision making, and 4) it relies more on practical wisdom than universal rules or consequences” (p. 12). The three key personal characteristics that promote SRB in the Schneider model are “the individual’s cognitive processes, individual values and emotions” (p. 17), which according to her have a dynamic interaction in contextual situations towards emergence of SRB.

This study adopted the Schneider model to research socially responsible behaviour and its constituent characteristics in relation to road safety behaviour by motorists in Kenya. The focus on motorists over other categories was guided by the statistics (NTSA, 2016) that show motorists contributing to the largest increase in road fatalities between 2014 and 2015. The choice to use the Schneider model was made due to its practical approach towards understanding the complex topic of human behaviour (as per the SRB assumptions outlined in the previous paragraph), as well as its alignment to the notions of Aristotelian virtue ethics as will be explained in detail in a later section. The study however did not cover the third personal characteristic of the model (emotions) as this would have broadened the scope to include a psychological angle, which was not the focus of the study, thereby encumbering arrival at a concise conclusion. The study also attempted to understand the concept of virtue in relation to road safety and from the perspective of the Kenyan motorist. This was included in the study because whereas the model is founded on the notions of virtue ethics it does not explicitly include “virtue” as a characteristic of SRB.

The outcomes from the descriptive statistics, quantitative tests for significance and the emergent qualitative themes show the extent to which the approach proposed would

successfully enhance road safety as a complement to the initiatives that regulators have already put in place.

1.2 Problem Definition

The literature cited above suggests that road users are generally aware of the law and the consequences of going against the rules, but these are not strong enough motivators for compliance, an issue which is corroborated by Koller's assertion on the role of law. The problem is compounded by the low ratio of enforcers to road users such that relying solely on enforcement reduces the chances of effective implementation of road safety initiatives.

1.3 Research Objectives

General research objective:

The goal of the study is improvement of road safety in Kenya and resultant reduction in loss of lives through road accidents. The study established the self-perceived role of virtue and the association between cognition and individual values in socially responsible behaviour as proposed in the Schneider model, and how this is applicable to complement the existing road safety initiatives in Kenya.

Specific research objectives:

1. Identify the extent to which motorist's cognitive processes is linked to socially responsible behaviour on the road.
2. Identify the extent to which motorists' individual values are linked to socially responsible behaviour on the road.
3. Establish the self-perceived importance of virtue to motorists in relation to road safety practices.

1.4 Research Questions

The questions for the research, derived from the objectives outlined above are:

1. Are motorist's cognitive processes linked to socially responsible behaviour on the road?
2. Are motorist's individual values linked to socially responsible behaviour on the road?
3. What is the self-perceived importance of virtue to motorists in relation to road safety practices?

1.5 Scope of the study

Data was collected from motorists around the Kangemi flyover area along Waiyaki Way, an area that has been highlighted on the National Police Service website as one of the accident black spots in Nairobi County.

Respondent data was collected from motorists of private vehicles, as this class of road users has seen the highest rise in contribution to road fatalities between 2014 and 2015, an increase from 18% to 35% (NTSA, 2016). This selection of a sub-set of road users allows for concrete research outcomes which would otherwise have been clouded by inclusion of all categories.

The research respondents were over 18 years old as a basic inclusion criterion, as it is against the law for people under the age of 18 to drive. This averted the special ethical requirements that would have been required if there was an engagement with minors, and also eased data collection because there was no need to seek parental consent from respondents.

1.6 Significance of the study

It is anticipated that this research will open new possibilities in the approach by regulating agencies to road safety policy, messaging and implementation by providing insights into intrinsic motivations that promote socially responsible behaviour by motorists on the road. The findings from the study will inform the applicability of a complementary road safety approach for transport regulators in Kenya.

A reduction in RTDIs resulting from application of the study's findings would be a significant outcome to the government, contributing to its mandate to protect its citizens. Moreover, the reduction in the economic cost of RTDIs would allow the government to channel investment into other social and economic activities. Reduction in RTDIs would also contribute to the achievement of UN Sustainable Development Goal 3.6 which aims to halve the number of global deaths and injuries from road traffic accidents by 2020 (United Nations, 2015).

The Kenyan citizens would also benefit from a safer environment in which to pursue their activities with less fear of being involved in a road accident. Additionally, encouragement of the practice of virtue would manifest not only on the roads but in their everyday lives, contributing to individual flourishing.

As a topic that has not previously been researched in Kenya, the outcomes are of interest to academicians in various fields such as behavioural science, ethics and government policy.

It is not expected that the insights from this research will negate the current and planned efforts of regulators in the road transport sector – rather the findings will provide additional insight that they may consider piloting, measuring and implementing as a complement to their existing work.

1.7 Possible Limitations of the Research

Whereas every effort was made to design neutral data collection instruments, the research is centred around human behaviour and therefore carried an inherent risk of bias towards self-reporting of positive behaviour. Skewed responses may limit the usability of the research outcomes to directional findings that may require substantiation, possibly by an in-depth qualitative study.

Human behaviour results from a complex interaction of multiple factors including emotion, education and environment. While this study did not cover these aspects, the insights drawn from the research are expected to contribute to the design of a more in-depth qualitative study into the 'why' that drives individual behaviour.

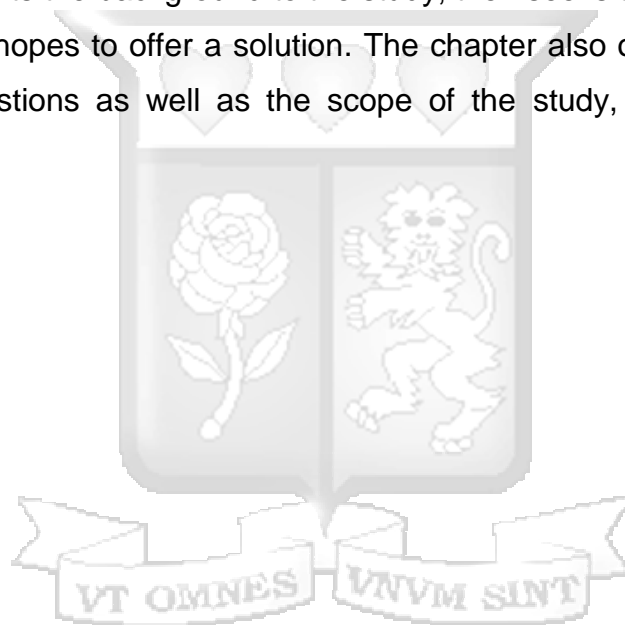
The research did not delve into the emotion aspect of the Schneider SRB model, because this would have extended the length of the questionnaire, necessitated a

change of research design, and / or broadened the scope of the study to an extent that it would be challenging to draw a solid conclusion.

The ideal design to study changes in behaviour would have been an iterative longitudinal study to observe and measure change of the same respondents over a long period of time (Cohen et al., 2000). Due to time and budgetary constraints, this research was cross-sectional, taking a snapshot of respondents as at the time of the study.

1.8 Conclusion

This chapter highlights the background to the study, then seeks to define the problem and how the study hopes to offer a solution. The chapter also outlines the research objectives and questions as well as the scope of the study, its significance and possible limitations.



Chapter 2 : Literature Review

2.0 Introduction

This chapter gives an overview of varied literature and theories related to socially responsible behaviour and virtue, and how the two concepts are linked. It also broadly highlights some empirical research on road safety and social responsibility and explain the rationale used to narrow down to the conceptual framework that guided the study. In addition, the chapter highlights the gaps in previous research that have necessitated this study.

2.1 Theoretical Review

While theoretical literature abounds in the field of ethics, there is a dearth of documented research and theories in the field of socially responsible behaviour of individuals; studies are predominantly related to Corporate Social Responsibility (CSR). Since this study is specifically geared towards individual responsibility, CSR models will not be considered; rather, perspectives related to ethical responsibility will be used as the closest available proxy.

Social Responsibility

Social Responsibility (SR) is defined as “a person’s obligation to consider the effects of his decisions and actions on the whole social system... SR, therefore, broadens a person’s view to the total social system” (Davis & Blomstrom, 1966, p. 46).

Boal and Peery (1985), pioneers in the study of the cognitive structure of social responsibility, show that SR is not unidimensional, and must therefore be modelled according to an individual’s cognitive map. They bring out 3 cognitive dimensions of SR that straddle across ethical theories: economic/market values as opposed to non-economic values; the ethics of non-maleficence as opposed to beneficence; and a dimension covering stakeholder interest. These dimensions are engaged in an interplay that individuals actively frame and use to make trade-offs and decisions through a cognitive process. While there is merit to the Boal and Peery theory in bringing out the complexity of decision making, its skew towards outcomes rather than the means or motives that drive SRB limited its applicability to this study.

Werhane (1999) proposed a moral imagination model defined as “...the ability to discover, evaluate and act upon possibilities not merely determined by a particular circumstance, or limited by a set of operating mental models, or merely framed by a set of rules” (p. 93). This model suggested that people have the ability to step beyond mind-sets and to evaluate the “mental traps” that they find themselves in. Being morally imaginative, according to Werhane involves self-reflection about oneself and the situations one is in, disengaging from and becoming aware of one’s situation, understanding the mental model or script dominating that situation, and mentally mapping possible moral conflicts or dilemmas that might arise as outcomes of the dominating scheme. Moral imagination helps one to conceive new possibilities, including those that are not context-dependent, and evaluates the original context, the dominant scheme and the new possibilities that one has imagined. Werhane’s theory has an idealistic approach that ascribes reality to the mind, a model which is not applicable to a study founded on a realist paradigm.

In an attempt to bridge the gaps in Peery and Werhane’s theories, Secchi (2009) proposes a cognitive approach where the individual is at the core of social responsibility, making decisions that affect other individuals and the society in general, but he argues that their cognition needs to be distributed beyond the mind. He argues against the concept that what happens in the human brain can be studied in isolation, quoting the question posed by Clark and Chalmers (1998): “where does the mind stop and the rest of the world begin?” (p. 27). Secchi outlines key influencers of behaviour beyond the human brain as: the environment, external resources, social resources and behavioural templates, arguing that these must be considered as part of the cognitive process because the individual is embedded in the social environment in which they think and behave. The merit in Secchi’s theory is in its acknowledgement of the role of external influences in shaping human thinking and behaviour, but the proposal to devolve the mind beyond the person would have proven problematic to this study because it opens itself up to the possibility of the individual being absolved from personal responsibility for their actions.

Some recently emerging theories linked to individual responsibility include the Professional Social Responsibility theory, primarily applicable to the fields of science and engineering. This theory proposes that professionals are “morally responsible for the negative consequences that may arise from the applications of their knowledge

and inventions”, and has been applied in the Vision Zero road traffic safety policy started in Sweden in 1997 and subsequently adopted in Norway and Denmark (Fahlquist, 2006), with the long term goal that no-one shall be killed or seriously injured within the road transport system (Johansson, 2009). The policy is based on a concept of forward / backward looking responsibility, introducing a distribution of moral responsibility for traffic safety between users and designers, with the latter taking the ultimate (forward-looking) responsibility for their influential role in future causation of accidents. The implementation of Vision Zero has been lauded for its success in improving road safety, but this concept was not considered in this research due to its limited applicability because such a policy has not been implemented in Kenya.

Personal Social Responsibility (PSR): defined by Davis, et al. (2017) as the way a person performs in his daily life as a member of the society, basing his decisions in a desire to minimize the negative and maximize positive impacts on the society, environment and economy in the long run. PSR is related with the emergent theory of Individual Social Responsibility (ISR) defined as “including the engagement of each person towards the community” expressed as maintaining active interest in what is happening in the community and an active participation in problem-solving for the community.” There is limited literature around PSR & ISR and their proposers, and neither of the theories delve into explaining the foundational principles, but inference from the definition skews these approaches towards altruistic and charitable causes in the society, such as donations and participation in community events. The PSR approach is not applicable to a road safety investigation because charity, on the opposite extreme from deontology, is purely voluntary and unregulated by law. Besides, the absence of a clear principle and conceptual framework makes it un-researchable.

Socially Responsible Behaviour

Schneider, et al. (2005) argue for the role of individual players and their character in development of CSR in organizations by examining virtue, character and certain elements of psychology as the aspects that drive SRB. The Schneider model places the individual person at the centre, stating that SRB is based on notions of moral agency where individuals exercise choice, assume personal responsibility, and are

driven by a vision of the good life. While this model was specifically developed for organizations it was adopted as a guide to this research primarily because it is practical and centred on the role of the individual person, it overcomes the shortcomings of pure utilitarian and deontological ethical theories, and it adopts a holistic and realistic approach to what it means to be human.

The Schneider model groups key individual characteristics driving SRB into three categories (pp. 17-31) that will guide the structure of this research. The first category, **cognition**, carries with it implications of moral reasoning and identity, personal responsibility, agency and choice. Kohlberg (1984) described moral development as a stage-wise progression – at pre-conventional levels 1 and 2 moral reasoning is based on rewards or sanction; at conventional levels 3 and 4 it is based on social acceptance and norms; at post-conventional levels 5 and 6 it is based on more abstract moral principles of the right thing to do. An individual's moral judgment relies more on internally held moral principles with each successive stage.

Moral integrity and identity are involved with turning intentions into actions, with the cautionary difference that “knowing what is the right thing to do is distinct from actually doing the right thing” (Blasi, 1980). This is where the principle of self-efficacy comes in as a necessity to actualizing a moral choice.

The second category deals with **personal values** that guide an individual agent's attitudes, choices and behaviours. This draws the distinction between people who are more concerned with the outcomes of their actions – such as success, efficiency and effectiveness – and those more concerned with the rightness or wrongness of their acts, and less sensitive to external reward or sanction. Schneider claims that the former are more inclined to seek reward and shun sanction while the latter are more likely to integrate responsible behaviour into every-day actions.

One of the key concepts related to values in the Schneider model is self-transcendence, which is consideration for the welfare of others through engagement in actions that protect others' interests and avoiding acts that exploit others for the benefit of self. Another key notion is *self as interdependent*, where one recognizes that they are an inextricable part of a whole, so their actions will impact on the well-being of others. This concept is consistent with Aristotle's notion of the inseparability of the

individual and the society. The final concept in the values category is openness to change, with the values of stimulation and self-direction.

The third broad category of the Schneider model deals with affect and emotions, which are a combination of psychological and biological responses that influence human behaviour. This category is only included here for complete representation of the Schneider model, but it was not covered in this research as it delves into the realm of psychology which was not the focus of this research, and though an important aspect in studying human behaviour, it can be covered in other studies to further ground research studies around SRB.

Virtue

Normative ethics broadly describes the theories of moral philosophy concerned with arriving at standards that regulate right and wrong behaviour in human society, with three main approaches proposed.

Classical utilitarian theories proposed by Jeremy Bentham and John Stuart Mill hold that an action is morally right if it serves the greatest good for the greatest number of people (Copleston, 1946). Utilitarianism identifies the good with pleasure, holding that that we ought to maximize the good, an approach which carries with it an implication of Epicurean hedonism (Gichure, 1997). Utilitarianism is criticized among other things for its focus on measurement and quantification which could be difficult, and in some cases irrelevant. This is a significant limitation in relation to road safety, because a driver's choice for instance to ignore a red traffic light at a deserted intersection might not inconvenience anybody, so a strict utilitarian may evaluate it as a morally acceptable act.

Moral actions in the deontological ethical theories are guided by the principles of obligation and duty (Gichure, 1997) proposed by philosophers such as Kant, where the evaluation of a moral act has more to do with adherence to formal rules than the outcomes of the act or the individual agent's personal goals. Solomon (1992) argues that this approach has forgotten the humanistic focus that is natural to ethics, and "takes away personal responsibility altogether". Whereas deontology is indispensable in the context of road safety where duty and obedience of the law are paramount, it is difficult to conceive how it can be all-encompassing, given the dynamism of road

usage that requires constant judgement and quick decision making in conflicted situations that the law may not have envisaged.

Virtue ethics is identified as the approach that emphasizes the individual agent, perhaps best understood by the Aristotelian notions of character, virtue and practice. Key to virtue ethics is its concern *both* with character and behaviour, referring to an individual's disposition to act, voluntarily and knowingly, in service of the common good, and where the virtuous act is "an end in itself" (NE 1094A). Depending on specific contexts, different virtues come into play and lead to *excellence* in action (Solomon, 1992). It is not enough, for example, to not break the law when driving – excellence requires one to consistently develop their natural capacity to do the right thing through practice, as this builds the practical wisdom (*phronesis*) to make proper judgement given the specific circumstances.

It is worth noting that the key concepts of these three approaches to normative ethics are not mutually exclusive, so there is room in each theory for virtue, consequence and rules. What distinguishes virtue ethics is the teleological aspect, the central position occupied by virtue (Watson, 1990), and the individual agent's character.

At this point the link that aligns the concept of SRB to Aristotelian virtue ethics will be brought out as it has not been explicitly stated thus far. In constructing the Schneider model, the authors made certain key assumptions underlying their definition of SRB as "discretionary decisions and actions taken by individuals in organizations to enhance societal well-being" (p. 10).

The first assumption in the Schneider model is that SRB is based on choice and agency (p. 11). Choice in the sense that individuals make rational decisions about the acts they choose to engage in, and socially responsible behaviour is based on an active pursuit of activities that benefit society. Agency in the sense that the individual's expression of their character through their actions is aimed at the common good, so living a good life for a socially responsible individual implies "bringing out the best of oneself in order to serve what is best for the community" (p. 12). The descriptions of choice and agency align with the Aristotelian definition of virtue as "a state involving rational *choice*... determined by *reason*..." (NE 1106b36 – 1107a1) and the notion that the self does not exist separately from the community, such that that which is good for the community is good for himself (Solomon, 1992).

The second assumption is that SRB is intrinsically motivated, deriving from fulfilment of higher order needs rather than external rewards. This notion bears a close resemblance to Aristotelian description of the nature of virtue as habits or trained faculties that “depend on ourselves and are voluntary” and the assertion that we can control our actions “from beginning to end, and we are conscious of them at each stage” (NE 1114b20).

The third assumption in the Schneider model is that SRB is “a way of being integrated into daily activities and decision making” (p. 13). Central to Aristotelian virtue ethics is the theory that virtues of character do not arise in humans by nature; rather what is natural is the capacity to acquire virtues (or vices) and perfect them by habituation (NE 1103a25). Development of virtue is therefore concerned with shaping of one’s character through practise and self-mastery in order to acquire the habit of excellence (*arête*).

The last assumption is that SRB relies more on the agent’s practical wisdom rather than on universal rules or consequences (p. 14). The complexity of situations that individuals find themselves in necessitates specific decisions that are suitable to the context, and socially responsible behaviour is practised by individuals with the propensity to choose the right act. Similarly, Aristotelian virtue ethics proposes that practical wisdom (*phronesis*) is key to determination of human action because there is no set of rules so “agents must always look at what is appropriate in each case as it happens” (NE1104a). The virtuous person knows how to walk the middle course between excess and deficiency depending on the situation at hand.

The personal characteristics of Schneider’s SRB model are aligned to Aristotle’s virtue theory which explains what, beyond the act itself, is needed for a virtuous act. The individual “must *know* that he is doing virtuous actions... *decide* on them, and decide on them for themselves” (NE 1105a31) – which aligns to Schneider’s cognitive processes. Additionally, “he must also do them from a firm and unchanging state” (NE 1105a34) – aligned to individual values.

The alignment between the concepts of SRB and virtue ethics outlined above provides the background for the conceptual framework of this research, which will be discussed in section 2.5 below.

2.2 Empirical Literature

Empirical works carried out on SRB and its effect on road safety are scanty. Nevertheless, this section will review some of the outcomes of empirical literature available on road safety and socially responsible behaviour.

Social consciousness and SRB

Schneider et al. (2010) carried out a randomized field learning experiment on 93 business managers to assess the relative effectiveness of different approaches to education in increased social consciousness and SRB. The study used executive education and meditation to raise the social awareness and social consciousness (respectively) of the managers. The results of the pre-post variations showed that the education program on social awareness *increased* the likelihood to take decisions that violated the “do no harm” principle, whereas the intervention based on meditation to increase social consciousness showed statistically significant positive changes in both social consciousness and SRB. Schneider et al. attribute these peculiar results to the limitations of “declarative knowledge” (know-what) and “procedural knowledge” (know-how) in development of a deeper understanding of self, personal traits and values that integrates into knowledge of the impact of one’s actions and decisions (know-why). They also state that SRB is a *reflexive* behaviour born of habit and embedded into one’s identity, rather than a reflective behaviour resulting from possession of knowledge. They support this claim by use of the analogy that despite the increasing levels of education by Business Managers, corporate scandals continue unabated. The outcomes from this study suggest that formal education on its own is not an effective tool to inculcate SRB, whereas ‘softer’ modes of education are more effective, which is consistent with the notion that “purely scientific knowledge (*episteme*) or technical skills (*techne*) are insufficient when it comes to issues where human well-being is at stake” (Tsoukas & Cummings, 1997).

Road safety

In 2015, the United States experienced 35,092 fatalities and 2.44 million injuries resulting from motor vehicle crashes, a 7.2% increase from 2014 and the largest percentage increase in 50 years. This was the second highest cause of unintentional

injury fatalities in the country (24.7%) and the leading cause of death in the 15 to 24-year age bracket (Sung et al., 2017).

The National Highway Traffic Safety Administration (NHTSA) in the United States has conducted behavioural research focusing on American road users, with the objective of developing and refining countermeasures to deter unsafe behaviours and promote safer alternatives. Despite their significant investments in behaviour change over the years, the percentage of speeding-related fatal crashes has remained at 30% between 1996 and 2012 (Richard et al., 2016). The Executive Summary of the report states that “speeding is a complicated behaviour that varies by driver and situation” (p ii). The broad strategies employed by the NHTSA revolve around engineering, public education and enhanced law enforcement (Sung et al., 2017), but more recently studies are being undertaken to understand motivations, attitudes and types of behaviour that may warrant different types of strategies (Goodwin et al., 2015). Other initiatives are being piloted to trial “intensive personal interventions” aimed at the attitude, skills and knowledge for high incidence drivers as a strategy for obtaining positive and lasting impact among participants in the program (Goodwin et al., 2015).

Research done on the Vision Zero road safety policy has shown that the rate of road accidents in Sweden has reduced from 6 deaths per 100,000 inhabitants per year in 1994 to 4.4 and 3.7 in the years 2008 and 2009 respectively, with a target of 2.2 in the year 2020 (Johansson, 2009). These positive results are attributed to the increased focus on forward responsibility of accident causation ascribed primarily to the designers of cars, road infrastructure and road safety policy, and only secondarily to the users. The policy’s assignment of a greater responsibility to the designers is based on the perspective that their role is preventive of future RTDIs by creating the right environment to minimize the user’s chances of being involved in an accident. The question asked, therefore, is not primarily “who caused it?” but “who should influence things so that it does not happen again?” (Fahlquist, 2006, p.4). The applicability of Vision Zero to this study is however limited because it is not explicitly founded on principles of virtue, and such policy has not been implemented in Kenya; the empirical data is included to demonstrate that conscious efforts to ascribe responsibility for road accidents have been made in other parts of the world with success.

A survey was carried out on 852 motorists in Australia by Soole et al. (2009) to measure the effect of overt versus covert police enforcement on speeding. The self-

reported results from the research showed that drivers typically perceive overt enforcement approaches to be more effective at achieving compliance to speed limits. As an example, a fixed camera was reported to be an effective enforcement tool for 69.7% of the respondents whereas a mobile, covert camera in the same driving situation was effective 44.8% of the time. The survey is primarily quantitative and does not give exhaustive narratives to explain the findings, but it can reasonably be inferred that the trigger for increased compliance to speed limits is not the driver's intrinsic motivation to do the right thing; rather the presence of clearly visible law enforcement and the avoidance of punishment triggers the desired behaviour. This shows that enforcement *does* work, but its effect is short-term while the motorist feels that they are under the radar and is likely to change when they are not in direct observation. Since it is not practical to have the entire road network under observation, the results from this study speak to the need for enhancement of road safety practise through individual SRB rather than increased enforcement.

2.3 Research Gaps

The main gap identified in the general approach to road safety is that whereas every traffic accident involves at least one individual, the approach towards acts that lead to improved road safety overlooks the role of the same individual. While acknowledging that rules and consequences are required for the establishment of order on the roads, this study aimed to investigate the incremental benefit that could accrue from the pursuit of road safety initiatives that are central to the individual, in line with the Aristotelian definition of a virtuous act outlined in Chapter 2, where the individual “must know that he is doing virtuous actions... decide on them, and decide on them for themselves” (NE 1105a31).

This research also contributes to study of the applicability of virtue ethics and SRB to road safety in Kenya, as this has not been done in the past.

2.4 Conceptual Framework

The approach to this study was guided by the model developed by Schneider et al. (2005) because of the underlying assumptions that align SRB to virtue ethics (p. 11), which are consistent with the aim of this research as outlined in the problem identification: overcoming the challenge of achieving transformational change in road safety behaviour solely through enforcement of the law.

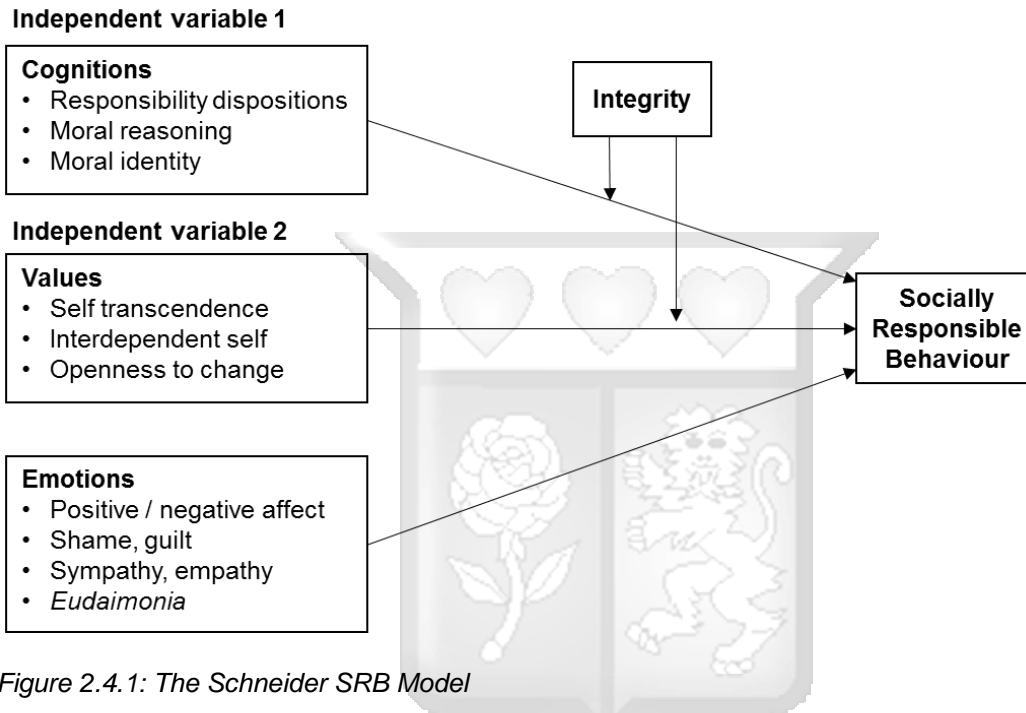


Figure 2.4.1: The Schneider SRB Model

Independent variables “reflect manipulated variables used for creating groups to compare”, while dependent variables are “either pre-existing or are the result of manipulation of the independent variable” (Beins and McCarthy, 2012 p.86) The Schneider model provides two out of the three independent variables that were used in the study, which are the individual characteristics of cognition and values (the third characteristic, emotion / affect, is not considered as explained in section 2.2). The third independent variable is virtue. It is thought that changes to these variables will result in a change to the dependent variable, which is road safety.

The investigation into the independent variables was conducted by questionnaire interviews structured around the 3 independent variables. Human behaviour and virtue are complex topics so the conclusions drawn from self-reported data on these subjects may not be as reliable as those drawn from relatively simpler topics such as household budgetary allocation. To counter the potential challenges with drawing conclusions

from data that could be construed as opinions, the questions were generally designed to examine for behaviour in an indirect manner, and phrased passively such that they did not focus on the respondent. For example, rather than asking to what extent the respondent agrees or disagrees that “it is OK to violate a traffic law as long as I don't get caught” the question was depersonalized to read “it is OK for *someone* to violate a traffic law as long as *they* don't get caught”.

The choice to incorporate a quantitative aspect to the study, interview a statistically significant sample and select respondents at random were additional measures to minimize the bias that could inhere in a study of this nature.

In recognition that a purely quantitative study may give insights that are of more interest to a statistical than a philosophical perspective, the data collection included in-depth qualitative interviews to enrich the findings by extracting recurrent themes to enable a deeper understanding of the “why” behind the numbers, breathing life into the conceptual framework.

2.5 Conclusion

This chapter reviewed varied theoretical and empirical models of socially responsible behaviour, linking the key concepts of SRB and virtue theory and providing the rationale for selection of the framework that was adopted in the study. The chapter also described the three broad normative ethical theories and their applicability to the problem identified in the study, and concluded with an outline of the research gaps that are being addressed and an overview of the conceptual framework.

Chapter 3 : Research Methodology

3.0 Introduction

This chapter describes the selected research design, including the size of the population, a rationalization of the sample selection and sampling procedures, definition of the data collection methods and the data analysis process utilized to achieve the objectives of the study. The steps that were taken to ensure validity, reliability and adherence to the requisite standards of research ethics are also outlined.

3.1 Research Approach

The research adopted a concurrent mixed method (Creswell, 2008) with both quantitative data collection and analysis to establish statistically valid associations between cognition, values and socially responsible behaviour, and qualitative data derived from in-depth face to face interviews guided by open-ended questions to establish the meaning and importance of virtue as it relates to road safety and socially responsible motorist behaviour. As outlined in section 2.5, the outcomes of a study with a philosophical perspective would not be achieved by pure statistics because the ensuing discussions would be skewed towards data validation and therefore lack the depth required to articulate and defend a precise philosophical position.

The data collection and analysis were cross-sectional, taking a snapshot of the selected population at a particular point in time (Cohen et al., 2000), with no respondent follow-ups scheduled due to time and budgetary constraints.

3.2 Population and Sample

The Kenya National Bureau of Statistics 2017 Abstract estimates the number of vehicles in Kenya in 2016 at 2.8 million, out of which 0.98 million are light duty non-commercial vehicles (p. 242). Due to the time and resource constraints that render a survey of the entire population impractical, a sample was selected. With a 95% confidence level, 5% margin of error and 50% response distribution, the minimum required sample size of 384 was surveyed for the quantitative data collection. This sample size was arrived at using the formula and table below (The Research Advisors, 2006):

$$n = \frac{X^2 * N * P * (1-P)}{(ME^2 * (N-1)) + (X^2 * P * (1-P))}$$

Where :

n = sample size

X² = Chi – square for the specified confidence level at 1 degree of freedom

N = Population Size

P = population proportion (.50 in this table)

ME = desired Margin of Error (expressed as a proportion)

Figure 3.2.1: Sample size formula

Confidence = 95%				
Population size	Margin of Error			
	5.0%	3.5%	2.5%	1.0%
1,000,000	384	783	1,534	9,512
2,500,000	384	784	1,536	9,567
10,000,000	384	784	1,536	9,594
100,000,000	384	784	1,537	9,603

Figure 3.2.2: Sample size selection

The sample population of 384 respondents was drawn from motorists in Nairobi's Kangemi flyover area, which has been highlighted in road safety reports as a high road-crash incident area in Nairobi County. Random sampling was used to select respondents meeting the minimum inclusion criteria – motorists within the targeted location. The identified respondents gave the researcher and research assistants referrals for potential respondents within their social or professional networks.

Since the research adopted a concurrent mixed method, the sample of interviewees for the qualitative research was drawn from the 384 respondents for the quantitative survey. The criteria for participation in interviews was the respondent's availability of time to proceed with open-ended questions after completion of the survey. The objective of the qualitative research is identification of recurrent themes relating to the respondents' understanding of virtue, and interviews were conducted until theoretical saturation was reached (Hancock et al., 2001) after 7 in-depth interviews, at which point the researcher felt that additional data from new cases would not contribute further to the development of the themes.

3.3 Data Collection Methods

Quantitative data was collected via structured questionnaire administered in person by the researcher and trained research assistants, with an online replica hosted at Google Forms both for convenience of respondents who may not have had sufficient time for an in-person interview, as well as for ease of accessing additional respondents referred through respondent networks. The Google questionnaire had a time limit corresponding to the final schedule of activities and was taken offline once data analysis began.

To avoid causing traffic obstruction during data collection, access to the motorists responding to the questionnaire was limited to areas where their cars were parked such as residential estates, car washes, petrol stations and restaurants.

The questionnaire consisted of 3 sections: the first was a collection of respondent demographic data which was used when investigating for trends in profile, the second and third sections contained closed-ended questions around cognition and personal values respectively, employing use of Likert scales to allow flexibility of responses while maintaining the ability to measure them quantitatively.

Qualitative data was collected through in-depth interviews with respondents selected from within the quantitative sample. The interview guide contained open-ended questions and was aimed at understanding the perception of the notion of virtue and its importance to the respondents in relation to socially responsible behaviour and road safety.

The mapping of the data collection tools to the research questions is summarized in the matrix below:

Research Question	Data Collection Tool	Type of question
N/A	Questionnaire Section 1	Demographic
Are motorist's cognitive processes linked to socially responsible behaviour on the road?	Questionnaire Section 2	Closed-ended

Are motorist's individual values linked to socially responsible behaviour on the road?	Questionnaire Section 3	Closed-ended
What is the self-perceived importance of virtue to motorists in relation to road safety practices?	Interview Guide	Open-ended

Table 3.3.1: Data Collection Matrix

The researcher administered quantitative surveys after which open-ended interviews were conducted with respondents who gave consent to the additional participation. The qualitative interviews continued until theoretical saturation was reached, where new interviews were found to confirm earlier insights rather than unearth new discoveries. Research assistants were engaged to assist with collection of quantitative data by administration of the questionnaires in the selected sample area, and they were paid for their service. For the qualitative inquiry to be effective it needed to allow for flexibility to probe for meaning on emerging issues and build on insights previously acquired, which would have been challenging to achieve if assigned to multiple researchers. Therefore, the research assistants were not involved in the qualitative interviews.

To accommodate varying literacy levels among respondents the data collection tools included a Swahili translation that made it easy to switch from English when required.

3.4 Data Analysis

The quantitative data collected was analysed using IBM's Statistical Package for Social Sciences (SPSS) to conduct Chi-square tests for the significance of relation, to assess whether differences between scores / data collected are caused by chance or statistically significant (Cohen et al., 2000). Chi-square tests were also conducted to test whether there were significant differences in the responses from various demographic profiles. The social sciences significance threshold was applied in the analysis, with chi-square values less than 0.05 pointing towards a positive relation.

Qualitative thematic analysis was conducted by extracting textual themes appearing in the interview transcripts and using QSR International's NVivo software to identify recurrent themes that supported the quantitative findings.

The relevant findings from both quantitative and qualitative data analyses are presented in summary tables supported by narrations to support the calling out of specific correlations. The narrative also provides the link between the conclusions arrived at and their philosophical relevance.

3.5 Research Quality

The questionnaire was subjected to validity tests to assess the extent of its fitness for the research. Face validity is a high-level test to check whether the research instrument “appears, at face value, to test what it is designed to test” (Cohen et al., 2000). This was assured by administration of the questionnaire to an academic at the university and a professional colleague, both of whom had been briefed on the study. Content validity was also undertaken prior to data collection by two external assessors with the requisite knowledge, to ensure proper coverage and representation of questionnaire content in relation to the research topic, such that the instrument “fairly samples the class or fields of the situations or subject matter in question” (Cohen et al., 2000, p. 213).

To ensure internal consistency (reliability) of the test scores, a Cronbach’s Alpha test was run on SPSS during data analysis, with an acceptance threshold of ≥ 0.7 .

3.6 Research Ethics

Consent was sought from each respondent, and the objectives of the research were explicitly stated. Participation in the study was entirely optional and the researchers were trained to accept declination without any further insistence. It was explained that if any respondent who had previously consented decided to pull out at any point before analysis and publication of the final report, any data collected from them would be purged. The researcher’s contact information was provided to the respondents to facilitate later withdrawal, or any query that may have arisen. Additional contact information of an independent person who can be reached regarding the research was also provided.

Formal consent from Strathmore University and the IRB to administer the questionnaire was sought in advance. Where motorist interviews were carried out on

a private premise such as residence or a petrol station, advance consent was sought from the relevant management representatives. No incentives were offered for participation in the research.

This study focussed on motorists, and the minimum inclusion criteria for respondent participation was an adult found operating a motor vehicle within the targeted location. Researchers asked the respondent's age and recorded it on the questionnaire but did not ask to validate the respondent's age or the status of their driving license because the researchers had no authority to make such enquiries, and this may have caused unnecessary agitation. The selection of motorists and recording of age on the questionnaire excluded minors from participating, so guardian consent was not necessary.

The data collected was used to profile respondents at aggregate level such as age, gender and occupation but individual respondents are anonymous. Research assistants were trained on the required ethical standards to adhere to in the data collection process.

The nature of the study was such that certain questions touching on virtue or character may have been perceived by some respondents as crossing personal boundaries. Taking this into cognizance, such questions were optional. If any respondent profiles were to stand out to the point of making them identifiable, the researcher would have ensured to fictionalize accounts for protection of identity.

The consent form explicitly stated what participating in the study involved as well as the risks or benefits of taking part in the study. Further assurance was given to the respondent on the security of storage of the information collected from them, and the persons who would be able to access their information.

3.7 Conclusion

This chapter covered the research approach and design, the size of the population, a rationalization of the sample selection and sampling procedures, description of the data collection methods and the data analysis process utilized to realize the objectives of the study. The chapter concluded with the steps that were taken to ensure research quality and research ethics.

Chapter 4 : Presentation of Research Findings

4.0 Introduction

This chapter contains the results from the data collection questionnaires and in-depth interviews. The presentation is made in the form of a summarized narrative supported by tables and graphs that relate the data to the key dimensions of the research.

4.1 Descriptive Statistics

4.1.1 General Respondent Information

Quantitative data collection was carried out between 26th and 31st January 2019 by the researcher with the help of five trained assistants. A total of 408 questionnaires were administered with one respondent declining to complete and requesting to withdraw from the study, bringing the effective sample size to 407 which is 23 more than the recommended sample size of 384. Out of the completed forms 378 were filled in person and the remaining 29 were filled online on a Google Forms replica of the questionnaire.

The Likert scales in the questionnaire were analysed for internal consistency using SPSS Cronbach Alpha on the entire dataset, and a result of 0.704 was obtained against the acceptance threshold of ≥ 0.7 . The reliability analysis further shows that one question, "I need to be free to act in any way that I please", would increase the score to 0.748 if deleted.

Section 1 of the questionnaire (Appendix III) contained demographic data about the respondents: their gender, age, years of driving experience, average hours spent on the road daily and their highest level of educational attainment.

270 of the respondents were male (66%) while 130 were female (32%). 7 of the returned questionnaires did not indicate gender (2%) and were entered as "Blank" during data entry. This is presented in the chart below:

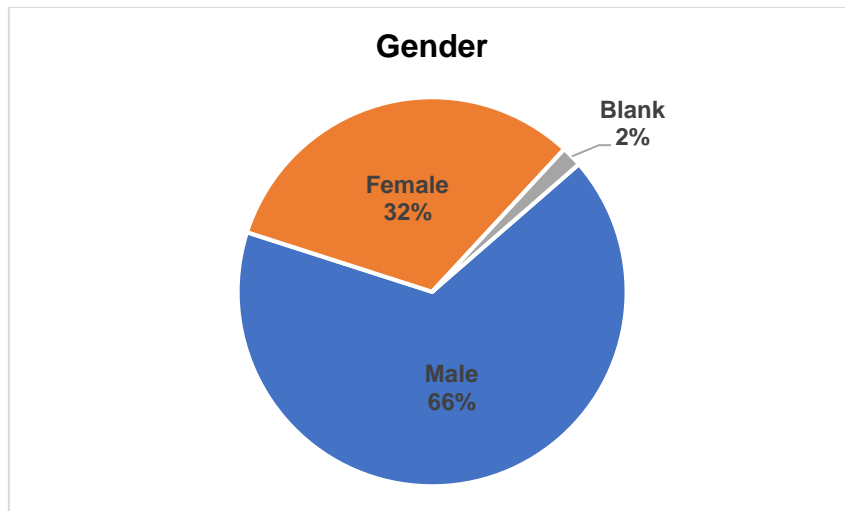


Chart 4.1.1.1: Gender Distribution

Respondents were asked to indicate their age bracket and 398 responded. Most respondents were between 26 and 33 years of age (167 respondents, 42%) followed by 34 – 41 years (115 respondents, 29%) and 42 – 49 years (65 respondents, 16%). Since the inclusion criteria for participation in the study was to be a licensed motorist, it was not expected that any respondent would be aged less than 18 years old.

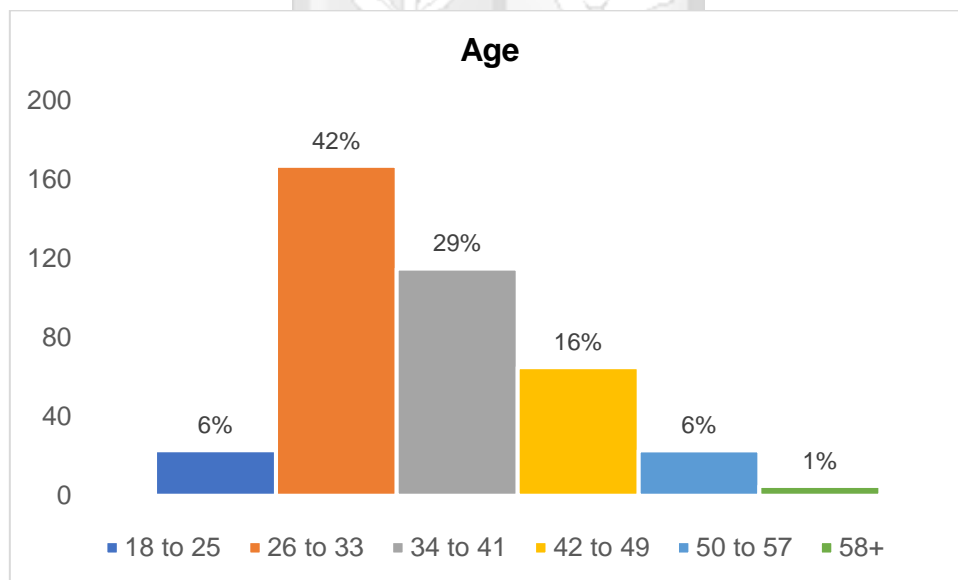


Chart 4.1.1.2: Age Distribution

The study also sought to establish how many years of driving experience the respondents had. The findings were that 75 respondents had driven for less than 5 years (20%), 122 had driven for 6 to 10 years (33%), 29% for 11 to 15 years, 11% had

driven for 16 to 20 years, and the remaining 7% split between those that have driven for 21 to 24 years (3%) and over 25 years (4%).

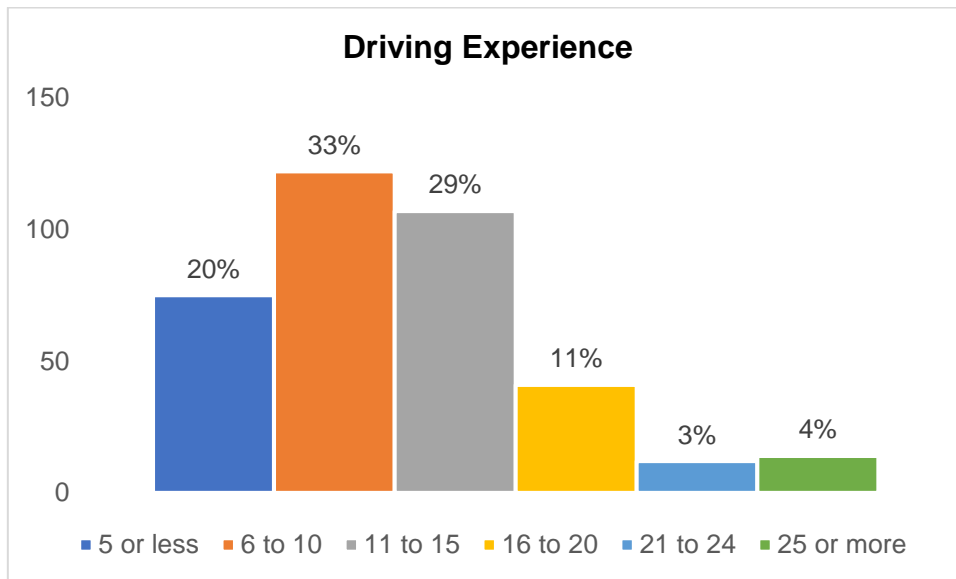


Chart 4.1.1.3: Years of driving experience

In addition to the years of experience the researcher asked respondents how many hours they spent driving on an average day. One third (33%) spent 2 to 3 hours a day driving, 21% spent 3 to 4 hours, 15% spent 1 to 2 hours, 14% drove for 4 to 5 hours, 13% spent more than 5 hours a day, and 3% spent less than an hour.

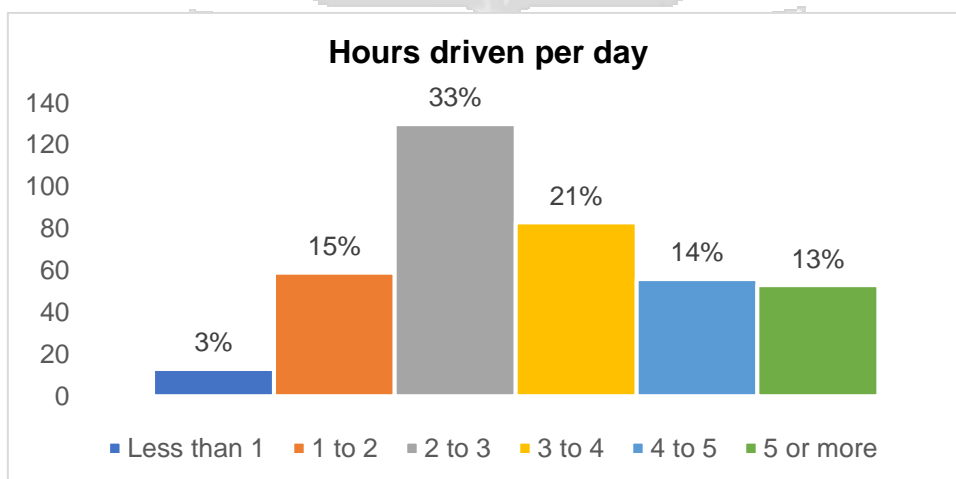


Chart 4.1.1.4: Hours spent driving per day

Finally, in the demographics section respondents were asked to indicate their highest level of education completed, ranging from “None” to “University”. The largest

percentage of respondents mentioned their highest attainment level as secondary school (58%), 31% indicated primary school, with university at 9% and the remaining 2% mentioning that they had not received any formal education.

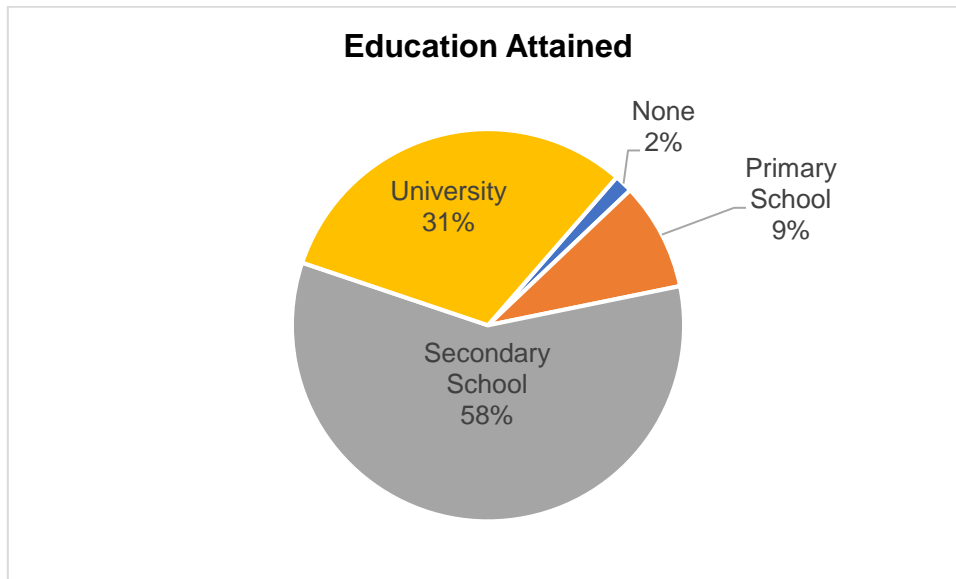


Chart 4.1.1.5: Level of education

4.1.2 Computation of Weighted Average Scores

The results from the Likert scale questions are summarized in tables that display the percentage distribution of responses and, to facilitate an objective comparison, a weighted average score out of 5 has been computed for each question and included in the last column of the table. The weighted score is arrived at by cumulating the product of responses (number of respondents multiplied by the score) across the Likert scale and dividing it by the total number of respondents as shown in the example below.

Likert scale score (a)	1	2	3	4	5	TOTAL
No. of respondents (b)	6	7	8	9	10	40
Score x no. respondents (c)	6	14	24	36	50	130
Weighted average score (c/b)						3.25

Table 4.1.2.1: Computation of weighted average score

4.1.3 Responses on Cognition

Section 2 of the questionnaire contained closed-ended questions to examine the respondents' understanding of various aspects of road safety and social responsibility in line with the first research question: "Are motorist's cognitive processes linked to socially responsible behaviour on the road?".

Question 2.1 asked the respondents to indicate on a scale of 1 (strongly disagree) to 5 (strongly agree) their extent of agreement with a list of statements related to cognition as outlined in the conceptual framework.

Responsibility Disposition

According to the Schneider model the disposition of responsibility for one's actions is a key factor in SRB, with individuals who link their behaviour to personal or internal factors being more inclined to socially responsible behaviour than those who define the responsibility externally to factors such as the outcomes of the action or adherence to established laws.

Items (a), (b) and (c) in Question 2.1 were designed to examine the extent of personal responsibility for road safety by respondents indicating to what extent they agreed that road safety is the responsibility of the government, of every road user or of the police. It was anticipated that respondents may not assign full responsibility to any one of these parties, so the questionnaire asked for a score for each party.

The weighted average scores showed the highest number of respondents feel that road safety is the responsibility of every road user (3.74) followed by the police (3.33) and the government (3.08) as tabulated below.

2.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
a	Road safety in Kenya is the responsibility of the government	15%	24%	13%	36%	13%	3.08
b	Road safety in Kenya is the responsibility of every road user	5%	12%	10%	47%	25%	3.74
c	Road safety in Kenya is the responsibility of the police	9%	21%	13%	45%	13%	3.33

Table 4.1.3.1: Cognition – responsibility disposition

Question 2.2 was intended to validate the above responses on responsibility disposition using a less abstract wording. Respondents were asked to rank in order of priority from 1 (highest) to 6 (lowest) the extent of road safety improvement that would result from certain actions. The scores indicated that the highest impact would be brought about by improved road infrastructure (2.73), followed by “adherence to existing traffic laws” (3.07), “road users doing the right thing” (3.51) “more police officers” (3.68). “New traffic laws ranked” fifth at 3.77 and “well-maintained vehicles” ranked 6th with a score of 4.01.

For this ranking result the weighted average score is computed in the reverse order because 1 represents the highest and 6 the lowest score. The findings are summarized in the table below:

2.2. Which of the following will have the highest impact on improved road safety?		Ranking						Wtd. Av.
		1	2	3	4	5	6	
a	New traffic laws	9%	23%	13%	18%	11%	26%	3.77
b	Adherence to existing traffic laws	22%	17%	19%	20%	13%	8%	3.07
c	More police officers	19%	10%	14%	20%	16%	21%	3.68
d	Improved road infrastructure	32%	23%	15%	10%	11%	9%	2.73
e	Road users doing the right thing	19%	14%	13%	16%	26%	12%	3.51
f	Well maintained vehicles	5%	12%	26%	16%	17%	25%	4.01

Table 4.1.3.2: Impact on road safety

Moral Reasoning

Question 3.3 investigated moral reasoning which according to Kohlberg (1984) is a three-stage progression of the motivations for an individual's actions: from the lowest level where it is based on rewards or punishment, to the intermediate level where the primary motivation is society's acceptance of the act, to the highest level where actions are based on the notion of doing the right thing. The question asked respondents to choose from three options which one should be the key consideration for decision

making, to which 59% of respondents indicated that the key criterion is that the decision chosen is right, 21% the reward or punishment associated with the decision and 19% the acceptance of the decision by society.



Chart 4.1.3.1: Moral reasoning

Moral Identity

One of the key dimensions of this study’s conceptual framework is the notion of moral identity which holds that knowledge of the right thing to do is distinct from turning that knowledge or intention into action.

Question 2.1 item (f): “Knowing the right thing to do is the same as doing it” was intended to gauge the respondent’s view on the link between knowledge of an act and execution of the act. 57% of respondents agree or strongly agree (summation of the percentage distribution in columns 4 and 5) that knowing the right thing to do is the same as doing the right thing, with a weighted average score of 3.43.

2.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
f	Knowing the right thing to do is the same as doing it	7%	12%	24%	46%	11%	3.43

Table 4.1.3.3: Knowing the right thing to do vs. doing it

Formation of Habits

One of the key assumptions of the conceptual framework used in this research is that SRB is integrated into everyday behaviour and decision-making such that the extent of an individual's demonstration of SRB is expressed in their character: what they repeatedly do. This is aligned to the Aristotelian notion of virtue (or vice) being developed through practise and self-mastery. Questions (d) and (e) sought to investigate views on how habits are built, and respondents gave a weighted score of 3.37 that habits are built through formal education and 3.60 that habit is built through repetition.

2.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
d	Habits are built through formal education	9%	15%	18%	46%	11%	3.37
e	Habits are built through repetition	4%	11%	23%	47%	15%	3.60

Table 4.1.3.4: Cognition – formation of habits

Knowing 'Right'

The last 3 items (g), (h) and (i) in Question 2.1 investigate respondent perceptions on the source of 'right' when it comes to decision making, which gives a feel of the respondents' inclination towards deontological, utilitarian or virtue ethics respectively. The respondents scored 3.44 that a person knows the right thing to do by knowing the laws, 3.30 by knowing the outcomes and 3.54 by building good character.

2.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
g	A person knows the right thing to do by knowing the laws	6%	14%	22%	44%	14%	3.44
h	A person knows the right thing to do by knowing the outcomes of the act	8%	17%	22%	43%	11%	3.30

2.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
i	A person knows the right thing to do by building good character	7%	12%	21%	40%	20%	3.54

Table 4.1.3.5: Cognition – how to know what is right

Question 2.3 in the cognition section contained a list of ten common traffic offences and respondents were asked to select those they had committed at least once. Due to the sensitivity of this question it was made clear to the respondents that it was optional. The top 3 selected were “overtaking where prohibited” (81%), “exceeding the speed limit” (71%) and “using a mobile phone while driving” (60%). Some respondents hesitated while responding to these questions, fearing that they were incriminating themselves and that they could get into trouble with the authorities. Due to the increased chances of skewed responses, these summaries are recorded for completeness of the presentation of findings but were not used to arrive at any conclusions.

4.1.4 Responses on Values

Section 3 of the questionnaire sought to establish the association between an individual’s personal principles and socially responsible behaviour, to answer the second research question: “Are motorist’s individual values linked to socially responsible behaviour on the road?”.

Self-Transcendence

Question 3.4 asked respondents “what is the key consideration for decision-making”, with different response options from Question 3.3. The intention of this question was to gauge the respondents’ perception of self-transcendence – the motivation to act based on enhancing the welfare of others. 77% of respondents indicated that the key to decision making is to consider the benefit of one’s actions on society in general, while 14% felt that the benefit of friends and family was key and 9% felt that personal benefit takes primacy.

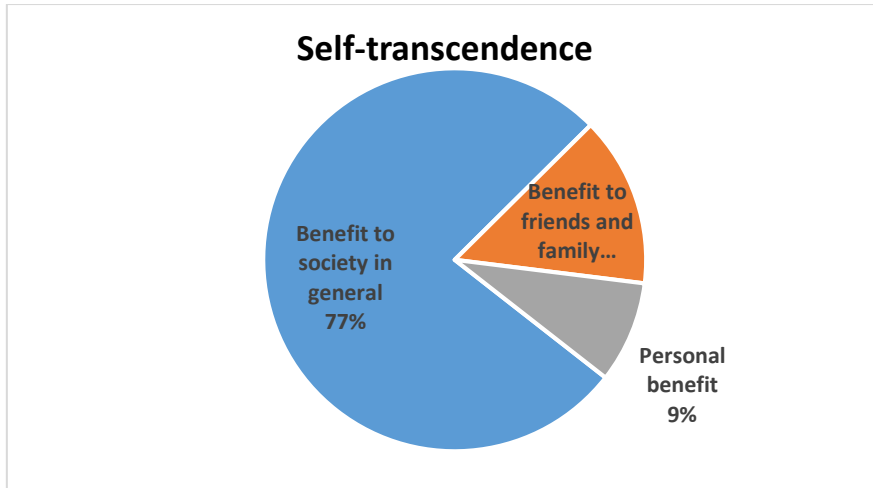


Chart 4.1.4.1: Decision-making criteria –self-transcendence

Self as Interdependent

Aristotle stated that the self does not exist separately from the community, so what is good for the whole is also good for the part. Items (d) and (e) in Question 3.1 were intended to assess the notion of “self as interdependent”, where one recognizes that by living in a society they are an inextricable part of a whole such that their individual actions will impact on the well-being of others. In response to the statement “individual actions have an effect on the well-being of society” respondents scored 3.43, and when asked whether individual decisions should consider the effect on other people they scored 3.28.

3.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
d.	Individual actions have an effect on the well-being of society	4%	16%	21%	50%	9%	3.43
e.	Individual decisions should consider the effect on other people	9%	17%	22%	42%	10%	3.28

Table 4.1.4.1: The role of values in SRB - self as interdependent

Self-direction

One of the key assumptions of SRB is that it is hinged on intrinsic and voluntary motivation that derives from an individual's desire to fulfil higher order needs rather than external rewards or sanctions. Aristotle's Nicomachean Ethics describes the nature of virtue as habits that "depend on ourselves" (NE 1114b20) and that we can control from beginning to end, and the Schwartz theory of basic values calls this "self-direction" and places it in the values category "Openness to Change", which the Schneider model picks up as a key variable in the conceptual framework. For the purposes of presentation and discussion, "self-direction" will be used as the preferred term because it better represents the notion of voluntariness.

Items (a), (b) and (c) in Question 3.1 were designed to examine the respondents' perception on self-direction. The first question asked whether "I need to be free to act in any way that I please" which respondents scored 2.92 out of 5 with an almost equal proportion agreeing (42%) as those who disagree (43%). When asked whether it is possible to do the right thing without expecting a reward, respondents scored 4.08, and in response to the question whether an individual should act independently of any external factors the score was 3.60.

3.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
a.	I need to be free to act in any way that I please	27%	16%	16%	21%	21%	2.92
b.	It is possible to do the right thing without expecting reward	2%	4%	10%	53%	31%	4.08
c.	An individual should act independently of any external factors	3%	14%	18%	50%	15%	3.60

Table 4.1.4.2: The role of values in SRB – self-direction

Acquisition of Values

Items (f), (g) and (h) in Question 3.1 were a gauge of the respondents' views on the source of an individual's values and principles. The weighted scores observed are 3.44 for acquisition through observation, 3.43 through repetition and 3.43 through formal education.

3.1. To what extent do you agree or disagree with the following statements?		← Disagree – Agree →					Wtd. Av. score
		1	2	3	4	5	
f.	Values are acquired through observation	4%	14%	26%	45%	10%	3.44
g.	Values are acquired through repetition	5%	14%	25%	48%	9%	3.43
h.	Values are acquired through formal education	9%	14%	22%	39%	18%	3.43

Table 4.1.4.3: Acquisition of values

Personal Values in Decision-Making

Question 3.2 in the values section asked respondents to rank in order of priority the key reason why they would not commit a traffic violation. Similar to Question 2.2 in the cognition section, this question was framed in a less abstract wording to check for consistency with the responses given in earlier questions. The highest rank was given by respondents who indicated their personal principles as the primary reason not to commit a traffic violation (2.52), followed by injury to self (2.86), arrest and penalty (3.39), injury to others (3.45) damage to property (4.09) and being a bad example (4.55).

The weighted average ranking is computed in the reverse order because 1 represents the highest and 6 the lowest score. The findings are presented in the table below:

3.2. Please rank in order of priority the reasons why you would not commit a traffic offence		Ranking						Wtd. Av.
		1	2	3	4	5	6	
a	Injury to myself	20%	32%	17%	14%	7%	11%	2.86
b	Injury to others	7%	18%	26%	31%	13%	6%	3.45
c	Arrest and penalty	15%	19%	19%	22%	9%	16%	3.39
d	My personal principles	49%	9%	13%	8%	13%	9%	2.52
e	Damage to property	7%	11%	13%	17%	42%	11%	4.09
f	Being a bad example	6%	11%	11%	14%	13%	46%	4.55

Table 4.1.4.4: Reasons not to commit a traffic offence

The final Question 3.5 sought an opinion from the respondent as to what in their view primarily drives people's actions. 53% of respondents indicated that people's actions are driven by the environment, 27% by personal values, 11% by the outcomes and 9% by the rules.

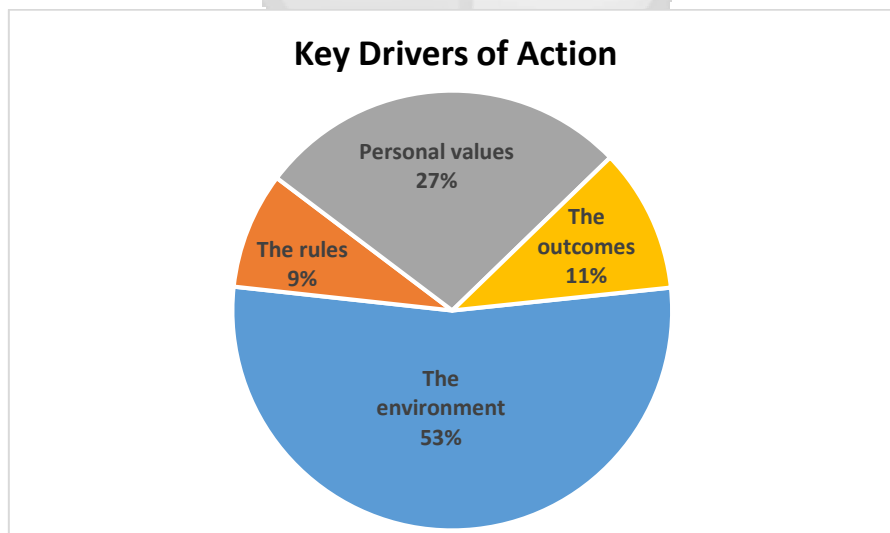


Chart 4.1.4.2: Key drivers of action

4.2 Inferential Statistics

Over and above the descriptive statistics outlined above, the questionnaire data was analysed for significances of relation using IBM's SPSS software. The questionnaire had multiple variables to consider, but this presentation will be restricted to the questions that showed significant relations when subjected to a chi square cross-tabulation test of independence.

RQ 1 examines the extent to which responsible behaviour on the road would be enhanced by initiatives aimed at motorists' cognitive processes, and this was investigated in Section 2 of the questionnaire.

Responsibility Disposition

A chi square test was performed to examine the relation between responsibility for road safety and the 5 demographic variables outlined in section 4.2 above. The results for the questionnaire variable "Road safety is the responsibility of every road user" (Question 2.1 (b)) shows that there is a significant relation to respondent gender, age and level of education with significance $\rho = 0.007$, 0.002 and 0.016 respectively as tabulated below.

Road safety in Kenya is the responsibility of every road user										
	Gender		Age		Years of driving experience		Average hours spent driving		Education	
Pearson chi square, χ^2	14.036		23.846		21.29		24.924		24.694	
Asymptotic Significance (2-sided), p	0.007		0.002		0.380		0.204		0.016	
Number of respondents, n	396		397		369		391		391	
Respondent distribution, n (%)	Male	268 (67.68)	18 to 25	22 (5.54)	5 or less	74 (20.05)	Less than 1	13 (3.32)	None	6 (1.53)
	Female	128 (32.32)	26 to 33	166 (41.81)	6 to 10	121 (32.79)	1 to 2	59 (15.09)	Primary	35 (8.95)
			34 to 41	115 (28.97)	11 to 15	107 (29)	2 to 3	128 (32.74)	Secondary	227 (58.06)
			42 to 49	66 (16.62)	16 to 20	41 (11.11)	3 to 4	82 (20.97)	University	123 (31.46)
			50 to 57	23 (5.79)	21 to 24	12 (3.25)	4 to 5	56 (14.32)		
			58+	5 (1.26)	25 or more	14 (3.79)	5 or more	53 (13.55)		

Table 4.2.1: "Road safety is the responsibility of every road user"

To obtain a deeper understanding of the relation suggested by the chi-square test, a further analysis of the weighted average scores per significant demographic was done. The results showed that there is a higher inclination for males (3.78) than females (3.69) to agree that road safety is the responsibility of every road user. In terms of age, the highest score was obtained in the 18 to 25 age group and the lowest score in the 34 to 41 group. And lastly in terms of level of education there was a progressive increase in the score from those who had no formal education to those who had

attained university education, with scores of 3.33, 3.66, 3.70 and 3.85 respectively for no education, primary school, secondary school and university. This is summarized in the table below.

	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Male	14	37	18	124	75	3.78
Female	6	12	22	64	24	3.69
Age						
18 to 25	0	1	2	4	15	4.50
26 to 33	5	24	16	79	42	3.78
34 to 41	8	15	18	54	19	3.54
42 to 49	7	6	4	30	18	3.71
50 to 57	0	3	1	14	5	3.91
58+	0	1	0	3	1	3.80
Education						
None	0	1	2	3	0	3.33
Primary School	1	7	4	14	9	3.66
Secondary School	14	33	13	113	54	3.70
University	5	9	22	51	36	3.85

Table 4.2.2: Responsibility disposition by demographic

Formation of Habits

The chi square results for the question on formation of habits through repetition (Question 2.1 (e)) show that there is a significant relation between this variable and the number of hours that are driven per day, as well as the respondent's education level with p values of 0.000 and 0.013 respectively.

Habits are built through repetition										
	Gender		Age		Years of driving experience		Average hours spent driving		Education	
Pearson chi square, χ^2	4.143		24.616		28.676		50.371		25.323	
Asymptotic Significance (2-sided), p	0.387		0.216		0.094		0.000		0.013	
Number of respondents, n	396		392		365		386		386	
Respondent distribution, n (%)	Male	268 (67.68)	18 to 25	22 (5.61)	5 or less	73 (20)	Less than 1	13 (3.37)	None	6 (1.55)
	Female	128 (32.32)	26 to 33	162 (41.33)	6 to 10	121 (33.15)	1 to 2	58 (15.03)	Primary	34 (8.81)
			34 to 41	115 (29.34)	11 to 15	104 (28.49)	2 to 3	127 (32.9)	Secondary	226 (58.55)
			42 to 49	66 (16.84)	16 to 20	41 (11.23)	3 to 4	81 (20.98)	University	120 (31.09)
			50 to 57	22 (5.61)	21 to 24	12 (3.29)	4 to 5	55 (14.25)		
			58+	5 (1.28)	25 or more	14 (3.84)	5 or more	52 (13.47)		

Table 4.2.3: "Habits are built through repetition"

Analysis of the weighted average scores shows that the inclination towards agreement with the formation of habit through repetition is highest with motorists who drive for less than one hour per day (4.08) and lowest with those who drive for over five hours a day (3.12). For level of education the score progresses from those who had no formal education to those who had attained university education, with scores of 2.17, 3.44, 3.62 and 3.67 for respondents with no education, primary school, secondary school and university respectively. This is summarized in the table below.

Hours driving	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Less than 1	0	0	2	8	3	4.08
1 to 2	3	2	14	23	16	3.81
2 to 3	3	14	29	70	11	3.57
3 to 4	5	4	18	35	19	3.73
4 to 5	0	6	15	30	4	3.58
5 or more	4	14	11	18	5	3.12
Education						
None	1	3	2	0	0	2.17
Primary School	1	4	12	13	4	3.44
Secondary School	9	24	43	118	32	3.62
University	4	10	32	50	24	3.67

Table 4.2.4: Habit formation by demographic

Knowing 'Right'

Another variable that was examined was respondent perception of character formation, with the question "to what extent do you agree or disagree that a person knows the right thing to do by building good character". The relation between these variables is significant across all demographic variables except driving experience, with p values of 0.024, 0.00, 0.00 and 0.01 for gender, age, daily driving hours and level of education respectively.

A person knows the right thing to do by building good character										
	Gender		Age		Years of driving experience		Average hours spent driving		Education	
Pearson chi square, χ^2	12.938		66.945		25.165		79.713		39.391	
Asymptotic Significance (2-sided), p	0.024		0.000		0.453		0.000		0.001	
Number of respondents, n	390		391		362		385		386	
Respondent distribution, n (%)	Male	260 (66.7)	18 to 25	22 (5.6)	5 or less	73 (20.2)	Less than 1	13 (3.4)	None	6 (1.6)
	Female	130 (33.3)	26 to 33	163 (41.7)	6 to 10	117 (32.3)	1 to 2	59 (15.3)	Primary	34 (8.8)
			34 to 41	112 (28.6)	11 to 15	107 (29.6)	2 to 3	127 (33)	Secondary	224 (58)
			42 to 49	66 (16.9)	16 to 20	39 (10.8)	3 to 4	82 (21.3)	University	122 (31.6)
			50 to 57	23 (5.9)	21 to 24	12 (3.3)	4 to 5	53 (13.8)		
			58+	5 (1.3)	25 or more	14 (3.9)	5 or more	51 (13.2)		

Table 4.2.5: "A person knows the right thing to do by building character"

This was analysed further to assess for the demographics that are more likely to agree with the formation of character being the way to know the right thing to do (those more inclined to virtue ethics). The results show that females have a higher inclination with a score of 3.77 versus males. In terms of age, the 18 to 25 age group has the highest score (3.90) and the 50 to 57 group scores the lowest (3.17). For education level the same trend is seen where the scores increase progressively from respondents with no formal education to those with primary school, secondary school and university education, scoring 2.67, 2.85, 3.48 and 3.87 respectively. In terms of hours spent driving the highest score was from those who drive for less than one hour and the lowest score from those who drive for more than 5 hours a day.

	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Male	23	34	62	94	47	3.42
Female	4	13	21	62	29	3.77
Age						
18 to 25	0	4	3	5	9	3.90
26 to 33	6	17	46	76	18	3.51
34 to 41	15	13	19	38	26	3.42
42 to 49	4	5	11	25	20	3.80
50 to 57	2	7	2	9	3	3.17
58+	0	1	1	3	0	3.40
Education						
None	2	0	2	2	0	2.67
Primary School	6	10	6	7	5	2.85
Secondary School	15	28	53	89	38	3.48
University	3	9	22	55	33	3.87

	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Hours driving						
Less than 1	0	0	1	6	5	4.33
1 to 2	5	8	14	18	14	3.47
2 to 3	2	13	30	60	22	3.69
3 to 4	4	13	13	35	17	3.59
4 to 5	3	6	12	24	8	3.53
5 or more	13	6	13	10	9	2.92

Table 4.2.6: Knowing the right thing - by demographic

RQ2 examined the extent to which responsible behaviour on the road would be enhanced by initiatives aimed at motorists' individual values, and this was investigated in Section 3 of the questionnaire.

Self as Interdependent

Chi-square tests on the question "Individual decisions should consider the effect on other people" show that there is a significant relation to all the respondent demographics investigated, with p values of 0.034, 0.003, 0.028, 0.025 and 0.00 for gender, age, years of driving experience, hours spent driving and education respectively.

Individual decisions should consider the effect on other people										
	Gender		Age		Years of driving experience		Average hours spent driving		Education	
Pearson chi square, χ^2	10.424		41.464		33.744		34.184		39.074	
Asymptotic Significance (2-sided), p	0.034		0.003		0.028		0.025		0.000	
Number of respondents, n	392		392		364		387		386	
Respondent distribution, n (%)	Male	263 (67.1)	18 to 25	23 (5.9)	5 or less	74 (20.3)	Less than 1	13 (3.4)	None	6 (1.6)
	Female	129 (32.9)	26 to 33	162 (41.3)	6 to 10	118 (32.4)	1 to 2	59 (15.2)	Primary	35 (9.1)
			34 to 41	116 (29.6)	11 to 15	107 (29.4)	2 to 3	127 (32.8)	Secondary	224 (58)
			42 to 49	64 (16.3)	16 to 20	40 (11)	3 to 4	82 (21.2)	University	121 (31.3)
			50 to 57	23 (5.9)	21 to 24	11 (3)	4 to 5	55 (14.2)		
			58+	4 (1)	25 or more	14 (3.8)	5 or more	51 (13.2)		

Table 4.2.7: "Individual decisions should consider the effect on other people"

Analysis of the scores per demographic are shown in the table below, indicating that females are more inclined to individual decisions considering the effect on other people (3.45) than males (3.19). In terms of age, the highest score was given by the 58 or older age group (4.25) with the lowest score given by the 18 to 25 group (3.13). For education level the same trend is repeated where the scores increase

progressively from respondents with no formal education to those with primary school, secondary school and university education, scoring 2.33, 2.74, 3.21 and 3.60 respectively.

In terms of hours driven per day, the highest score was recorded from those who drive for less than an hour per day (3.54) while the lowest was from those who drive for 2 to 3 hours per day (3.10). Lastly in the years of driving experience category the highest score was from motorists who have driven for 21 to 24 years (3.64) and the lowest score from those with 6 to 10 years of experience. These scores are summarized in the table below:

	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Male	26	45	67	102	23	3.19
Female	8	23	18	63	17	3.45
Age						
18 to 25	1	5	10	4	3	3.13
26 to 33	10	39	42	59	12	3.15
34 to 41	12	15	20	58	10	3.34
42 to 49	7	8	8	27	13	3.49
50 to 57	3	2	6	12	0	3.17
58+	0	0	0	3	1	4.25
Education						
None	2	1	2	1	0	2.33
Primary School	6	6	14	9	0	2.74
Secondary School	21	41	47	99	16	3.21
University	3	21	21	53	23	3.60
Hours driving						
Less than 1	1	1	2	8	1	3.54
1 to 2	6	3	16	24	10	3.49
2 to 3	10	35	24	48	10	3.10
3 to 4	10	9	16	41	6	3.29
4 to 5	1	11	11	24	8	3.49
5 or more	3	9	17	18	4	3.22

	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Driving experience						
Less than 1	5	17	19	25	8	3.19
1 to 2	15	19	23	53	8	3.17
2 to 3	9	13	19	53	13	3.45
3 to 4	1	5	13	15	6	3.50
4 to 5	1	0	5	1	4	3.64
5 or more	1	1	2	9	1	3.57

Table 4.2.8: Consideration of other people - by demographic

Self-direction

The chi square results for the question "It is possible to do the right thing without expecting a reward" shows a significant relation to respondent gender, daily hours spent driving and level of education with significance $\rho = 0.012, 0.008$ and 0.003 respectively as tabulated below.

It is possible to do the right thing without expecting reward										
	Gender		Age		Years of driving experience		Average hours spent driving		Education	
Pearson chi square, χ^2	12.852		23.759		15.983		38.218		28.897	
Asymptotic Significance (2-sided), p	0.012		0.253		0.718		0.008		0.003	
Number of respondents, n	396		396		367		390		390	
Respondent distribution, n (%)	Male	267 (67.4)	18 to 25	23 (5.8)	5 or less	74 (20.2)	Less than 1	13 (3.3)	None	6 (1.5)
	Female	129 (32.6)	26 to 33	164 (41.4)	6 to 10	120 (32.7)	1 to 2	59 (15.1)	Primary	35 (9)
			34 to 41	116 (29.3)	11 to 15	107 (29.2)	2 to 3	129 (33.1)	Secondary	227 (58.2)
			42 to 49	65 (16.4)	16 to 20	40 (10.9)	3 to 4	83 (21.3)	University	122 (31.3)
			50 to 57	23 (5.8)	21 to 24	12 (3.3)	4 to 5	55 (14.1)		
			58+	5 (1.3)	25 or more	14 (3.8)	5 or more	51 (13.1)		

Table 4.2.9: "It is possible to do the right thing without expecting reward"

Analysis of the weighted scores by each of the demographics with significant relations shows that males have a higher inclination to agree with the statement (4.11) than females (4.02). In terms of hours spent driving, those who drive for 1 to 2 hours a day scored highest with 4.17 while those who drive for 2 to 3 hours scored the lowest at 3.95. For the educational level the highest score was recorded among those with a primary school education (4.34) while the lowest score was from respondents with university education (3.97). This is summarized in the table below:

Gender	Likert Scale					Wtd Av Score
	1	2	3	4	5	
Male	6	13	19	136	93	4.11
Female	1	3	21	72	32	4.02
Hours driving						
Less than 1	0	0	3	5	5	4.15
1 to 2	1	2	8	23	25	4.17
2 to 3	2	7	18	71	31	3.95
3 to 4	1	1	6	50	25	4.17
4 to 5	0	1	6	35	13	4.09
5 or more	3	5	0	21	22	4.06
Education						
None	0	1	1	1	3	4.00
Primary School	1	2	0	13	19	4.34
Secondary School	4	6	18	135	64	4.10
University	2	6	22	56	36	3.97

Table 4.2.10: Expectation of reward - by demographic

4.3 In-depth Interviews

Aristotelian virtue ethics states that to do the right thing individual agents “must always look at what is appropriate in each case as it happens” (NE1104a) – this suggests the need for practical wisdom because universal and abstract principles cannot sufficiently guide behaviour given that human activity and decision-making is dynamic, situational and affected by multiple conflicts and dilemmas. It is for this reason that the quantitative approach was considered incomplete and was augmented by a qualitative element to decode the perceived meaning of virtue.

Seven in-depth interviews were conducted by the researcher in response to RQ 3: “What is the role of virtue in enhancing motorists’ responsible behaviour on the road?”. The enquiry was guided by an open-ended interview guide that gave the researcher the leeway to probe further based on the responses received.

The steps taken to analyse the interview content are as below:

- a. The hand-written interview notes were transcribed into electronic format via Microsoft Word and studied again, assigning each piece of relevant text to an intuitive theme.

- b. The themes were then migrated into a single column in a Microsoft Excel spreadsheet and duplicates removed, which reduced the entries from 220 to 93 unique themes. These were further grouped into 14 broad thematic areas.
- c. The 14 thematic areas were created as nodes in the NVivo software and the relevant interview texts assigned to their corresponding nodes.
- d. Analysis was carried out to summarize and rank the themes in an NVivo report.

The results of the NVivo analysis gave a better understanding of the perceived meaning of virtue by motorists. The predominant themes that emerged from the spontaneous respondent mentions were:

1. **Rules:** there was a general sense that the notion of virtue involved an element of adherence to rules (traffic laws) by motorists and enforcement of the same by the police, and that these are paramount to road safety. Some interviewees felt that without rules there can be no virtue because the notions of right and wrong would be meaningless. There were 19 textual comments that broadly fell into the “rules” theme.
2. **Culture:** interviewees mentioned that there is a cultural element that impacts on one’s acquisition of virtue, such that the customs and norms that a society adopts and accepts will influence what is considered as the right thing to do. A recurrent theme that emerged and was categorized under this theme was that corruption has become part of the Kenyan culture, and it has a negative impact on road safety as well as acquisition of virtue. Culture was the second highest theme with 18 mentions.
3. **Habits:** The third highest mentions were under the theme “habit” which contained sub-themes such as consistency, discipline and steadfastness. When asked to mention a person that they thought was virtuous and why, interviewees said that the people they selected are reliable, their words are consistent with their actions, they are always principled and steadfast regardless of the circumstances. Habit was mentioned 18 times, which was a tie with “culture” for second place.
4. **Society:** in the same way as culture influences acquisition of virtue, society was mentioned as a key contributor to one’s outlook towards life and their ability to understand and acquire virtue. This theme was also mentioned several times when interviewees were asked how virtue is demonstrated and the response was “by doing what is best for society”. The acquisition of virtue is linked to sub-themes

such as upbringing and inculcation of values whereas demonstration of virtue has connotations of empathy and serving the common good. Society was mentioned 17 times and ranked in fourth place.

5. **Character:** this theme primarily emerged when interviewees were asked what qualities a virtuous person demonstrated, where responses such as visionary, focussed, respectful, balanced, humble, patient and courteous were recorded. While there may be some thematic overlap with “habits”, character was considered separately as it was interpreted to be an outcome of the habits. The character theme ranked fifth with 15 mentions by interviewees.
6. **Goodness:** this theme encompassed mentions of virtue entailing goodness and doing the right thing. This was predominantly mentioned in response to the question “what does virtue mean to you”. The theme also emerged in the context that virtue can be acquired through repetition of good acts, but vice could similarly be acquired through repetition of bad acts. This theme received 14 mentions in total, ranking sixth.
7. **Action:** this theme ranked seventh with 10 mentions, and was coded in situations where interviewees talked about “doing” or “acting” in the active sense. For instance, where it was said that “virtue is doing the right thing” this was recorded under the “goodness” theme as well as the “action” theme.
8. **Belief:** recorded under this theme are comments that mentioned factors such as religion, principles and values, and these were captured 9 times which placed it in eighth place.
9. **Infrastructure:** there were eight mentions of infrastructure in the conversation on virtue and road safety, primarily in response to the question “What is your view on the road safety situation in Kenya?”. Infrastructure was brought up as a reason to explain certain motorist behaviours, and the mentions rank it in ninth place.
10. **Intrinsic:** interviewees mentioned that people who demonstrate virtue are internally motivated to act that way, with quotes such as “...acts without being told” and “...always does the right thing regardless of the circumstances”. This theme ranked in tenth place with 7 mentions.
11. **Economy:** this theme was mentioned in two different contexts: firstly, there were comments that the state of the economy played a role in the way that motorists behave, secondly, that the economy was growing faster than the infrastructure,

which strained resources and contributed to motorist behaviour. This was ranked eleventh with 4 mentions.

12. **Emotion:** there were comments from one interviewee that motorists were frustrated and angry as a result of poor infrastructure and congested roads. This was ranked in twelfth place with 3 mentions.

13. **Consequence:** two interviewees mentioned fear of penalties as the reason for motorists to adhere to the law. There were 2 mentions and this was in thirteenth place.

14. **Systems:** one respondent attributed the state of motoring in the country to inefficient police and judicial systems which encourage the wrong behaviour. This received 1 mention and is ranked fourteenth.

The list of mentions for all the 14 thematic areas are presented in the matrix below:

Rank	Themes	Respondents							Total
		DM	AG	CK	EW	JPM	JT	PG	
1	Rules	1	1	1	1	4	4	7	19
2	Culture	3	2	1	0	6	3	3	18
3	Habit	2	1	2	4	2	2	5	18
4	Society	3	2	5	2	1	2	2	17
5	Virtues	5	2	0	1	3	1	3	15
6	Good_right	1	1	2	3	2	2	3	14
7	Action	0	0	1	3	2	2	2	10
8	Belief	0	1	2	2	0	2	2	9
9	Infrastructure	1	1	1	2	0	1	2	8
10	Intrinsic	1	0	1	2	1	0	2	7
11	Economy	1	1	0	1	0	1	0	4
12	Emotion	0	0	0	3	0	0	0	3
13	Consequence	1	0	0	0	0	0	1	2
14	Systems	0	0	0	0	0	1	0	1
Total		19	12	16	24	21	21	32	145

Table 4.3.1: Thematic analysis outcome matrix

4.4 Conclusion

This chapter began by outlining the data collection process that was undertaken in this research, after which the findings are summarized in narrative and visual form. Descriptive statistics of the respondent demographics and the questionnaire responses were presented, followed by inferential statistics from the data analysis and finally the results of the in-depth interviews.

Chapter 5 : Discussion

5.0 Introduction

This chapter highlights key findings from the collected and analysed data from the questionnaire survey and the in-depth interviews and how they relate to relevant literature. These findings are organized in line with key dimensions of the Schneider SRB model, and will form a basis for discussing the perceptions of virtue and character in relation to road safety.

5.1 The Dimensions of SRB

The aim of the research was to establish the extent to which individual cognition and values are linked to socially responsible behaviour on the road, and to establish the role of virtue in road safety. The discussion is structured in line with the key dimensions of the conceptual framework.

5.1.1 Responsibility Disposition

Personal Responsibility

A voluntary action is defined as “a moral situation whereby action or omission results from a source within the agent and from some knowledge which the agent possesses regarding the end” (Gichure, p. 48). At the close of Book III Chapter 5 of Nicomachean Ethics, Aristotle describes the nature of virtue as “...habits or trained faculties... that depend on ourselves and are voluntary...” (NE 1114b20). The Schneider SRB model builds on the voluntariness of human acts and infers that since individuals can choose their actions they should be assigned personal responsibility for their actions.

Findings from the quantitative research show that road safety responsibility is perceived to rest primarily with the individual road user (3.74 out of 5) while the police and government were perceived to be secondarily responsible with scores of 3.33 and 3.08 respectively. These findings corroborate the theory that SRB is voluntary, but the additional ascription of responsibility to factors external to the agent warrants further discussion.

Several questionnaire respondents spontaneously mentioned that each of the stakeholders in question has a distinct role to play and that none of them can be excluded, which is corroborated by the relative similarity of scores across the three questions. This result demonstrates that road safety behaviour involves complex and dynamic interactions between multiple stakeholders such that it is not practical to purely assign it to one factor.

Inference from the qualitative themes arising from in-depth interviews lend further credence to the complexity of understanding virtue – it comes across from the thematic analysis that besides the personal elements theorized to lead to virtuous acts, such as the voluntariness of the action, development and mastery of good habits and taking personal responsibility for one's actions, there are other factors such as rules, culture and society which are external to the individual agent but impact their perception of the right thing to do and their subsequent choice of action.

The applicability of these outcomes to road safety is derived from the quantitative findings which show that there is an opportunity to design initiatives where the primary responsibility for improving the road safety situation lies with the individual road user. To delve into this further and profile the respondents, the responses to the question "Road safety in Kenya is the responsibility of every road user" were subjected to a chi square inferential test which shows that there is a significant relation between the perception of personal responsibility for road safety and the respondent's gender, age and level of education.

When responses are dissected by demographics the data shows that males have a marginally higher weighted average score than females (3.78 vs. 3.69), suggesting that they are more inclined to subscribe to individual responsibility for road safety. Age-wise 18 to 25-year-old respondents have the highest weighted average score at 4.50 while 34 to 41-year-old respondents score the lowest at 3.54. In terms of education level, the ascription of responsibility to the individual progressively increases from 3.33 at the lowest level to 3.85 for university graduates.

The relevance of this analysis is provision of insights to inform the structure and content of strategies and messaging aimed at enhancement of individual responsibility for road safety, by guiding the creators on what would be expected to work depending on the targeted audience. Holding factors such as rules, cultural dynamics and social

norms constant, a road safety campaign with a personal responsibility theme would be expected to resonate best with 18 to 25-year-old university graduates based on this data.

Choice and Agency

Aristotle states that virtue is “a settled disposition of the mind determining the choice of actions... a state involving rational choice... determined by reason” (NE 1106b36 – 1107a1). He additionally states that virtue is not implanted in us by nature because that which occurs in nature cannot be altered by training, supporting this claim with the analogy that a falling stone cannot be trained to rise upwards, nor can fire be trained to move downwards. Rather, he claims, what is natural to man is the capacity to acquire virtue, which is perfected through habituation.

St. Thomas Aquinas writes about the voluntariness of human acts (ST I-II, q6. a1) that “those things which have a knowledge of the end are said to move themselves because there is in them a principle by which they not only act but also act for an end”. This means that in evaluating an act for voluntariness it is not only the ability to act that is considered but also the knowledge of the desired end of the act, which implies that the person who acts makes a rational choice and may therefore be held responsible for it.

According to Schneider (2005) the notion of choice and agency involves an individual’s rational knowledge that they have a level of control over situations in which they are involved, and an ability to transform them. This knowledge is what drives them to act, thereby forming a key aspect of SRB. The concept of individual choice and agency is closely linked to personal responsibility in that the acting person is central to the actions that they voluntarily perform.

The choice and agency dimension was examined through a question that asked respondents to rank from a list of initiatives which one would have the highest impact on road safety. The findings showed that the highest ranked item by a sizeable margin was “improved road infrastructure”, followed by “adherence to existing traffic laws” and thirdly “road users doing the right thing” (details in section 4.2.3). Based on the previous personal responsibility question where the primary responsibility for road safety is attributed to the individual road user, this comes as an unexpected result

because in the former case the attribution is primarily internal to the individual, consistent with the Aristotelian and Thomistic views on voluntariness. But this case where infrastructure is chosen as having the highest impact despite it being external to the agent and outside of their locus of control goes contrary to the theory.

In analysing the results it could be interpreted that “adherence to existing laws” overlaps with “doing the right thing” especially from a deontological angle where (good) laws prescribe the right thing to do. If this premise were to be accepted then these two items would be cumulated, in which case infrastructure would be relegated to second place, and the highest impact on road safety would result from a combination of adherence to law and doing the right thing, both of which are rational choices made by an individual agent, and therefore consistent with the theories.

The analysis from the qualitative interviews infers to the notion of choice and agency through comments such as “application of logic” in reference to decision-making, and “consciously following traffic signs”. These indicate that there is an evaluation of alternatives and a rational decision-making process that the individual agent goes through before acting.

The key outtake therefore is that whereas there is a general agreement that impactful change in road safety would be influenced by individual choices to do the right thing, motorists also have a perception that they are prevailed upon by environmental factors when they make certain decisions.

5.1.2 Moral Reasoning and Moral Identity

Aristotle writes in *Nicomachean Ethics* that objects pursued as ends in themselves are superior to those pursued as means to an end, and to live well one needs to know which of the ends that our actions aim at is chosen for its own sake – the “Supreme Good” (NE 1094A). The Schneider SRB model (p. 18) refers to Kohlberg’s (1984) stage-wise model in which moral reasoning progresses from the early stages where it is based on rewards and sanctions, followed by social acceptance and at its highest level it is based on more intangible constructs and principles such as “the right thing to do”. This is the basis for the assumption that individuals whose moral reasoning is based on the higher level are more likely to be socially responsible.

Moral reasoning was examined in question 3.3 of the questionnaire which investigated respondents' views on what the key consideration for decision making should be between "reward / punishment", "acceptance by society" and "doing the right thing". The results showed most respondents felt that doing the right thing should be the key consideration for one's actions (59%) followed by reward / punishment (21%) and acceptance by society (19%). This suggests that based on the Kohlberg model there is a high level of moral reasoning among the respondents because they demonstrate knowledge that SRB is driven by doing the right thing without expectation of incentive or sanction and notwithstanding societal expectations.

Moral identity is described by Schneider (2005) as being "involved in turning intentions into actions" (p. 20) based on the moral premise that "knowing the right thing to do is quite distinct from actually doing the right thing" (Blasi, 1980). Aristotle differentiates between virtuous actions and products of art by stating that for one to possess virtue knowledge is necessary but not sufficient – the key to acquiring virtue is repeatedly performing good acts. He writes in *Nicomachean Ethics*: "...a man may possess the disposition without its producing any good result, as for instance when he is asleep, or has ceased to function from some other cause; but virtue in active exercise cannot be inoperative—it will of necessity act, and act well." (NE 1098b20 – 1099a1)

The investigation into moral identity was addressed by asking to what extent respondents agreed that "knowing the right thing to do is the same as doing it" (Q.2.1 (f)), in which 57% agreed or strongly agreed with the statement, a weighted average score of 3.43. This outcome suggests that in the view of most respondents it is enough to know without following through to action, which is inconsistent with the Aristotelian philosophy. This brings back the challenge addressed in Chapter 2 that "knowledge (*episteme*) or technical skills (*techne*) are insufficient when it comes to issues where human well-being" is at stake" (Tsoukas and Cummings, 1997).

The combined observations from these investigations into moral reasoning and moral identity suggest that whereas there is a high level of awareness that people need to do "the right thing" there is a missing link in translating the knowledge into actions that will realize the desired socially responsible behaviour. Arguably the gap that arises during the transition from intention to action could be environmental as discussed in 5.2.1 above, where a person who knows they should act a certain way will 'adapt'

themselves to the unique nuances of their environment and act contrary to their disposition.

The outcomes from the qualitative interviews showed that in sixth and seventh place were the themes of “goodness / right” and “action” respectively, which have connotations of moral identity. The phrase “doing the right thing” was mentioned by multiple respondents, which is an indication that knowledge of the notion of “good” is an important component of responsible behaviour, as is action.

In conclusion therefore, intrinsic motivation comes across as key to socially responsible behaviour, but environmental factors need to be considered. Further research into the exact nature of these external influences would be useful to guide the creators of road safety campaigns and strategies to understand what the environmental nuances are and pre-empt the obstacles that they may cause. There is also useful insight that awareness generation on its own may enhance knowledge but may not result in the desired behaviour change, so it may be of benefit to segregate between the learning and performance aspects of behaviour change and develop clear plans to address them both.

5.1.3 Values

Aristotelian virtue theory states that for an act to be virtuous the acting person must “act with knowledge, deliberately choose the act, and choose it for its own sake”, and perform the acts from “a fixed and permanent disposition of character” (NE 1105a31). The inference of the last statement is that virtue is not a fleeting or chance occurrence, rather it must be grounded in one’s firm convictions which are demonstrated over time.

The theory of basic values (Schwartz, 2012) specifies six features of values, two of which suggest the longevity and firmness of values: that they “transcend specific actions and situations”, and that they “serve as standards or criteria” to guide the decision-making process. Schwartz lists ten values which are placed in four categories: self-enhancement, conservation, openness to change and self-transcendence, and reports empirical research that shows that the prioritization of these values across cultures has shown remarkable consistency in the rankings, with the self-transcendence (enhancing welfare of other people) and openness to change (self-direction through development of control and mastery) categories consistently

topping the hierarchy. There is significant similarity between these outcomes and the values that the Schneider model suggests will lead to increased SRB: self-transcendence, self as interdependent and openness to change.

Investigation of respondent views on importance of values was covered in question 3.2 which asked respondents to rank in order of priority the reasons why they would *not* commit a traffic offence, where “personal principles” emerged as the highest ranked reason, ranked in first place by 49% of respondents. The inference from this result is that personal values are generally perceived as being important in decision-making, which validates the inclusion of values as a variable in the study.

The research questionnaire investigated perceptions on acquisition of values with question 3.1 asking the extent to which respondents felt that values are acquired through observation, repetition or formal education. The weighted average scores of 3.44, 3.43 and 3.43 respectively suggest that the options are not mutually exclusive, or that respondents do not compartmentalize the notion of acquisition of values in these categories. Schwartz (2012) alludes to family as the main place where values are obtained and sustained and, although he does not delve deep into the ‘how’, he argues that values at different levels of the importance hierarchy are acquired in differing ways and motivated by different things. The higher priority (self-transcendence) values are acquired through family and the immediate social setting motivated by the need for positive family relations, whereas a lower priority category such as conservation which contains values such as “tradition and conformity” these are acquired in order to avoid conflicts and conform to group norms. The theory further talks about the interrelatedness of different value categories such that they enhance or conflict with each other – for example values aligned to conflict avoidance are usually in conflict with those geared towards self-gratification.

The content of the in-depth interviews had several references to personal values especially in the questions “how is virtue demonstrated?” and “what qualifies [named person] to be a virtuous person?”. Some of the recorded responses were patience, courtesy, discipline, kindness, humility, focus, drive and consistency. These were categorized under the “character” theme which was ranked fifth in the qualitative analysis. There were also references to negative standards of behaviour such as bribery, corruption and selfishness contributing to the road safety situation in Kenya.

Based on the complexity of values as proposed in the Schwartz theory and the similarity of scores observed in the quantitative analysis, the researcher infers that the question on acquisition of values was not framed in a way that would yield useful insights from the respondents. In future studies of this nature a better result could perhaps be obtained from focusing on specific values and principles that are of interest to the researcher.

5.1.4 Self-transcendence and Self as Interdependent

Self-transcendence and self as interdependent are social dimensions based on an individual's consideration for the welfare of other people and aligned with the Aristotelian principle that the individual and society are inseparable. It is theorized in the Schneider model that these are important factors that lead to SRB, demonstrated by "concern for others and behavioural integrity" (p. 23).

Question 3.4 investigated respondent perception of Self-transcendence by asking "what is the key consideration for decision-making" in relation to society, to which 77% of respondents indicated benefit to society, 14% mentioned family & friends and 9% personal benefit – which gives a strong indication that individual decisions need to consider the well-being of the larger society.

The research investigated Self as Interdependent by asking to what extent individual actions have an effect on the well-being of society (Question 3.1 (d); score 3.43) and to what extent individual decisions should consider the effect on other people (Question 3.1 (e); score 3.28). These results suggest that people generally agree with the Aristotelian principle that the individual and society are inseparable, and individual actions therefore have an impact on society.

These three results speak to the same thing: the respondents generally agree that impact on people other than self plays a key role in individual decision-making. As discussed in the previous section on values, the Schwartz (2012) theory proposes that based on a cross-cultural empirical research conducted in 82 countries, the highest priority personal values lie in the self-transcendence category, which is about concern for the welfare of other people.

The inferential statistics show with respect to the extent that individual decisions should consider the effect on other people (Question 3.1 (e)) there are significant

relations to all the respondent demographics that were collected. Deeper analysis of this shows that whereas for example males on average scored 3.19 (n=264), females scored higher at 3.45 (n=130) which suggests that females are more inclined to act with consideration to the impact on society. The scores based on educational level increased from 2.33 to 2.74, 3.21 and 3.59 from the lowest to the highest attainment, which suggests that consideration of the societal impact of one's actions is proportional to the individual's level of education. The statistics are not all analysed in this section, but it would be important that the numerical insights are studied in advance of formulating road safety strategy and policy, with the anticipated result that they will resonate better and have a higher success rate in observed behavioural change.

The qualitative thematic analysis ranked "culture" and "society" as the second and fourth highest themes, featuring more prominently in response to the questions "how is virtue acquired?" and "what qualifies [named person] to be a virtuous person?". Responses to the former question mentioned the role of socialization and upbringing through family, schools, religious institutions and societal values in acquisition of virtue. The responses to the latter question included reference to empathy, self-sacrifice, philanthropy and doing what is best for society.

The outcomes of the research show that there is an inclination among Kenyan motorists towards the individual being an integral part of society, and that there is a general knowledge that consequences of one's actions transcend to impact other people, which indicates that the Kenyan society is inclined towards the Aristotelian theory of inseparability of the person from the community.

5.1.5 Self-Direction

St. Thomas Aquinas writes on the voluntariness of the human act that "those things which have a knowledge of the end are said to move themselves because there is in them a principle by which they not only act but also act for an end", and that voluntary acts implies that "movements and acts are of their own inclination" (ST I-II, q6, a1).

One of the key assumptions in the conceptual framework is that SRB is self-motivated and driven by "fulfilling higher order needs" (p. 12). The Schwartz theory calls this

value “self-direction” and groups it alongside other values in the “Openness to Change” category.

The research investigated this in question 3.1, and it emerged that 84% of respondents agreed or strongly agreed that it is possible to do the right thing without expecting reward, with a weighted score of 4.08 out of 5. The follow-up question, whether an individual should act independently of external factors, scored 3.60 out of 5, with 65% of the respondents agreeing or strongly agreeing to the statement. This is consistent with Aquinas’ view that voluntary acts are driven by an intrinsic principle.

However, in response to Question 3.5: “what in your view primarily drives people’s actions” 53% indicated that the environment is the key driver of behaviour, 27% personal values, 11% outcomes and 9% rules. The suggestion that the external environment is the primary driver of people’s actions contradicts with the general agreement observed earlier that individuals should act independently.

Aquinas writes in reply to Objection 1 (ST I-II, q6, a1) that “although it is essential to the voluntary act that its principle be within the agent, nevertheless it is not contrary to the nature of the voluntary act that this intrinsic principle be caused or moved by an extrinsic principle: because it is not essential to the voluntary act that its intrinsic principle be a first principle”. This means that human actions do not cease to be voluntary even if the agent is influenced by factors from the external environment, and the researcher intuitively feels that this would be an important topic for motorists to understand that notwithstanding external factors they are still primarily responsible for their own actions.

The output from the qualitative analysis shows that “culture” and “society” are key thematic areas when speaking about perceptions of virtue and road safety, ranking second and fourth respectively. Whereas these are external factors that may influence the way one chooses to act, the responsibility for the act remains with the acting person because it is a direct result of their own inclination. One of the interview participants observed that habit is a double-edged sword, so the outcome of building a habit could be virtue or vice depending on the quality of the input, which is in line with Aristotle’s view in Nicomachean Ethics that good harpers and bad harpers alike are produced by harping.

5.1.6 Theories of Normative Ethics

Normative ethics is concerned with setting standards for the determination of conduct as right or wrong. According to the Internet Encyclopaedia of Philosophy (IEP), the theories of normative ethics assume that “there is only one ultimate criterion of moral conduct, whether it is a single rule or a set of principles” (“Ethics”, n.d.). Chapter 2 outlines the three main normative theories of ethics, and the researcher sought to examine respondent perceptions about how a person knows the right thing to do. The questions at the tail end of section 2.1 of the questionnaire were framed to explore for the inclination towards a specific theory by asking whether a person knows the right thing to do by knowing the laws, by focus on the outcomes or by building good character, representative of deontological, utilitarian and virtue ethics respectively (Hursthouse, 2013).

An analysis of the results shows that the weighted scores out of 5 were very close: building good character scored 3.54, knowing the laws scored 3.44 and knowing the outcomes 3.30. Some of the anecdotal quotes from questionnaire respondents that the researcher interacted with were “it’s not so straightforward”; “you can’t build character in a vacuum, there must first be rules”; “the term ‘right’ presupposes existence of rules”; and “rules are made based on experience and with outcomes in mind”.

Klein (1998) states that virtue ethics “while deontological in many respects, does not object to utilitarian style calculations as long as they are contained within a moral framework that is not utilitarian in its origin”. This view suggests that the clear-cut lines that the normative theories of ethics draw between their foundational principles may not be as clear in practise, which could help to explain the perceptual overlaps and conflicting responses that were observed between the role of individual choice and external influences in decision-making. The view that there are blurred lines between the ethical theories is shared by Baron (1985) who states “it is misleading to suppose that one must choose between ethics of virtue and ethics of duty rather than combine some elements of both” (p. 135) .

The inferential statistics conducted on the question “a person knows the right thing to do by building character” shows that there are significant relationships with all demographic factors except the number of years of driving experience. For example,

the weighted average score for males is 3.41 (n=260) and higher for females at 3.78 (n=129), suggesting that the latter are more inclined to building character as a way of knowing the right thing to do. In terms of education the score is progressively higher across the four categories, increasing from 2.67 to 3.87 for respondents with no education and university attainment respectively – suggesting that the more schooling one receives the more they are inclined towards the character-building approach.

In the analysis of the in-depth interviews it emerged that the theme that was mentioned the most in relation to understanding of virtue and improvement of road safety was “Rules”, suggesting that deontology is a key driver of action. However, two themes that resonate more with virtue ethics – “Habit” and “Character” also featured at the top of the list in 3rd and 5th place with 18 and 15 mentions respectively. This is consistent with the quantitative findings and the literature quoted above suggesting that the boundaries are not discrete, and it helps to develop an understanding of what virtue means to Kenyan motorists – over and above the conventional principles of virtue ethics theory (goodness, habit and character), a virtuous person is also perceived as one who follows the rules.

The inference from these observations and the quoted literature is that there may be connections between the normative ethical theories such that compartmentalizing the single-most important aspect of each approach becomes problematic. Whereas the agent-centred notion of doing the right thing is understood, there are other act-centred considerations that influence behaviour, and these relate to adherence of laws as well as knowledge of consequences. The relevance of these findings to the study is the guidance it provides in determining what an effective road safety improvement strategy in Kenya would need to consider. Over and above the complexity of balancing the strategies to accommodate for the intersections between the various ethical inclinations, demographic factors also need to be factored into the targeting of the initiative. It suggests that a purely virtue-ethics based approach to road safety may miss out on key aspects and only resonate with a sub-set of the targeted audience.

5.2 Conclusion

This chapter outlined the key discussion points arising from the research findings and was organized in line with the key dimensions of socially responsible behaviour outlined in the conceptual framework.



Chapter 6 : Conclusion and Recommendations

6.0 Introduction

This chapter presents the conclusions arrived at based on the research findings and outlines how the research objectives were met. This is followed by implications and recommendations from the conclusions derived, and possible areas for further research.

6.1 Summary of Key Findings

The research problem that necessitated this study was a two-fold road safety challenge: a) road users are generally aware of the law and the consequences of going against the rules, but these are not strong enough motivators for compliance (NTSA, 2016), and b) the low ratio of enforcers to road users as established from national statistics in Chapter 1. The general objective of this research was therefore to establish the role of the individual road user and to what extent their cognition, personal values and character could result in improved road safety through socially responsible behaviour as proposed in the Schneider SRB model.

The review of literature in relation to road safety in Kenya found that no studies have been conducted to investigate the improvement of road safety using the notions of individual character and virtue to complement the existing initiatives which are primarily based on enforcement of rules and the attendant consequences of not following the law.

Specifically, the research addressed the following questions:

1. Are motorist's cognitive processes linked to socially responsible behaviour on the road?
2. Are motorist's individual values linked to socially responsible behaviour on the road?
3. What is the self-perceived importance of virtue to motorists in relation to road safety practices?

1. The key findings in response to RQ1 are presented in line with the core dimensions of cognition in the conceptual framework.

Responsibility Disposition

It emerged that individual responsibility is important and well understood by motorists in Kenya. However, there is need to recognize the role of external stakeholders such as the regulators and enforcers. It is also important to consider the demographic factors where there are significant variations.

Moral Reasoning

There is a general agreement among motorists in Kenya that it is important to do the right thing notwithstanding the rewards, sanctions or societal acceptance of one's actions and decisions.

Moral Identity

The findings from the research indicate that motorists perceive knowledge of the right thing to do as being the same as doing it.

2. The key findings in response to RQ2 are presented below under the headers outlined in the conceptual framework.

Self-transcendence

There is a good understanding of the notion that individual decision-making needs to consider the benefits that will accrue to the larger society.

Self as Interdependent

The findings from the research indicate a general agreement that the individual is an inseparable part of the community.

Self-direction

There is an understanding that self-direction and voluntariness are key to individual decision-making. However, the role of environmental influences in determination of actions is important.

3. In response to RQ3, it emerged that virtue and its associated notions such as goodness, habit and character are known intuitively but not definitively. Virtue is also associated with other themes such as rules, culture and society.

6.2 Conclusions

The findings from the study give rise to the following conclusions in line with each research question:

1. Conclusions for RQ1:

Responsibility Disposition

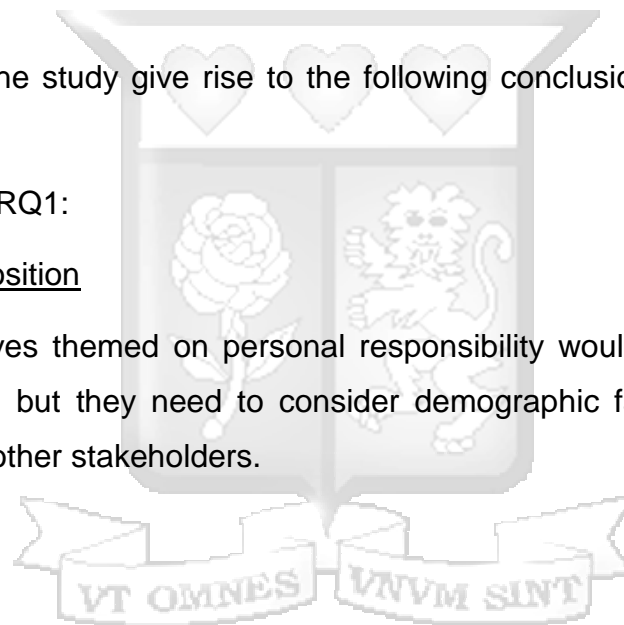
Road safety initiatives themed on personal responsibility would resonate well with motorists in Kenya, but they need to consider demographic factors and take into account the role of other stakeholders.

Moral Reasoning

Road safety initiatives based on “doing the right thing” would resonate well with motorists in Kenya.

Moral Identity

Road safety initiatives that are designed to enhance knowledge and awareness without a call to action are less likely to demonstrate tangible results.



2. Conclusions for RQ2:

Self-transcendence

Road safety initiatives that are themed on the concept of “common good” will resonate well with motorists in Kenya.

Self as Interdependent

Initiatives that are premised on the individual recognizing that they are part of a larger community are likely to resonate well with motorists in Kenya.

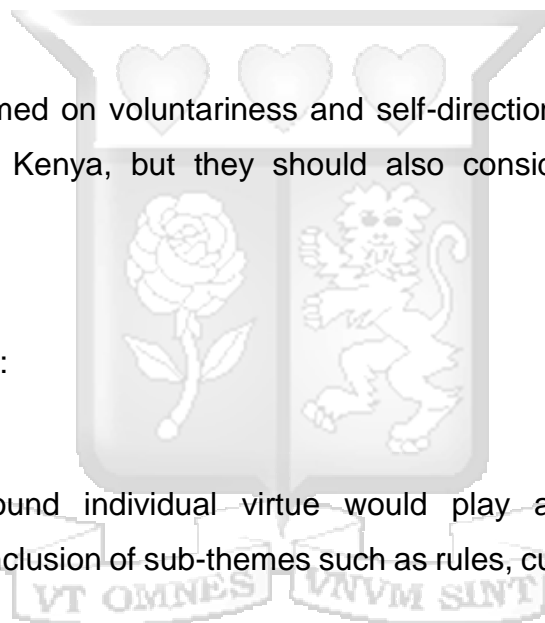
Self-direction

Initiatives that are themed on voluntariness and self-direction are likely to resonate well with motorists in Kenya, but they should also consider demographics and environmental factors.

3. Conclusion for RQ3:

Virtue

Initiatives themed around individual virtue would play a role in road safety improvement, but the inclusion of sub-themes such as rules, culture and society would be important.



6.3 Recommendations

Following the conclusions reached, the following recommendations may be made in relation to improvement of road safety:

1. Recommendations for RQ1:

Responsibility Disposition

Inclusion of an element of personal responsibility in road safety initiatives can enhance individual accountability for improvement of road safety; the role of other road safety stakeholders should however not be diminished.

Moral Reasoning

Road safety initiatives should include the aspect of doing the right thing because it is right, and not because of reward, punishment or societal acceptance.

Moral Identity

Road safety awareness campaigns should include a clear call to action to bridge the gap between knowledge and action.

2. Recommendations for RQ2:

Self-transcendence and Self as Interdependent

The role of the individual in enhancing the welfare of their society should be made more prominent in road safety campaigns.

Self-Direction

The notion of voluntariness in individual acts should be considered for inclusion in road safety campaigns to encourage motorists to take personal accountability for their actions.

3. Recommendation for RQ3:

Virtue

Incorporation of the core notions of virtue into road safety messaging to demonstrate how building the right habits leads to improved social responsibility would be important. However, care needs to be taken in formulating these messages as motorists do not make clear distinctions between the core principles of normative ethics, so restricting the communication to the conventional principles of virtue ethics is unlikely to resonate well.

4. General recommendation:

Demographics

Where significant relations are observed in the perceptions of different demographic groups, consideration should be made to factor for these at the conceptual stage of road safety strategy development.

6.4 Suggestions for Further Research

This study targeted the motorist category of road users as respondents but in future the SRB model could be studied more comprehensively with a population including all categories of road users. This would be useful to investigate more diverse themes and perceptions, and the insights derived, if actionable, would help to improve road safety in the broader ecosystem.

Since behaviour change takes time, an iterative longitudinal study on SRB and road safety is recommended, with scheduled respondent follow-ups and stringent measurement criteria to objectively evaluate the results obtained.

This study omitted the emotional dimension of the Schneider SRB model, thereby not capturing the elements of positive/negative affect, discrete emotions, sympathy, guilt and shame. It is recommended that further research should be undertaken on this topic as it could yield useful behavioural insights and close some of the knowledge gaps.

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Appendices

Appendix I: Timeline of Activities

Activity	Start	Finish
Dissertation - timeline of activities	8-Jan-18	26-Mar-19
Proposal writing	8-Jan-18	16-Aug-18
Defence of proposal	17-Aug-18	18-Aug-18
Amendment of proposal	18-Aug-18	11-Nov-18
Submission of final proposal	11-Nov-18	15-Nov-18
Ethical clearance	15-Nov-18	8-Jan-19
Research permit (NACOSTI)	8-Jan-19	15-Jan-19
Budgeting	15-Jan-19	16-Jan-19
Recruit research assistants	16-Jan-19	26-Jan-19
Training research assistants	26-Jan-19	26-Jan-19
Reproduction of questionnaires	26-Jan-19	26-Jan-19
Data collection and analysis	26-Jan-19	13-Feb-19
Report writing and revision	13-Feb-19	15-Mar-19
Submission of final dissertation document	25-Mar-19	26-Mar-19
Oral dissertation defense	30-Apr-19	14-May-19



Appendix II: Letter of Introduction

Date _____

Dear Sir / Madam:

My name is Paul Njuguna, and I am a student at Strathmore University pursuing a Masters Degree in Applied Philosophy and Ethics. For my thesis titled “AN ASSESSMENT OF SOCIALLY RESPONSIBLE BEHAVIOUR OF MOTORISTS IN KENYA”, I am investigating how road safety can be improved in Kenya by interviewing motorists along Waiyaki Way and Kangemi. I am inviting you to participate as a respondent in this research by responding to some questions, which will take approximately twenty minutes to complete. The data collected will provide useful information on possible avenues for improving road safety in Kenya.

Participation is entirely voluntary and you may withdraw at any time. There are no risks in taking part in this study. Your participation involves signing a consent form and answering some questions which the researcher will ask you. Your responses are confidential and will be securely stored by the principal researcher, with access only to people who are closely concerned with the study.

Completion of the questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions, please contact the principal researcher at the phone number and email address listed below.

If you are not satisfied with the manner in which this study is being conducted, or if you have any question about the research, you may contact (anonymously if you prefer) The Dean of Research, Strathmore University, P. O. Box 59897-00200 GPO, Nairobi, Kenya. Telephone number: +254 703 034000.

Alternatively, if you would like to address your queries to an independent person you may contact The Secretary – Strathmore University Institutional Ethics Review Board, P. O. BOX 59857 – 00200, Nairobi. Email: ethicsreview@strathmore.edu. Telephone number: +254 703 034375

Thank you for taking the time to assist me in my educational endeavours. Please note that there is no compensation for responding to this questionnaire.

Sincerely,

Paul Njuguna

Telephone: +254 722 998280

Email: paul.njuguna@gmail.com

PARTICIPANT CONSENT

I have had the study explained to me and understood all that has been explained. My questions have been satisfactorily addressed and I consent to participate in the study with the knowledge that I will not be compensated, and that I can withdraw at any time.

Name (optional): _____

Sign & Date: _____



Appendix III: Data Collection Tools

a. Questionnaire

Section 1: Demographics						
Respondent name (optional) _____						
Date of interview _____		Time: _____		Interviewer: _____		
1.1 Gender (do not ask)	Male <input type="checkbox"/>	Female <input type="checkbox"/>				
1.2 Age	18-25 <input type="checkbox"/>	26-33 <input type="checkbox"/>	34-41 <input type="checkbox"/>	42-49 <input type="checkbox"/>	50-57 <input type="checkbox"/>	58+ <input type="checkbox"/>
1.3 Years of driving experience	<5 <input type="checkbox"/>	6-10 <input type="checkbox"/>	11-15 <input type="checkbox"/>	16-20 <input type="checkbox"/>	21-24 <input type="checkbox"/>	25+ <input type="checkbox"/>
1.4 Average number of hours spent driving per day	<1 <input type="checkbox"/>	1-2 <input type="checkbox"/>	2-3 <input type="checkbox"/>	3-4 <input type="checkbox"/>	4-5 <input type="checkbox"/>	5+ <input type="checkbox"/>
1.5 Educational level:	None <input type="checkbox"/>	Primary <input type="checkbox"/>	Secondary <input type="checkbox"/>	University <input type="checkbox"/>		

Section 2: Cognition / Utambuzi						
Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree						
1 = Kutokubaliana kamwe, 5 = Kukubaliana kabisa						
2.1. To what extent do you agree or disagree with the following statements?						
<i>Je, unakubaliana au kutokubaliana na kauli zifuatazo?</i>						
		1	2	3	4	5
a	Road safety in Kenya is the responsibility of the government <i>Usalama barabarani ni jukumu la serikali</i>					
b	Road safety in Kenya is the responsibility of every road user <i>Usalama barabarani ni jukumu la kila anayetumia barabara</i>					
c	Road safety in Kenya is the responsibility of the police <i>Usalama barabarani ni jukumu la maafisa wa polisi</i>					
d	Habits are built through formal education <i>Tabia hudumishwa kupitia masomo</i>					
e	Habits are built through repetition <i>Tabia hudumishwa kupitia mazoezi</i>					
f	Knowing the right thing to do is the same as doing it <i>Kufahamu tendo la haki ni sawa na kulitenda</i>					
g	A person knows the right thing to do by knowing the laws about the act <i>Tendo la haki linafahamika kwa ufahamu wa sheria</i>					
h	A person knows the right thing to do by knowing the outcomes of the act <i>Tendo la haki linafahamika kwa ufahamu wa matokeo ya hilo tendo</i>					
i	A person knows the right thing to do by building good character <i>Tendo la haki linafahamika kwa kukuza nidhamu na tabia njema</i>					
2.2 Please rank which of the below will have the highest impact on improved road safety. 1 = highest, 6 = lowest						
<i>Orodhesha yaliyotajwa kulingana na kiwango cha usaidizi kuboresha usalama barabarani</i>						
	New traffic laws / <i>Sheria mpya za barabarani</i>					
	Adherence to existing traffic laws / <i>Kufuata sheria zilizopo</i>					
	More police officers / <i>Kuongeza maafisa wa polisi</i>					
	Improved road infrastructure / <i>Uboreshaji wa mabarabara</i>					
	Road users doing the right thing / <i>Watumiaji wa barabara kutenda haki</i>					
	Well maintained vehicles / <i>Magari kutunzwa vyema</i>					

2.3 Have you ever committed any of the following traffic violations? Tick as many as apply (Optional)

Je, umewahi kufanya makosa yaliyotajwa? (Sio lazima kujibu)

Overtaking when prohibited / <i>Ku 'overtake' mahali pasiporuhusiwa</i>	
Using the mobile phone when driving / <i>Kutumia simu ya mkononi unapoendesha gari</i>	
Failing to comply with a traffic light signal / <i>Kutotii taa ya trafiki</i>	
Failing to wear the seat belt / <i>Kukosa kufunga mkanda wa usalama</i>	
Getting off the road to bypass traffic / <i>Kukwepa msongamano kwa kupitia kandoni mwa barabara</i>	
Expired insurance or license / <i>Bima ya gari au leseni kupitwa na muda</i>	
Mechanical fault e.g. worn tyres / <i>Shida ya kifundi kama vile magurudumu mabovu</i>	
Driving under the influence of alcohol / <i>Kuendesha gari baada ya kunywa kileo / pombe</i>	
Stopping at undesignated areas to pick passengers / <i>Kubeba abiria pasiporuhusiwa</i>	
Exceeding the speed limit / <i>Kupitisha kasi iliyoruhusiwa</i>	

Section 3: Values / Maadili

Key: 1 = Strongly Disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, 5 = Strongly Agree

1 = *Kutokubaliana kamwe*, 5 = *Kukubaliana kabisa*

3.1. To what extent do you agree or disagree with the following statements?

Je, unakubaliana au kutokubaliana na kauli zifuatazo?

	1	2	3	4	5
a I need to be free to act in any way that I please <i>Ninafaa kuwa na uhuru kutenda jambo lolote nilipendalo</i>					
b It is possible to do the right thing without expecting reward <i>Inawezekana kutenda haki bila ya zawadi kutarajiwa</i>					
c An individual should act independently of any external factors <i>Mtu binafsi anafaa kutenda bila ushawishi wa nje</i>					
d Individual actions have an effect on the well-being of society <i>Matendo ya kibinafsi huathiri ustawi wa jamii</i>					
e Individual decisions should consider the effect on other people <i>Maamuzi ya kibinafsi yafaa kuzingatia watu wengine</i>					
f Values are acquired through observation <i>Maadili hupatikana kwa kuigiza kilichoonwa</i>					
g Values are acquired through repetition <i>Maadili hupatikana kwa mazoezi</i>					
h Values are acquired through formal education <i>Maadili hupatikana kwa masomo</i>					

3.2 Please rank from highest to lowest the reasons that would make you not commit a traffic violation. 1 = highest, 6 = lowest

Orodhesha yaliyotajwa kulingana na kiwango cha kukusababisha kutokiuka sheria za barabarani

Injury to myself / <i>Maafa au hasara ya kibinafsi</i>	
Injury to others / <i>Maafa au hasara kwa wengine</i>	
Arrest and penalty / <i>Kutiwa nguvuni na kutozwa faini</i>	
My personal principles / <i>Maadili ya kibinafsi</i>	
Damage to property / <i>Uharibifu wa mali</i>	
Being a bad example / <i>Kuwa mfano usiofaa</i>	

3.3 Which of the following should be the key consideration for decision-making? (Choose one) - (*self transcendence*)

Katika kufanya uamuzi, jambo la muhimu la kuzingatia ni lipi? (Chagua jibu moja)

The reward or punishment associated / <i>Zawadi au adhabu itakayotokea</i>	
The acceptance by society / <i>Kukubalika na jamii</i>	
That it is the right decision / <i>Ni tendo la haki</i>	

3.4 Which of the following should be the key consideration for decision-making? (Choose one) - (*interdependent self*)

Katika kufanya uamuzi, jambo la muhimu la kuzingatia ni lipi? (Chagua jibu moja)

Benefit to society in general / <i>Manufaa kwa jamii kwa jumla</i>	
Benefit to friends and family / <i>Manufaa kwa marafiki na familia</i>	
Personal benefit / <i>Manufaa ya kibinafsi</i>	

3.5 In your view, people's actions are primarily driven by? (Choose one)

Kwa maoni yako, vitendo vya watu husababishwa haswa na nini? (Chagua jibu moja)

The environment / <i>Mazingira</i>	
The rules / <i>Sheria</i>	
Their personal values / <i>Maadili ya kibinafsi</i>	
The outcomes / <i>Matokeo</i>	

b. Interview Guide

Continuation from questionnaire:

1. Could I take a few more minutes of your time to ask some additional questions in the form of an interview? Thank you.
Naomba dakika chache kukuhoji zaidi? Asante.
2. The purpose of this interview is to investigate whether virtue is important in relation to road safety.
Madhumuni ya mahojiano haya ni kuchunguza kama wema ni muhimu kwa usalama barabarani
3. Do you have any questions before I start?
Kabla sijaanza, una swali lolote?

Personal experience

1. For how many years have you been driving?
Umekuwa ukiendesha gari kwa miaka mingapi?
2. Has motorist behaviour evolved over time? In what way?
Je, tabia za waendeshaji magari zimebadilika?
 - a. If yes, what has caused the change?
Mabadiliko yamesababishwa na nini?
 - b. If no, proceed
3. Are there things you do to ensure road safety as you drive?
Je, kuna vitu unavyofanya kuhakikisha usalama barabarani unapoendesha gari?

Body

1. What is your view on the road safety situation in Kenya?
Maoni yako ni yapi kuhusu usalama barabarani nchini Kenya?
2. What does the word “virtue” mean to you?
Neno “wema” lina maana gani kwako?
3. How is virtue demonstrated?
Je, wema huonyeshwa kwa jinsi gani?
4. Is there any person you know that you would call virtuous? What qualifies them?
Kuna mtu yeyote unayemjua ambaye ungesema ni mwema? Ni nini kinachowatenga?
5. In your view how does a person acquire virtue?
Kwa maoni yako, wema hupatikana kwa njia gani?
6. Is [person named] likely to be a responsible motorist? Why?
Je, [aliyetajwa] ana uwezekano kuwa dereva mwema wa gari? Kwa sababu gani?

Transition

1. Is there anything else you think I should know?
Kuna jambo lolote ambalo ungetaka nijue?
2. Do you have any questions for me?
Je, una swali lolote la kuniuliza?

Closing

1. Thank you for the time you have taken. Have a nice day.
Asante kwa muda ulionipa. Nakutakia siku njema.

Appendix IV: Budget Estimate

	Unit	Quantity	Rate (Ksh)	Total (Ksh)
Questionnaire production	pages	1,500	4	6,000
Stationery, printing and binding	estimate	1	3,000	3,000
Recruitment and training of research assistants	estimate	1	1,300	1,300
Research assistants' remuneration (labor + transport)	man days	25	800	20,000
Transcription & data entry	man days	-	-	-
Fuel and transportation	estimate	1	3,000	4,000
Report writing, binding and presentation	estimate	1	5,000	5,000
TOTAL				39,300

