DETERMINISM, RISK AND SAFE DRIVING BEHAVIOR IN NORTHERN ALBERTA, CANADA

J. Peter Rothe, Laureen Elgert

ABSTRACT

**Introduction.** There is evidence that Alberta’s rural north is over-represented in the Canadian province’s overall traffic fatality rate, even after weather, travel exposure and highway geometry are controlled for.

**Objective.** The objective of this study was to identify underlying reasons and rationales that northern citizens use to accommodate risk and driving behavior.

**Methods.** A total of 82 individuals participated in 13 focus groups, each with between 5 and 10 participants. Eight focus groups were conducted with general drivers and five with service professionals in five different Alberta locations. Discussions centered on a series of questions that were designed to elicit insight into general characteristics of the participants’ world-view and featured two categories of questions, including dimensions of belief systems and driver characteristics and behavior.

**Results.** Although much of the discussions focused on freedom of choice, over half of the interviewees cited determinism as a key feature of responsibility. Three versions of determinism were emphasized as key in roadway safety: religious determinism, ‘universal’ determinism (fatalism), and humanistic determinism. These observations highlighted peoples’ perception of the likelihood of getting into traffic situations outside one’s control.

**Conclusion.** In order to maximize the effectiveness of traffic safety in the north, professionals need to take an approach which addresses not only safety issues, but also issues regarding responsibility and its links with behavior.

**Keywords:** Beliefs, road safety, risk, determinism, rural drivers
INTRODUCTION

Canada’s rural north has lately been treated within a popular discourse of "social problems". Researchers have identified it as experiencing a disproportionately high number of traffic deaths. For example, Alberta’s rural areas accounted for 74.2% of all fatal crashes in the province, while accounting for only about 20% of the provincial population (1). Furthermore, after combining information from multiple data sources, Schopflocher et al. (2) determined that, when weather, travel exposure and highway geometry are controlled for, Alberta’s six northern regional health authorities have a significant higher death rate due to motor vehicle crashes than do other regional health administration sectors in the province. Such findings require greater understanding of the complexity of the activities that are inevitably rooted in northern life (3).

Little research has been engaged to identify the underlying reasons and rationales that northern citizens use to accommodate risk and driving behavior. This paper portrays how people in northern Alberta, Canada, account for their driving behavior on the basis of beliefs that reflect basic and essential determinism - people governed by some universal laws (4).

OBJECTIVE

This study was designed to explore socio-cultural factors that support northern rural driver realities. More specifically, the research sought to clarify the extent to which northern drivers considered determinism and responsibility in their sense-making. Study questions were designed to elicit detailed information on northern rural drivers pertaining to culture, sociality, personal disposition, legality, economics, politics and spirituality, in order to move toward greater effectiveness and relevance of prevention and intervention programs in traffic safety. Within this context, a concept that was particularly emphasized was responsibility. The latter is essential to road safety discussions because it is pivotal for understanding crash involvement. Furthermore, establishing responsibility is an essential precursor to changing the roadway reality. The ultimate intent of the study was to contribute to the development of an innovative framework for addressing traffic safety in northern Alberta jurisdictions.
METHODS

Data was collected through semi-structured focus group interviews conducted by the authors. This method involves interviewing participants in a group, rather than individually, using predefined questions, but allowing for elaboration through use of follow-up questions. The interviews were designed to guide the conceptual directions of the dialogue, but participants themselves determine the specific content. Furthermore, because participants are interviewed in tandem, focus groups allow researchers insight into the ‘natural’ interaction and behavior amongst members of a group. Issues can be explored in more depth than in individual interviews because of multiple perspectives, comparison of experience, establishment of consensus and expression of disagreement. The most significant advantage of using focus groups is that participants can elaborate on how they construct answers to questions – and provide insight into how these answers reflect their ideologies and philosophies. This allowed us to establish relationships between overarching beliefs and driving behavior.

A total of 82 drivers participated in 13 focus groups of between 5 and 10 participants each, conducted in different northern Alberta regional health authorities. Eight of the focus groups were comprised of ‘general drivers,’ or individuals recruited from the general population who drive a vehicle. Five of the focus groups were comprised of ‘service professionals,’ or individuals in each locale with in-depth knowledge of traffic-related issues in their respective locales. Examples of these participants are police officers, municipal office staff, emergency medical service personnel and hospital staff. Focus group discussions generally lasted for one and a half to two hours.

Existing contacts in five regional health authorities were used in order to recruit participants. These contacts recruited ‘general drivers’ and ‘service professionals’ in each of their respective locations. In some cases, these contacts used snowball sampling, whereby word of mouth is used to recruit. In other cases, these contacts used advertisements in local newspapers, or posters hung in community facilities, to recruit the participants.

Discussions were centered around a series of questions that were designed to elicit insight into general characteristics of the participants’ world views, and featured two principal categories of questions:
1) dimensions of belief systems; and 2) driver characteristics and behavior. The first category, dimensions of belief systems, explored themes such as social roles and meanings (family, home, friends, community, work), religion (personal views), lifestyle, civic society (taxes, appropriate laws, personal freedom), and justice (effectiveness, application of justice). The second category focused on driver characteristics and behavior, and explored themes such as driving (past experiences that affect present practices, anger, following the law), safety (personal safety practices, safety consciousness and crashes), risks/attribute (blame for crashes, luck, driver error and crashes), and law enforcement (research and laws, techno policing, appropriateness of laws, police commitments).

The data were audio-taped, transcribed and analyzed through the process of “induction” so as to identify patterns, or themes, embedded in the data. The interpretations were reviewed/verified by a sample of willing focus group participants. The study design was approved by the Health Research Ethics Board at the University of Alberta, Edmonton, Alberta.

RESULTS

The central issue is: if drivers are determined to act by outside forces, and could not act otherwise, should they be held responsible for their driving behaviors? Over half of the interviewees focused on determinism as a key feature of responsibility. Three versions of determinism were particularly prevalent in the focus group discussions: religious (theological) determinism, universal determinism (fatalism) and humanistic determinism.

Religious Determinism

A group of northern Alberta citizens reported that they behave as they do in traffic on the basis of religion. God, or some supernatural being, controls people’s destinies. He determines people’s choices on driving and establishes the context in which driving events happen. The individual has no real freedom. Several sample comments are:

- I believe there’s some sort of power that determines your fate, and I’m not sure what it is…
- I believe in a higher power. I believe that like when you look at
the universe and whatever else, I can’t believe that there isn’t so
mething up there that’s watching and telling me what to do.
• If its God’s will, then there’s nothing you can do.

God, or some other supernatural being, accepts and ratifies a crea-
ted universe. Drivers act in accordance to a supernatural power that
has perfect knowledge of the future and determines driver choices and
consequences for the choices made.

‘Universal’ Determinism
Determinism is not only in the domain of religious belief. Events hap-
pen to people that reflect an unspoken and often ill-defined scheme of
events in the universe. They are fixed and human effort cannot alter
them (5). Circumstances happen that are out of the immediate control
of the driver. Some drivers are pre-destined, or programmed, to crash,
get injured, or die. Popular lines of reasoning were short comments li-
ke, “My number was not yet up,” “It wasn’t my turn yet,” “Being at the
wrong place at the wrong time,” “There’s little you can do when your
number is up, its up,” or “I don’t make the rules.”

A split second here or there, a quick unforeseen event, or an object
that impairs vision can lead to crashes without drivers thinking that
they have an opportunity to counteract the pre-determined events.
Circumstances were often described in conjunction with luck, whether
if was good or bad. Sample quotes are:
• When an animal runs onto the road, I suppose maybe you could
say you weren’t looking carefully, but sometimes at night you
can’t see them at the side, but your going 100, or a 120, and you
hit the animal. Is there much difference? Well no, but who’s fault
is that?
• Well, if luck is split seconds, you know, one second here, one
second there. I mean there has to be a certain element of it
doesn’t there?
• There are times when, for no reason, you just slow down and if
you hadn’t you could have died. I’ve been in those. Yeah, I think
there is luck.

Anyone can have a crash, and anyone can get killed. It is a matter
of probability, opportunity and being there. Sample comments are:
• I’ve done some dumb things, real dumb things, drinking and
driving (inaudible). So I think anyone can have an accident, es-
pecially if anybody else is on the road.
• *It can happen to you. It’s not necessarily going to be something that you do yourself. Something bad happens to a good family…. people killed in a collision. That’s just senseless….*

• *It’s going to happen…. Some collisions are almost unavoidable. There’s a hundred things you always do right. There’s some things that are really hard to avoid, and sometimes there are other people that do things…. You can’t avoid everything.*

In the north, things happen that drivers deem to be out of their control – bad weather, wild animals, or other stupid drivers. Northerners are reluctant to take responsibility for such events, or for their behavior before, or during those events. Luck plays a role at such times.

**Humanistic Determinism**

The concept of humanistic determinism reflects Spinoza’s concept of native and self-existent substance (6). The rationale suggests that people engage in activities for the sake of abiding with a natural code of events. The entire train of deliberation leading up to decisions is an expressions of natural, yet unconscious, urges and desires (7). Being human means to break laws and behave in a way that suggests how much each person can get away with. The data featured numerous comments that suggest a natural order to obeying or breaking traffic laws.

• *It's human nature to push as far as we can. If we got away with it a couple of times, we’ll keep doing it and sometimes we’ll push a little further. I do the same thing with speed. Like I know how fast I can go without being ticketed and I will do that. Well, it's a perception, perception of the risk and what you can get away with. Some people are just inherent risk-takers. …They weave in and out of traffic, like mostly young guns, but …women too, I guess. They just like the speed. They like to be there first. They like to beat everybody else. Some people are just like that….*

As in the previous descriptions, if behavior is programmed into the northerner as impulses, then there is little reason to take responsibility. There was a strong suggestion that people who live in the northern areas have the natural instinct to survive and, in order to do so, they “*do what they have to do to get by.*”
DISCUSSION

Determinism reflects the philosophical position that all events are completely settled by previously existing causes, or at a higher level, that preclude individual choice and agency. Ideas about the deterministic perspectives have been discussed with regards to behavior in many areas, including counseling and social work, politics, welfare economics and criminology (8-11). Much of the scholarship on determinism has provided an alternative discourse to determinism, which is often considered biased and antiquated. This work has largely negated theories and models have been built upon a foundation of determinism. While determinism has been largely outdated as explanation for phenomena in the positivistic paradigm, the results of this qualitative study have reinforced the significant reflection of a deterministic orientation in the attitudes and behavior among northern Alberta drivers.

Many northern Alberta rural residents believe that drivers tend to get into traffic situations outside of their control. Hence, there is no prerogative for them to take personal responsibility for choices made and preventive driving action they could have taken. A split second here or there, a sudden unforeseen event, or an object that impairs vision or judgment, lead to crashes. Drivers can’t choose them away, or counteract, them because determinism, interpreted as fate, luck and human nature dominate. The northern drivers take events as they come. They do not make decisions to counter the events and, therefore, take no responsibility. The blame is not theirs (8).

This study extends the notion of determinism to driving behavior and risk and thus, ultimately, has implications for road safety. In order to maximize the effectiveness of traffic safety in northern constituencies, professionals need to take an approach which addresses not only safety issues, but also issues regarding beliefs about causality, responsibility and behavior. It is on the basis of belief systems that people design their actions for which consequences are derived.
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J. Peter Rothe
Alberta Centre for Injury Control and Research
Department of Public Health Sciences
University of Alberta
8308 114 Street, Edmonton, Alberta
CANADA T6E 2G1
peter.rothe@ualberta.ca