

The Illogic of Youth Driving Culture

Kate C. Tilleczek

Most adolescent deaths are caused by injury sustained in traffic crashes, and driver education does not necessarily reduce the problem. This multi-method, ethnographic study describes the logic and regulation of youth driving culture in a northern Ontario community. This included 40 hours of participant observation and a survey of 88 novice drivers. The survey results suggest that youth are aware of the risk of driving, intend to practice safe driving and hold positive meanings of driving. Driver education and graduated licensing were seen as critical opportunities to support these goals. However, the mapping of youth driving culture revealed system flaws such as mixed messages, missed opportunity for integration, lack of clear regulation, and society's negative images of youth. Results also suggest that most prevention efforts are attempted from the point of view of assigning individual blame to youth as risk-takers. Theoretical and practical implications for road safety and injury prevention are discussed.

Introduction

This study has been designed to describe youth driving culture. In the process of learning to drive, youth are engaged in attaining a critical *rite de passage* into adulthood. However, unlike troubles that occur in other cultural transitions such as graduating from high school, becoming a driver is fraught with the possibility of injury or death. The leading cause of death for adolescents is injury, and most of it is due to driving incidents. Although prevention strategies such as graduated licensing and driver education are in place, youth driving injury remains significant. The primary concern of this study, therefore, is to investigate and reframe the problem in a cultural context through: (a) a description of the logic and regulation of youth driving culture, and (b) an examination of the ways in which this system is and/or is not preventative.

Death by motor vehicle injuries increases dramatically during this phase of development (Irwin 1993), a trend that holds steady regardless of whether one examines global (World Health Organization 1999), national (Health Canada 1997; Transport Canada 2001), provincial (Ontario Ministry of Transportation 2000) or

Correspondence to: Kate C. Tilleczek, Department of Sociology, Laurentian University, Sudbury, Canada P3E 2C6, Email: ktillecze@laurentian.ca

local trends such as those in Northern Ontario communities (Northern Health Information Partnership 2003). On a global level, fatality and injury due to traffic accidents has been shown to be a serious problem in both industrialized and developing countries (Laflamme 1998). Cross-national studies show that trends in global modernity, such as increasing population density, are associated with a proportionately greater number of traffic-related deaths in the young, whereas gross national product per capita and increased proportional spending on health care are associated with decreasing traffic fatality rates (Soderlund & Zwi 1995).

On a national level, for Canadian youth under 20 years of age, unintentional injuries as the leading cause of death and the second most frequent cause of hospitalization (Health Canada 1997). Youth, age 15–19 years, as defined by Health Canada, is the age group with the highest rates of death and hospitalization for all injury categories in Canada, with males three times more at risk than females. In Canada in 2001, there were 20 million licensed drivers of whom 1,013,621 were in the 15–19 age range (Transport Canada 2001). Youth in this age ranges make up 6.7 percent of the total Canadian population. However, their traffic fatalities and serious injuries account for 63 percent of all motor vehicle fatalities and serious injuries. In total, youth in the 15–19 age range were involved in 29,646 serious injuries and 387 fatalities due to traffic accidents in 2001 (Transport Canada 2001).

Both provincial and community trends demonstrate a similar problem. In Ontario, novice drivers make up five percent of Ontario's driving population yet account for 50 percent of motor vehicle accidents (Ontario Ministry of Transportation 2000). In 2000, there were 234,932 male drivers and 203,238 female drivers in Ontario in that age range. Together, they accounted for 28 percent of the collisions in Ontario. Of those, the majority (80 percent) are coded as occurring under 'normal conditions' that are not alcohol related. In Northern Ontario, injury accounts for 70 percent of the leading causes of mortality in children aged 14–19. Motor vehicle and other transport accidents account for 20 percent of injury morbidity in the Northern districts for those in the 14–19 range (Northern Health Information Partnership 2003). In the district of Sudbury, the trends are similarly 66 percent and 20 percent, respectively.

To address the population health trends, both graduated licensing and driver education have been implemented. Graduated licensing systems have been shown to increase road safety for novice drivers, with an up to 31 percent drop in crash rates reported that suggests the importance of experience in road safety (Ontario Ministry of Transportation 1998; *Washington Post* 2002). However, driver education does not necessarily increase road safety for those in the early stages of driving experience in Canada (Ontario Ministry of Transportation 1998), the United States, Sweden, or Australia (Mayhew & Simpson 1996). It has been suggested that lack of standards in driver instructor training and curriculum, and an ineffectual driver testing system have negative effects on the driving skills of the young driver. However, these elements of driving culture have yet to be examined as an inter-related system that influences the acts of driving.

Youth Driving Culture: Images and Passages

Culture is critical in that it influences action by shaping the tool kit of habits, skills and styles from which people construct strategies for action (Swidler 1986). Beck's (1992) risk society suggests a paradox of dramatic expansion in wealth generation alongside growing incidence of health transgression, especially for those marginalized by social class, gender and age. Beck (1992) presents a basis for understanding the nature and effects of this paradox, suggesting that late modernity is characterized by a deconstruction of traditional social networks and a new set of risks and opportunities, creating an unsettled cultural context for youth. It has been argued that in the case of youth, transitions to adulthood are therefore increasingly multidimensional and complicated (Krahn 1996; Furlong & Cartmel 1997; Tilleczek & Lewko 2001). As a result, behavior and lifestyles become individualized and problems are seen as outcomes of individual failings that may be solved through personal action. Furlong and Cartmel (1997) suggest that a key feature of modernity is the fallacy of individual control that occurs along with this individualized lifestyle. This perception obscures the cultural relations that govern opportunity and risk.

Non-material Driving Culture: Representing Youth

Non-material aspects of youth driving culture concern the culturally held representations about youth. These assumptions shape the logic of prevention strategies that are written in cultural context. Even the term *adolescence* itself is a representation with roots in historical and cultural forms of representation (for reviews see Reigel 1972; Griffen 1997; Moore & Parsons 2000). A central concern here is the extent to which ideas about youth have been prone to cultural fluctuation and interpretation.

One of the more useful examples of this process is the work of Enright *et al.* (1987) who explored links between theory generation, history and societal images of youth to empirically test the presence of biases. Their data indicate the following relationship:

In times of economic depression, theories of adolescence emerge that portray teenagers as immature, psychologically unstable, and in need of prolonged participation in the educational system. During wartime, the psychological competence of youth is emphasized and the duration of education is recommended to be more retracted than in depression. (Enright *et al.* 1987, p. 541)

During World War I and World War II, adolescence was seen as adult-like in manner. It would be much more troubling to publicly proclaim sending children to the front lines of the war, than to send the same individuals seen as adults. During the depressions of the 1890s and 1930s, adolescence emerged as a phase both stressful and childlike. Since work was too scarce for adult males, youth was protracted in a back-to-school sweep, safely away from the labor market. These images reversed under economic demand and fluctuation.

Current dominant representations of youth are generally understood to be about ways to set them apart from children and adults, the inevitability of trouble, and the need for surveillance (Foucault 1977; Griffen 1997; Kelly 2000). Images can be

summarized as dichotomies of active/passive, good/bad, and capable/incapable. How are youth represented and located in youth driving culture? Are these representations similarly dichotomized, mixed and culturally loaded?

Material Driving Culture

Research addressing the origins of youth driving injury has offered a number of individual explanations to explain the problem. Most often cited (although not mutually exclusive) are faulty cognition, inexperience and risk-taking propensity (Williams *et al.* 1995). A recent trend in literature portrays adolescence as a time of escalating risk-taking that results in increased injury and death (Irwin 1993; Muuss & Porton 1998). Risk-taking is defined as behavior that probably has both potentially non-injurious and injurious outcomes and must be volitional (Irwin 1993). Adolescents are known to increase their risk-taking behavior as they undertake the ongoing cultural tasks of constructing an identity.

In seeking and asserting adult status, they are drawn to automobiles (and other adult artifacts), which increase opportunity for risk-taking and injury. However, attempts to explain links between risk-taking and injury have been sparse as compared with the wealth of research aimed at explaining the antecedents of risk-taking behavior. These include a general cognitive incapability of adolescents (unrealistic self-appraisal and cognitive egocentrism), the inability to perceive risks, inexperience, thrill-seeking personality, and family structure (for reviews see Arnett & Balle-Jensen 1993; Irwin 1993).

Current risk-taking literature cites inexperience to explain why adolescents have been found to take longer to perceive and respond to hazardous situations. For instance, they are less likely to know how to respond to road dangers and lack the necessary driving skills to do so (Mayhew & Simpson 1990). Youth appear to believe their risk of being in a serious accident is low, as they rate icy roads, darkness, curvy roads, driving under the influence of alcohol and traveling above speed limits as less risky than do adult drivers; they are also overconfident about their driving skills (Hingson & Howland 1993). Young drivers drive faster, follow more closely, overtake other cars in a risky manner, and allow too little time to merge (Jonah 1986; Romanowicz & Gebers 1990; Saibel *et al.* 1996). Youth are also less likely to use seat belts and other protective devices (Rothe & Cooper 1989) and have been shown to demonstrate risky attitudes and behaviors interpreted as lifestyle factors (Mayhew & Simpson 1990). Young drivers with the worst driving records have been shown to drive more than 20 hours per week 'for fun', regard the car as an essential feature in their lives (Pelz & Schumann 1971), and have low levels of integration into school culture such that they receive lower grades on citizenship and exhibit lower grade points (Harrington 1972).

These studies suggest that the origins of traffic incidence reside with the individuals who take more risks, lack experience, and display poor driving judgment and decision-making. However, Jelalian *et al.* (1997) have found that risk-taking propensity accounted for only 4 percent of the variance in self-reported injury, while having a

friend injured in a similar way accounted for 28 percent of the variance. Perception of injury risk was related to prior injuries (in the past six months) to the extent that prior injury best predicted perception of injury risk and accounted for 22 percent of the variance. This suggests a more culturally plausible explanation for injury. Similar studies have yet to be conducted on traffic injury for youth.

While theoretical explanations for youth risk-taking vary, it is clear that both individual and social factors in the lives of young people influence health transgressions. Embedded in this argument is the view that risk-taking is culturally necessary for positive identity construction and the social tasks of youth (Lightfoot & Cox 1997; Gullone *et al.* 2000). Lightfoot (1997) has suggested ways in which intentional risk-taking happens for a group of American, middle-class youth engaged in less dangerous risky activity such as sneaking out of the house, drinking, smoking drugs (for a review see Keating 1998). She reports that risk is both social and transformative, taking the place of childhood play and offering opportunity for social developmental growth.

Lightfoot's work is akin to Elkind's (1980) classic work using social cognitive metaphor to detail Goffman's (1969) notion of 'strategic interactions' and Piaget's (1972) 'formal operations' as jointly used by youth to construct, enhance and maintain self-concept. Thus, sneaking out of the house, forging parental signatures to skip school, dating behaviors, forbidden acts of drug use, and phoning behavior was related to social cognitive growth.

Lyng (1993) has further explicated the relationship between forbidden acts as criminal behavior and risk-taking strategies. Risk was valued by the study participants as an accomplishment, as 'edgework', which allowed for a negotiating between self and culture. Both risk and crime held sensual properties within the culture. It could be suggested, therefore, that without risk-taking the opportunity for growth and development is stunted. What remains to be studied are the optimal quantity and quality of risk for developmental health, and the ways in which risk could be distributed and negotiated in youth driving culture.

In addressing these issues, elements of youth culture require further study. Initial work has been undertaken detailing the importance of parental and peer relationships in determining social integration, which in turn guards against risk-taking (Youniss *et al.* 2001). Their findings suggest important variations in social integration into youth culture such that connection is associated with regulation and adult normative behavior. Those who were more integrated into adult-school norms were more likely to engage in integrated activity, while those who were less integrated engaged more often in negative health risks. Youniss *et al.* (1997) suggest the presence of a kind of 'integrated youth syndrome' that is counter to the syndrome of multiple delinquency. Similar heterogeneous subcultures of youth have also been characterized as differing in incidences of risk-taking behavior in the Australian (Moore & Parsons 2000) and Danish populations (Arnett & Balle-Johnson 1993).

Little evidence exists detailing the various meanings that driving and risk have for novice drivers. It has been suggested that adolescent males rate the automobile as providing high levels of enjoyment and satisfaction (Bibby & Posterski 1996).

Csikszentmihalyi and Schneider (2000) have examined the opportunity and constraints of other transitional sites of becoming adult, such as work, school and sports. Their results indicated that images of risk and play are embedded in these social experiences. Firth and Geoffrey (1980, cited in Rothe 1987) suggest that all youth want to own a car since driving represents increased status. The meaning of driving was also related to the ease of getting around, enhanced social status, and access to culturally appropriate events such as school/work-related activities; and/or providing freedom (Rothe 1987).

Prevention efforts targeted at novice drivers include regulatory approaches, such as graduated licensing systems, and knowledge/practice approaches, such as driver education. The evidence on the safety value of driver education suggests little support for the hypothesis that it is effective (Mayhew & Simpson 2002). Moreover, some studies suggest a 'safety disbenefit'; that is, an increase in rather than a decrease in crash involvement (Ontario Ministry of Transportation 1998; Potvin *et al.* 1988).

Several possible reasons for this have been put forward. First, traditional driver education fails to teach the knowledge and skills that are critical for safe driving. This is suggested to be based in part on a dearth of empirical bases for curriculum development (Mayhew & Simpson 1995). Mayhew and Simpson (2002) also suggest four further reasons for the failure of driver education: students are not motivated to use the safety skills that they are taught; driver education fosters overconfidence; driver education fails to adequately address lifestyle issues such as patterns of behavior and risk-taking; and driver education fails to tailor content to individual student need and skill.

The graduated licensing system, in placing regulations on driving conditions for novice drivers, shows more promise (Arnett & Balle-Jensen 1993; Preusser *et al.* 1993; Ontario Ministry of Transportation 1998; Williams 1998). While each program of graduated licensing is unique in terms of features, Mayhew's (1997) review of international programs suggests that they remain true to basic prevention principles that attempt to reduce risks through regulation. Results of the evaluations of these programs illustrate a reduction in collisions of between 6 and 8 percent for young drivers. In Ontario, a 31 percent overall improvement in collision rates was demonstrated across all age groups; the greatest improvement (42 percent reduction) was for novice drivers aged 20–24 (Ontario Ministry of Transportation 1998). Despite these gains, however, youth driving injury remains significant. Negotiating a transition such as learning to drive could be reflective of an unsettled transition through youth culture. What then is the culture of youth driving, and how does it set up a tool kit and strategies for action? These questions guide the rationale and method of this study.

Method

Novice Drivers' Survey

Surveys were conducted with all novice drivers who attended the community driving

schools. In total, 88 students completed the survey. The sample is purposive and inclusive of all students over the course of the study. The driver education centers provided access to students of a local version of a national driver education program, and to students from a local, privately operated, Ministry-regulated driving school.

Over the course of two years, I sought out and combined a set of standardized measures to construct the Novice Driver Survey from measures with valid and reliable properties. The survey was made up of measures of social integration, risk-taking behaviors, risk-taking beliefs, injury self-reports, feelings about driving, and socio-demographic variables. Thus, they were chosen to provide a more comprehensive and composite view of novice driver approaches to both social and individual dimensions of driving, injury, safety and risk. The origins and quality of the measures are now described.

Measures

Social integration. Social integration was measured with a list of self-reported lists of everyday activity items taken from previous research in which 3113 high school seniors were assigned to social integration groups (Youniss *et al.* 1997). These items were originally factor-analyzed into four crowd groups: 'school', 'creative', 'sports' and 'fun'. This procedure was repeated by the authors in both 1999 and 2002 (Youniss *et al.* 2001) yielding similar significant factor loadings (greater than 0.30) in each case.

Risk-taking. Risk-taking was measured with both risk-taking behavior and risk-taking beliefs using the Adolescent Risk Questionnaire (Gullone *et al.* 2000). This questionnaire is made up of two separate but similar check-lists, for each of risk-taking behavior and risk-taking beliefs—each of which is made up of four subscales: thrill-seeking, rebellious behavior, reckless driving, and antisocial behavior. The measures have been shown to be internally consistent for each subscale with Cronbach's alpha ranging from 0.7 to 0.8. Test-re-test reliability suggests that the subscales are reasonably if not exceptionally stable. For example, the Pearson's correlation coefficient, respectively, for reckless perception was $r=0.44$ and for thrill-seeking perception was $r=0.35$. All other Pearson's correlation coefficients exceeded $r=0.5$, with most ranging from 0.6 to 0.8 (Gullone *et al.* 2000). Correlations between each subscale on the two measures (perception and behavior) were calculated. For the thrill-seeking subscale, behaviors and perceptions were positively correlated (0.59–0.74). For the remaining subscales, the behaviors and perceptions were inversely related. The rebelliousness subscales varied from -0.51 to -0.57 , recklessness from -0.2 to -0.38 , and antisocial subscales from -0.14 to -0.19 . All correlations were statistically significant ($p < 0.01$) (Gullone *et al.* 2000). The content validity of the measures is suggested by the correspondence of results with past research on the factors that yielded the four subscales, the inter-relation between

behavior and perception, and robustness of the risk structure illustrated via confirmatory factor analysis in the sample (Gullone *et al.* 2000).

Injury self-reports. For both self and friends, injury was measured with the Adolescent Injury Checklist (Jelalian *et al.* 1997). The Adolescent Injury Checklist is a self-report measure used by Jelalian *et al.* (1997). This profile was a detailed interview to assess positive and negative health behaviors in adolescence. The form was used in this study to record specific injuries related to adolescents as well as their friends. Jelalian *et al.* (1997) report an internal consistency, as measured by an alpha coefficient of 0.68 for the 17 items of injury occurrence, of 0.62 for the injuries requiring medical care, and of 0.84 for friends injured this way.

Meanings and feelings of driving. Statements and feelings about driving were measured from an adapted form of the British Columbia Youth Driving Survey (Rothe 1987). This survey was originally conceptualized following a thorough review of literature on young drivers, key informant consultation with the Provincial Traffic Safety and Planning Department, and 40 focus group interviews with adolescents. The survey was originally composed of 129 items that appeared to measure concepts missing from the literature surrounding the social aspects of driving. The survey was completed by 1368 students in British Columbia, Canada (Rothe 1987). The findings relating to these items are corroborated in other research (Pelz & Schumann 1971) showing that the meaning of driving is related to adult status and mobility. This suggests face and content validity of the measure. The 17 items used in this study were chosen to measure attitudes towards driving, cars, and the driving habits of young people. These items were also chosen to measure the social meaning dimensions specific to driving that were not tapped with the other measures on the survey. Thus, they were selected to augment the survey and provide a more complete view of novice driver approaches to driving, injury, safety and risk. For example, seven features of driving were measured on a seven-point scale, each question began with the prompt 'Driving is ...'. The lower end of the scale was 'necessary, important, safe, exhausting, boring, difficult and risky'.

Respondents were also asked to rate eight statements about the nature of driving as it related to themselves, their parents and friends. A rating of 7 represented the opposite end of each scale; for example, 'unnecessary, unimportant, dangerous, relaxing, exciting, easy and not risky'. Questions were adapted from Rothe (1987) and responses were given on a five-point Likert scale, with 1 being 'strongly agree' and 5 'strongly disagree'.

Four further open-ended questions as to the meaning of driving yielded multiple responses that were thematically coded. The question 'Why do you want to drive a motor vehicle?' yielded 123 responses that were coded into seven main themes with an inter-coder reliability of 95 percent. In the case of the question 'Why are you taking a driver education course?', six separate themes emerged from 133 responses; with an

inter-coder reliability of 92 percent. For the question 'What are the negative/bad things that can happen to you because you drive?', seven separate themes emerged from 144 responses; with an inter-coder reliability of 93 percent. For the question 'What are the positive/good things that can happen to you because you drive?', seven themes emerged from 131 multiple responses with an inter-coder reliability of 77 percent.

Socio-demographics. A number of socio-demographic items were measured by asking participants to provide date of birth, grade, school, parental driving activity, peer driving activity, past driving experience, and exposure to road safety and injury training curricula.

Social class. Parental education and occupation items were included following the National Longitudinal Survey of Children and Youth (Statistics Canada 1999). These included asking the level of maternal and paternal education on a closed-ended checklist from grade eight to graduate or professional education, and by asking participants to describe their mother's and father's occupations in an open-ended format. Maternal occupations were then coded into one of 16 mutually exclusive categories (e.g., teacher, social worker, entrepreneur, student, accountant, etc.). Paternal occupations were similarly coded into one of 22 mutually exclusive codes (e.g., mechanic, computers, investment banker, doctor, lawyer, geophysical operator, police officer, etc.). These new variables were then re-coded into four categories reflecting broad classes of occupation in Canada: professional/managerial, sales/service, manual/clerical, and not employed (home-making, injured, retired, etc.).

The survey was constructed and pilot tested on a group of 10 adolescents. It was found to 'make sense' to them, have face validity and be readable. The survey took approximately 20 minutes to complete.

The Critical Ethnography

Critical or institutional ethnography has emerged from the feminist research methodology of Smith (1984, 1987, 1990, 2002) as a strategy '... intended to disclose how activities are organized and how they are articulated to the social relations of the larger social and economic process' (Smith 1987, p. 151). As a method, critical ethnography is committed to the explication of how things are, and how they work in practice.

Ethnographic data were collected through observation and 'talking to people' (Campbell & Gregor 2002). Six key informants opened the field for observations and further discussions with students and instructors. These key informants were either interviewed or contacted on the telephone and/or through e-mail. No standard interview format was used, but the informants were asked for clarification on main points, direction on finding research reports, interpretation of findings and/or access

into the field. The informants were made up of driving school instructors, administrators and researchers.

The observations consisted of 40 hours of separate sessions (either three hours or one hour per session) to orient to the students, classrooms, lessons, locations and teachers. Notes were taken about the physical space of the class, the ethos of the room, the content of the lesson, student reaction to the lesson, and pedagogy.

The analysis of open-ended survey questions was completed by having one coder read through all surveys, attending to responses to four separate open-ended questions: 'Why do you want to drive a motor vehicle?', 'Why are you taking a driver education course?', 'What are the good/positive things that can happen to you because you drive?', and 'What are the negative/bad things that can happen to you because you drive?'. In each case, the participants were instructed to list as many answers as possible and thus multiple responses were generated. All responses were thematically coded by the first coder who generated a table of possible themes for each question. This table was then given to a second coder who was asked to place each of the multiple responses (per question) into one of the themes. All answers were coded into one mutually exclusive theme per question. Inter-coder reliability is reported in the results section.

The second analytical phase involved reading field notes and discussion transcripts. Three additional readers were asked to read the first eight pages of the field notes to suggest coding direction. The direction of the analysis was similar for all four readers and was therefore utilized in analysis. The surface themes suggested were the opportunities, problems, strategies and images (of youth, risk, driving, and practice).

Results

Novice Driver Survey

Sample description. Eighty-eight novice drivers completed the Novice Driver Survey. They were virtually evenly proportioned by gender with 51 percent ($n=45$) male and 49 percent ($n=43$) female. The ages ranged from 15 to 34 years. Age was recoded for analytical purposes into three groups. The groupings were formed in an effort to differentiate the results based on both the Ontario Ministry of Transportation and Transport Canada definitions of youth (15–19 years). Moreover, the distribution of ages allowed for roughly equitable groupings of early and middle-aged youth for further descriptive purposes. Therefore, three groupings of youth were constructed: early (15 and 16 years), middle (17, 18 and 19 years) and later (20 years and over) adolescence.

Early adolescence comprised 50 percent ($n=41$), middle adolescence comprised 28 percent ($n=23$) and late adolescence comprised 22 percent ($n=18$) of the respondents. Sixty-two percent of the respondents ($n=53$) were attending the local private driving school, and the remaining 38 percent ($n=32$) were attending the locally operated national course. Thirty-six percent ($n=32$) were simultaneously being instructed by

Table 1 Grade level of respondents

Grade level	Frequency	Percentage
Grade 10	6	7
Grade 11	39	46
Grade 12	17	20
OAC (grade 13)	4	5
Graduated	19	22
Total	85	100

Table 2 Parental education

	Father's education (percent)	Mother's education (percent)
Secondary school	42	34
College	24	33
University/professional	34	33
Total	100	100

Table 3 Parental occupations

	Father's occupation (percent)	Mother's occupation (percent)
Manual/clerical	34	18
Sales/service	12	21
Professional/managerial	48	35
Not employed	6	26
Total	100	100

their mothers, and 44 percent ($n=39$) by their fathers. Only eight percent were being instructed by a friend.

Respondents were currently enrolled in a variety of secondary schools and grade levels as illustrated in Table 1. Only seven students reported having taken a driver's safety or injury prevention course within their school. However, 45 percent would have been exposed to the grade 11 and 20 percent to the grade 12 Ministry of Education Health Curriculum at the time of the study.

The majority of respondents (93 percent, $n=75$) held a G1 class license. Only six percent ($n=5$) currently held no driver's license, and one held a G2 class license. Only nine respondents owned their own car; 64 percent ($n=56$) were driving a parental vehicle. The others were borrowing a car from a friend or relative, or had no access to a car.

Results relating to social contexts, including social class and social cohesion follow. Tables 2 and 3 illustrate the educational and occupational categories of both mothers and fathers.

Table 4 Importance of different types of peer social activities

Social activity of peer group	Frequency	Percentage
School related		
Studying	56	67
Getting good grades	66	79
Joining clubs	20	24
School publications	13	16
Fun/integrated		
Going to parties	44	48
Being popular	28	33
Having steady boy/girl friend	25	31

Note: Data are the sum of those stating 'important' and 'very important'.

Table 5 Mean ratings of seven features of driving

Features of driving	Mean	Standard deviation
Necessary	1.9	1.5
Important	1.7	1.2
Safe	3.2	1.6
Exhausting	4.4	1.7
Boring	5.4	1.3
Difficult	4.7	1.7
Risky	3.9	1.5

Respondents were also assigned into groupings based on their responses to the social cohesion questions. In general, the sample portrayed aspects of both 'school' and 'fun' crowds, with the importance of studying, getting good grades, and attending parties rated as the most important activities among their respective peer groups (see Table 4). Involvement in school activities and clubs was relatively less important, as was 'being popular' and 'going steady'.

Table 5 illustrates the respondents' mean ratings of seven features of driving on a seven-point scale. Statistically significant differences were found for both age and gender for responses of driving as exhausting/relaxing, boring/exciting, difficult/easy and risky/not risky (see Tables 6 and 7).

Early and later adolescent responses were differentiated to suggest that the younger drivers found driving more relaxing [$F(81)=9.2, p < 0.05$], exciting [$F(81)=6.2, p < 0.05$], easy [$F(80)=8.8, p < 0.05$], and less risky [$F(79)=3.8, p < 0.05$] than did older drivers. Females reported driving to be more exhausting [$F(81)=5.2, p < 0.05$], dangerous [$F(81)=5.9, p < 0.05$], difficult [$F(80)=14.9, p < 0.05$] and risky [$F(79)=11.2, p < 0.05$] than did males. Respondents were also asked to rate eight statements about the nature of driving as it related to themselves, their parents and friends. Table 8 reports these mean ratings in descending order of agreement.

Table 6 Mean differences in driving ratings by age

Features of driving	Early adolescence	Middle adolescence	Late adolescence
Exhausting/relaxing	4.8 ^a	4.6 ^a	3.0 ^b
Boring/exciting	5.8 ^a	5.4 ^a	4.6 ^b
Difficult/easy	5.1 ^a	4.9 ^a	3.5 ^b
Risky/not risky	4.2 ^a	3.6 ^a	3.1 ^b

Note: Numbers with different subscripts designate a statistically significant difference.

Table 7 Mean differences in driving ratings by gender

Features of driving	Females	Males
Exhausting/relaxing	4.0	4.8
Safe/dangerous	3.6	2.8
Difficult/easy	4.1	5.3
Risky/not risky	3.3	4.4

Table 8 Mean and percent agreement of driving statements

Driving statement	Percent agreement*	Mean (standard deviation)
Driving is important to me	82	1.8 (1.1)
Young people take more chances than older drivers	42	2.6 (1.1)
Young people drive the way their friends want them to, not the way they should	36	2.9 (1.2)
My parents would be upset if they thought I went to parties where people were drinking alcohol	32	3.1 (1.4)
Most of my friends are dangerous drivers	24	3.4 (1.1)
It is important to have a car that is powerful and fast	17	3.4 (1.1)
Parents should only let young drivers use the car for essential trips like sports and music lessons	16	3.9 (1.3)
The most important thing about a car is getting good gas mileage	15	3.4 (1.0)

Note: * Data are sum of both 'strongly agree' and 'agree'.

The only statistically significant gender difference [$F(1,86)=19.0, p < 0.01$] for the aforementioned statements was 'It is important to have a car that is powerful and fast'. The mean agreement with this statement for males (mean=2.98, standard deviation [SD]=1.10) versus females (mean=3.93, SD=0.92) suggests the salience of a car's speed

and power for males. There were statistically significant age differences in agreement with driving statements. Most importantly, the mean importance of driving was differentially rated for the early (mean=1.46, SD=0.87), middle (mean=1.91, SD=1.20) and later (mean=2.17, SD=1.20) adolescent groups. Early and late adolescent group means were statistically significantly different [$F(2,81)=3.42$, $p=0.044$], signaling that driving is rated as most important by the youngest novices.

The meanings of driving are variable. The most frequently cited reason for driving was that driving provided a necessary means of transportation (41 percent, $n=51$). The next most frequent was to gain independence (30 percent, $n=37$), followed by no longer needing to wait for, or depend on, others for a ride (11 percent, $n=13$). Seven respondents (six percent) cited the importance of driving for their job. Five respondents each (four percent) stated that driving would be useful for driving friends/family and/or as a way to have fun. The remaining responses were around the theme of gaining confidence with more driving and being able to travel long distances on trips. There were no statistically significant age and/or gender differences in the responses.

Respondents were asked in open-ended questions to list and describe all possible positive and negative aspects of driving. Negative aspects included: danger of accidents (38 percent, $n=54$), injury or death to self or others (27 percent, $n=39$), potential for trouble (e.g., breaking the law) (13 percent, $n=12$), added financial cost of driving (10 percent, $n=15$), stress (e.g., from traffic, and responsibility) (seven percent, $n=10$), and expectations of others to be chauffeured (four percent, $n=6$).

The positive aspects of driving included the following; gaining status through independence, maturity, confidence, responsibility, and control over one's schedule (53 percent, $n=70$). Other frequent response themes were: to gain faster and cheaper transportation (12 percent, $n=16$), to get to work (11 percent, $n=15$), to help family and friends (11 percent, $n=14$), and to connect with friends (11 percent, $n=14$). Other remaining responses were to save money and/or to travel distances on trips. There were no significant differences by age and/or gender with any responses about the positive or negative aspects of driving. Themes could be further analyzed as relating to either to personal/individual or practical external reasons. For example, in stating the positive aspects about driving, the majority of responses were personal reasons relating to the ability to gain independence and/or further connect with the social world (75 percent).

Reasons for taking driver education courses included gaining professional knowledge and experience (45 percent, $n=59$), to gain lower insurance premiums (25 percent, $n=33$), to speed up the graduated licensing processes and gain a G2 (18 percent, $n=23$), to over-ride bad driving habits learned from others (five percent, $n=7$), and parental insistence (five percent, $n=7$). No significant age and/or gender differences were found.

Forty-six percent of the respondents ($n=40$) reported that they had suffered from some form of injury in the past 12 months. Forty-three percent ($n=38$) also reported having a close friend who had been injured in the past 12 months. Respondents were asked to report the locations (home, school, sports, motor vehicle) in which the

Table 9 Frequency of self-reported engagement in risk-taking

Risk-taking behaviors	Frequency	Percentage
Thrill-seeking		
Risky sports	26	30
Skiing	18	21
Roller-blading	9	10
Skipping school	4	5
Parachuting	1	1
Rebelliousness		
Staying out late	30	35
Smoking	18	21
Drinking	18	21
Getting drunk	13	15
Drugs	5	6
Recklessness		
Speeding/other risks in car	11	13
Having unprotected sex	9	11
Drive with drunk/high driver	8	9
Drive without license	3	3
Stealing car/joy ride	1	1
Drinking/driving	1	1
Antisocial behavior		
Talk to strangers	28	33
Over/under-eating	15	17
Cheating	6	7
Teasing others	6	7
Sniffing glue/gas	2	2

Note: Data are sum of categories 'often' and 'all of the time'.

injuries took place. Ten respondents had experienced broken or fractured bones (one in a motor vehicle accident), five had suffered dislocations, 17 had suffered strains or sprains, 37 had a cut, scrape or bruise, four had concussions, and had suffered an internal injury in a motor vehicle.

Although 66 percent of the sample were in grades 11 or 12 and would therefore have been exposed to the grade 11 or grade 12 Health and Physical Education curriculum, none of the participants reported having taken a previous course on driver safety. Only eight percent reported having taken a course on general health and safety such as first aid.

The respondents rated their perceptions and behaviors relating to risk-taking based on an adolescent risk-taking measure of Gullone *et al.* (2000). Table 9 illustrates the frequencies with which participants engaged in risk-taking behaviors by summing the responses to 'often' and 'all of the time'. Frequencies are presented in descending order within each subcategory of the measure.

As hypothesized, boys took significantly more risks than girls. In the subcategory of 'thrill-seeking', responses to self-reported risky sports were combined for 'never' and 'sometimes' to measure the percentage of those who did not often participate. For

females, 85 percent reported non-participation in risky sports, while for males the respective rate was 47 percent (chi-square [degrees of freedom (df)=3]=16.3, $p < 0.001$).

As also hypothesized, boys took significantly more risks than girls for the subcategory of 'rebelliousness'. Males were more likely than females to report engaging 'often' or 'all the time' in the risk behaviors of staying out late and drinking. In the case of drinking, 34 percent of males and nine percent of females reported 'often' and/or 'all the time' (chi-square [df=3]=7.9, $p < 0.05$). In the case of staying out late, 42 percent of males and 23 percent of females report doing so 'often' or 'all the time' (chi-square [df=3]=8.9, $p < 0.03$).

Contrary to the hypothesis, there were no statistically significant relationships found with 'Recklessness' and gender. However, such relationships were found by age for both having unprotected sex and taking risks in the car. Again, responses to both 'often' and 'all of the time' were combined to gauge frequent risk-taking. In both cases, middle adolescents (17, 18 and 19 years) were more likely to report such behaviors than were either early adolescence (15 and 16 years) or late (20 years and over) adolescence/adulthood. In the case of unprotected sex, 35 percent of middle adolescents, three percent of early adolescents, and 0 percent of late adolescents reported doing so 'often' or 'all of the time' (chi-square [df=6]=21.6, $p < 0.001$). In the case of taking risks in driving a car, 35 percent of middle adolescents, five percent of early adolescents, and six percent of late adolescents reported doing so either 'sometimes' or 'often'. Conversely, 65 percent of middle adolescents, 95 percent of early adolescence and 94 percent of late adolescents reported 'never' taking risks in driving a car (chi-square [df=4]=12.6, $p < 0.03$).

Table 10 illustrates self-reported perceptions of the risk involved in the aforementioned risk-taking behaviors. Participants seemed generally aware of the risks involved in reckless driving behavior, as the most risky behaviors were seen as drinking and driving and/or being in a car with a driver under the influence of drugs or alcohol. Taking risks in a car, speeding and joy riding were also perceived by a majority of participants as extremely risky. No significant relationships were found between age and perceived risk behaviors. Only two significant relationships were found between perceived risk and gender, although they did not relate to driving risks. Males were more likely to perceive parachuting as 'not very risky' than were females (chi square [df=5]=13.1, $p < 0.02$). Males were also less likely than females to perceive unprotected sex as risky (chi square [df=4]=9.6, $p < 0.05$).

Critical Ethnography

Driver education is not currently mandatory in Ontario. However, by taking an Ontario Ministry of Transportation-approved beginner driver education course at a driving school, license holders may qualify for a four-month reduction in the 12-month minimum G1-licensing period as well as a potential reduction in insurance premiums. Through the field research, it was learned that the Traffic Injury Research Foundation annually estimates the numbers of youth in the 'Canadian driver training

Table 10 Frequency of respondents' perception of risk

Risk behavior	Extremely risky	Risky	Not very risky	Not risky
Thrill-seeking				
Roller-blading	11	16	15	1
Parachuting	43	31	1	0
Skipping school	22	30	27	2
Skiing	12	19	38	16
Risky sports	26	43	15	2
Rebellious				
Smoking	40	36	7	2
Drinking	22	37	23	3
Staying out late	10	15	37	23
Getting drunk	29	32	20	5
Drugs	63	15	5	3
Reckless				
Drinking/driving	85	1	1	1
Speeding	65	14	7	2
Stealing/joy ride	73	11	2	2
Drive without license	64	14	5	4
Having unprotected sex	76	9	1	2
Drive drunk/high driver	81	4	1	2
Risks in car	75	9	2	2
Antisocial				
Cheating	33	30	17	6
Talk to strangers	14	27	35	10
Sniffing glue/gas	70	12	2	2
Over/under-eating	27	33	17	8
Teasing others	22	29	23	13

market'. The Traffic Injury Research Foundation (2000) reported that in Ontario there were 584,586 youth (aged 16–19 years), of whom 394,512 were driving. Of those, 304,000 were learning to drive and only 43 percent ($n=130,000$) were being 'trained' in a driving school. Young Drivers of Canada was training 27,600 (21 percent) of these learners. Thus, 57 percent of the new drivers were not attending driving school in Ontario. In comparison, the national Canadian rates are 619,494 new drivers, 44 percent (270,591) of whom are enrolled in a driver training program.

Politicking and inequity in membership of boards of directors of non-profit regulatory bodies were reported, along with suggestions that the data commenting on the efficacy of graduated licensing versus driving education could be politically loaded and 'bad for the industry'. Cases were reported in discussions with informants in which the regulated activity of providing driving certificates to owners of driving schools would be held up and/or backlogged for many months. Such cases were suggested as 'favoritism' to particular schools that received their certificates in a more timely fashion than others. The backlog of certification caused problems for young drivers in that insurance companies were unable to provide a discount before the certification was registered. This backlog has been addressed recently by the Ontario

Ministry of Transportation, as has the backlog of driving road tests, with an effort toward privatization of the disbursement of certifications to driving schools and to license G2 exit road tests. At present, there are over 500,000 tests pending.

The issue of road testing standards was mentioned by two informants in the field, suggesting that the pass rate is both relatively low and variable by region and time of year. To verify, I checked with The Traffic Injury Research Foundation (2000) statistics (via personal correspondence) and found that in 1994–95 the pass rate for a G1 road test was 70 percent, and in 1999–2000 the pass rate was 60 percent. In Kirkland Lake, Ontario the pass rate is 92 percent, while in the Greater Toronto Area the rate is 52 percent. The variability signals a further systemic inconsistency.

The ability to profit through driver education was cited in the field as a problem. For example, the recent sale of a national driving school to a multinational car manufacturer was mentioned as explicating the business aspects of driver education. In this case, students are offered a \$1000 rebate of the purchase of a vehicle with a driver's education certificate from their school. Teaching youth to drive was described as both a money-making and politically regulated activity. Driver education is a for-profit business monitored by the provincial government and its regulatory associations. Strategies through which owners/operators attempt to make extra money at the expense of their driving 'clients' were discussed in the field. For example, cases were reported in which youth perceived driving instructors as conducting other retail business and cell-phone marketing while 'teaching' an in-car lesson.

Two driving schools were accessed for the study. A formal series of questions was posed to uncover the history and context of each school, known as School A and School B. It is worth mentioning that observational data from the classrooms consistently noted the small, cramped, spaces with no windows, poor air circulation and very little room to move. Instructors stood at the front behind a desk or podium and students sat in rows of tables, one behind the next. Chairs were uncomfortable and tables narrow, as though the very smallest amount of space possible had been allocated so that standards were met but never exceeded. In essence, these were difficult spaces both to sit in and to learn in for seven hours per day with only minimal breaks (two breaks of 15 minutes each and one lunch break of 45 minutes).

The driver education classrooms were both similar and dissimilar. Similarities included the use of the Ontario Ministry of Transportation curriculum as a baseline to which many elements were added by the owner/operators and instructors. Additions included the use of specific work books, paper and pencil tests (such as a Learning Styles Inventory), and the series of videos and transparencies for classroom use. In both classrooms, students were placed at tables in rows while the instructor stood at the front of the room to deliver the course material. The rooms were small with no windows (although at times less crowded than others depending on the course and time of day) and the chairs were uncomfortable. The timing and flow of the classes was similar. Regulation dictates two 15-minute breaks and one half-hour lunch break in the 7.5-hour day. It seemed interminable to me at times and I could easily see the discomfort of students when they had reached satiation points in listening, attending and sitting in the space. The courses that ran in three-hour time blocks in the evenings

were less of a strain than were the full-day courses. Ontario Ministry of Transportation dictates the student–teacher ratio per square foot of classroom space as 39:1 within 400 square feet. Both classrooms complied with this standard.

Differences were apparent in tone, delivery and curriculum. In general, the tone in Classroom A was one in which a relaxed version of local knowledge was shared. For example, local streets were named in exemplifying driving situations, and local accidents and inquests were spoken about in relation to safety and risk discussions. On six occasions, a member of the class was asked to speak about an experience with death or injury due to car crashes. This involved detailing ways in which a member of his/her family or a close friend was killed or injured in a car.

Breaching was also regularly used to focus attention and make critical points relating to safety and risk. This took the form of rule-breaking in relation to refusal to test students in conventional ways. Breaching was, as well, used in uncovering unwritten and unspoken rules of the road that are not covered in the texts. For example, the danger related to driving on our Northern Ontario roadways, due to the rocky terrain, myriad 18-wheel trucks, deer, moose, and two-lane highways, was exemplified with video and stories that were directly local. This was accomplished by showing footage shot from a car-mounted video camera on local streets and highways. The strength was in the fact that these were not actors, but real, local drivers. The video was well received by students and opened up the class for discussion of incidents and ‘what could have been done’ to prevent them.

In Classroom B, a professional but collegial tone was struck. For instance, all students were referred to by first name within the first session. Students responded well to the tone and remained motivated by the fact that ‘they would all do well by the end of the course, even if not all at the same speed’. The standardized nature of the curriculum was apparent in that instructional materials were provided by the national organization. Professional transparencies and videos (using actors) were used fluidly in the class. The course was standardized and prepackaged and was delivered with very little deviation from the national curriculum.

In both classrooms, inherent images and assumptions about youth were enacted in interactions with the young drivers. Observation revealed a highly respectful tone in which students were regarded as competent people with a difficult task ahead of them. Embedded in the practice was a view of the active learner and responsible student. Mostly they were seen as ‘good kids’ with a few exceptions that could be recognized. The main educational challenge was to ‘help them see that driving has many consequences, some of which can stay with them for life’ and to see ‘that bad things can happen to them in cars’. This could not be accomplished by preaching or guilt, but through careful means of detailing stories and facts about the dangers and consequences of driving. The instructional approach was to address students as capable of overcoming the danger of driving. However, students were also characterized as ‘high risk-takers’ and ‘adventurers’ who come to the classroom with ‘plenty of bad habits to be broken’.

In relating the trends of accidents and road danger, instructors also spoke of the trouble with inexperience and the heterogeneity of young drivers. For instance,

instructors articulated images of youth as both risky and rational, stating that in their classes there were subgroups of young males and those 'easily led by social pressures'. These youth (estimated to be perhaps 70 percent) were 'adventurers' and 'risk-takers' whose fun could further lead into bad habits. The others were 'very safe' and 'rational drivers' and would remain that way. When asked to articulate how 'risky young drivers' act, the fun and play of driving was stressed as opposed to road rage and driving out of control.

To summarize, the classroom practices of driver education operate as potential sources of support for prevention of driving incidents. They are an integral location in the system whereby young drivers access content and curriculum (both hidden and explicit). Within the school setting, competing images of driving exist, illustrating driving as both dangerous and normal. Youth are treated in the classrooms as competent and agenic in preparing to overcome the inherent risks of driving, while the texts and curriculum illustrate youth as an integral part of the system of driving danger. Youth are portrayed as taking great risks and demonstrating faulty decision-making, but these troubles can be addressed in the class and car instruction. Discussion of the safe and dangerous nature of driving coalesces within certain content such as becoming a 'defensive driver', 'traffic psychology' and 'handling adverse conditions'. It is here that the opportunity of co-locating responsibility for safe driving with individual and contextual factors exists.

Discussion

This study has aimed to describe the culture of youth driving in an effort to better understand the ways in which this system works and how it is and/or is not preventative. The theoretical frame has allowed interpretation of the findings as ways in which driving, youth and risk/safety have been constructed and could be reconstructed.

In contrast to the views held by young drivers, the system tends to problematize driving. Youth see driving as necessary in making their transition to adulthood. They seek driving education to meet the goals and expectations of becoming safe drivers. There is heterogeneity in these meanings but they generally reflect careful, cautious, and caring purposes, findings also suggested by Rothe (1987). Younger drivers found driving to be more relaxing, exciting, easy and less risky than did older drivers. Females reported driving to be more exhausting, dangerous, difficult and risky than did males. All students rated driving as a necessary, important and exciting part of their passage into adulthood. They saw driving as a relatively easy activity. However, they were also aware of the dangerous and risky aspects of driving. Driving was seen as a way to gain independence and as a means to become mobile.

I argue that the system's characterization of youth and driving suggests simultaneously normalized and pathologized images. Evidence of a normal, well-regulated, and logically structured driving culture compete the mixed messages of the dangerous and unregulated nature of driving. The freedom with which youth access cars and licenses speaks to the view of the 16 year old as competent enough to handle a machine of this

size, albeit with restrictions. The opposing images of extreme danger are also presented in the discourse.

The driving culture is portrayed here a microcosm of Beck's (1992) risk society. The danger is pervasive, and the onus of negotiating these risks is placed on the individual, who must '*shop carefully*' for a driving school and then apply great caution in learning to drive. This result suggests the presence of an epistemological fallacy (Furlong & Cartmel 1997) causing individual blame for danger to persist in a sea of systemic trouble. The trouble takes the forms of system flaws, mixed and ageist messages that do not necessarily reflect adolescent lives, and lack of coordination within the logic and regulation of driver education. As suggested by Mayhew and Simpson (2002), there is further need for driving education to be integrated and coordinated with secondary schools.

The findings of the study suggest that prevention efforts are attempted from the assumption (a historical one) that youth are troubled, take risks, and are in need of surveillance. This psychological model places the blame for driving incidents with youth. However, contested images were presented both historically and currently that portray youth as a heterogeneous group of active and competent transition makers for whom age and gender matter (Enright *et al.* 1987; Griffin 1997; Marecek 2002). A move toward deconstructing 'risk' has been an important outcome of the study. Risk has been seen to act as a positive strategy in negotiating culture (Lightfoot 1997; Gullone *et al.* 2000) and worth rethinking as the key location of prevention in driving. Few novice drivers are interested in risk-taking activities and see the danger of doing so in cars.

If we are not to blame risky youth for traffic injury, then understanding the regulatory practices and strategies currently in place becomes critical. I suggest that this moves us from prevention as surveillance, to a logic of informed and integrated regulation. Regulation appears to have positive outcomes in reducing crash rates (Mayhew & Simpson 2002) and this study further suggests the need to coordinate with other elements of culture. Driver education, graduated licensing, and driver testing are offered as resources to meet the dangers and challenges. However, these practices do not fully operate as opportunities and may present further challenges and demands. As Erskine (1996) has suggested, we have hints into the cultural influences of driving accidents, but they have yet to be organized and interrelated. This study suggests that one way to proceed is to pay attention to the ways in which these influences place undue demands and constraints which hinder safety. Young drivers have been seen to operate at a deficit under such demands (Mayhew & Simpson 1995).

The study suggests specific curricular directions. Driving students appear to have knowledge about risk, safety and danger and are in process of learning more. The curriculum, however, is focused on speaking about individual risk-taking that impedes safe driving and could more clearly address the 'strategies for action' and 'tools for negotiating: this rite of passage'. The messages should be coherent, purposeful and agenic (Swidler 1986). At present, this is approached only sporadically in the classroom by instructing students to 'talk aloud' while driving. Messages also need to be tailored to the small number of youth that are about to take undue risks in

cars. Prevention literature recognizes that health and social transgressions are often accompanied by detailed information about health and social risks (Dryfoos 1993; Prochaska 1994). Contrary to Mayhew and Simpson (1995), this suggests that knowledge and awareness of risk is necessary but not sufficient in safe driving practice. Moreover, the evidence of competing meanings of risk-taking, both inter-individually and across age and gender groupings in adolescence (Levitt & Selman 1996; Lightfoot 1997; Tilleczeck & Hine 2003), suggests a need for addressing homogeneity. Beyond addressing inadequacies in curriculum, preventative measures might constructively be geared toward the question: For whom does curricular translation remain problematic and under which cultural conditions?

In addition to its relevance to preventative practice, this analysis suggests directions for sociology of youth theory. For example, reconstructing prevention is suggested here in relation to the more general project of developmental health as outlined by Keating and Hertzman (1999). A link between developmental health, adolescent needs in transitioning to adulthood, and macro-cultural systems has been suggested. The danger of not envisaging this possibility has been suggested by Kelly (2000) as resulting in faulty surveillance, regulation and intervention that do not necessarily address or reduce the core of the social problem at hand. This study also suggests an entrenched epistemological fallacy in youth driving culture that mirrors that in youth culture (Furlong & Cartmel 1997, 2003) in which the dangerous, individualized youth risk-taker is located as the heart of a larger systemic transitional battle. Risk and blame become overly attributed to individuals at the expense of understanding how institutions contribute to and monitor the problem. As Douglas suggests, to move past '... this standpoint, the proper way to organize a program of studying risk is to start with studying institutional design' (1994, p. 19). The culture of youth driving provides evidence for the ways in which tool kits and strategies are constructed in an unsettled transitional space (Swidler 1986; Beck 1992; Furlong & Cartmel 2003). We appear to have created a less than cohesive tool kit to guide action. This study suggests the promise of promoting driving safety through reconstructing risk-taking as adaptive and culturally constructed (Lightfoot 1997; Tilleczeck & Hine 2003).

Questions remain as to the most effective strategies for negotiating youth driving culture. Future research should include further critical ethnographic methodologies to study the ways in which the challenges and opportunities described here are lived and negotiated. Comparisons between novice drivers who have not encountered driving education with those who have are warranted. In-depth interviews with youth and their parents would uncover more fully what was learned, transferred and retained in classes on safety and prevention. Driver training requires further study; questions such as the following could be asked: Who attends driving schools in the first place, and what prohibits access? How effective are different modes of driver training and why? How does each of the in-class and in-car components work in driver education? Who passes the driving tests, and are these tests useful in evaluating preparedness for driving?

In conclusion, the challenges of interpretation of the study have been threefold. The first was in attempting to explicate and concretize youth driving culture. This included

the ability to describe resources and/or challenge at multiple levels of the culture. The second challenge was to construct a useful depiction of the cultural system of youth driving as it emerged over the course of the study. The third challenge has been the interpretation of the results, interwoven with the challenge of coming to know hermeneutics and social ontology. From this vantage point, the relationships between the meaning of driving in adolescence, and the cultural layers of learning to drive are highly interpretive and useful. In returning to the evidence that most adolescent deaths are caused by injury sustained in traffic crashes, this study has begun to address the influence of culture in constructing this problem. In an already unsettled period of transition to adulthood, learning to drive is a supercharged and significant ritual requiring further investigation.

References

- Arnett, J. J. & Balle-Johnson, L. (1993) 'Cultural bases of risk behavior: Danish adolescents', *Child Development*, vol. 64, pp. 1842–1855.
- Beck, U. (1992) *Risk Society: Toward a New Modernity*, Sage, London.
- Bibby, R. W. & Poterski, D. C. (1996) *Teen Trends: A Nation in Motion*, Stoddard Publishing, Toronto.
- Campbell, M. & Gregor, F. (2002) *Mapping Social Relations: A Primer in Doing Institutional Ethnography*, Gramond Press, Aurora.
- Csikszentihalyi, M. & Schnieder, B. (2000) *Becoming Adult: How Teenagers Prepare for the World of Work*, Basic Books, New York.
- Douglas, M. (1994) *Risk and Blame: Essays in Cultural Theory*, Routledge Press, London.
- Dryfoos, J. (1993) 'Common components of successful intervention with high-risk youth', in *Adolescent Risk-taking*, eds N. Bell & R. Bell, Sage, Thousand Oaks, CA.
- Elkind, D. (1980) 'Strategic interactions in early adolescence', in *The Handbook of Adolescent Psychology*, ed. J. Adelson, John Wiley & Sons, New York.
- Enright, R. D., Levy, V., Harris, D. & Lapsley, D. (1987) 'Do economic conditions influence how theorists view adolescents?', *Journal of Youth and Adolescence*, vol. 16, pp. 541–559.
- Erskine, A. (1996) 'The burden of risk: who dies because of cars?', *Social Policy and Administration*, vol. 30, no. 2, pp. 143–157.
- Foucault, M. (1977) *Discipline and Punish: The Birth of the Prison*, Vintage, New York.
- Furlong, A. & Cartmel, F. (1997) *Young People and Social Change: Individualization and Risk in Late Modernity*, Open University Press, Buckingham.
- Furlong, A. & Cartmel, F. (2003) 'Explaining transitions through individualised rationality (in the UK)', in *Youth and Work in the Post-industrial City of North America and Europe*, ed. L. Roulleau-Berger, Koninklijke Brill, Leiden.
- Goffman, E. (1969) *Strategic Interaction*, University of Pennsylvania Press, Philadelphia, PA.
- Griffin, C. (1997) 'Representations of the young', in *Youth and Society*, eds J. Roche & S. Tucker, Sage Publications, London.
- Gullone, E., Moore, S., Moss, S. & Boyd, C. (2000) 'The adolescent risk-taking questionnaire: development and psychometric evaluation', *Journal of Adolescent Research*, vol. 15, no. 2, pp. 231–250.
- Harrington, D. (1972) 'The young driver follow-up study: an evaluation of the role of human factors in the first four years of driving', *Accident Analysis and Prevention*, vol. 4, pp. 191–240.
- Health Canada (1997) *For the Safety of Canadian Children and Youth: From Injury Data to Preventative Measures*, Minister of Public Works, Ottawa.

- Hingson, R. & Howland, J. (1993) 'Promoting safety in adolescents', in *Promoting the Health of Adolescents: New Directions for the Twenty-first Century*, eds S. Millstein, A. Petersen, & E. Nightengale, Oxford University Press, New York, pp. 305–327.
- Irwin, C. (1993) 'Adolescents and risk taking: how are they related?', in *Adolescent Risk Taking*, eds N. Bell & R. Bell, Sage Publications, Newbury Park, CA, pp. 7–28
- Jelalian, E., Spirito, A. & Rasile, D. (1997) 'Risk taking, reported injury and perception of future injury among adolescents', *Journal of Pediatric Psychology*, vol. 22, pp. 513–531.
- Jonah, B. A. (1986) 'Accident risk and risk-taking behaviour among young drivers', *Accident Analysis and Prevention*, vol. 18, pp. 255–271.
- Keating, D. (1998) 'Looking for trouble: new slant on adolescent risk-taking', *Journal of Applied Developmental Psychology*, vol. 19, pp. 663–667.
- Keating, D. & Hertzman, C. (1999) 'Modernity's paradox', in *Developmental Health and the Wealth of Nations*, eds D. Keating & C. Hertzman, The Guilford Press, New York.
- Kelly, P. (2000) 'The dangerousness of youth-at-risk: the possibilities of surveillance and intervention in uncertain times', *Journal of Adolescence*, vol. 23, pp. 463–476.
- Krahn, H. (1996) *School–Work Transitions: Changing Patterns and Research Needs*. Discussion paper, Human Resource Development Canada, Ottawa.
- Laflamme, L. (1998) *Social Inequality and Injury Risks*, Karolinska Institute, Stockholm.
- Levitt, M. & Selman, R. (1996) 'The personal meaning of risk behaviour. A developmental perspective on friendship and fighting in early adolescence', in *Development and Vulnerability in Close Personal Relationships*, eds G. Noam & K. Fisher, Lawrence Erlbaum, Mahwah, NJ.
- Lightfoot, C. (1997) *The Culture of Adolescent Risk Taking*, Guilford Press, New York.
- Lightfoot, C. & Cox, B. (1997) 'Locating competence: the sociogenesis of mind and the problem of internalization', in *Sociogenetic Perspectives on Internalization*, eds B. Cox & C. Lightfoot, Lawrence Erlbaum, Mahwah, NJ.
- Lyng, S. (1993) 'Dysfunctional risk-taking: criminal behaviour as edgework', in *Adolescent Risk Taking*, eds N. Bell & R. Bell, Sage, London.
- Marecek, J. (2002) 'Safe conduct: dangers, pleasures and adolescent sexuality', *32nd Annual Meeting of the Jean Piaget Society*. Philadelphia, PA, 6–8 June.
- Mayhew, D. R. (1997) *Reducing the Risks of New Drivers through Legislation and Regulation*, Traffic Injury Research Foundation, Ottawa.
- Mayhew, D. R. & Simpson, H. M. (1990) *New to the Road. Young Drivers and Novice Drivers: Similar Problems and Solutions?*, Traffic Injury Research Foundation, Ottawa.
- Mayhew, D. R. & Simpson, H. M. (1995) *The Role of Driving Experience: Implications for the Training and Licensing of New Drivers*, The Insurance Bureau of Canada, Toronto.
- Mayhew, D. R. & Simpson, H. M. (1996) *Effectiveness and Role of Driver Education and Training in a Graduated Licensing System*, Traffic Injury Research Foundation, Ottawa.
- Mayhew, D. R. & Simpson, H. M. (2002) 'The safety value of driver education and training', *Injury Prevention*, vol. 8, pp. 113–118.
- Moore, E. & Parsons, J. (2000) 'A research agenda for adolescent risk-taking: where do we go from here?', *Journal of Adolescence*, vol. 23, pp. 371–376.
- Muus, R. E. & Porton, H. D. (1998) *Adolescent Behaviour in Society: A Book of Readings*, McGraw-Hill, New York.
- Northern Health Information Partnership (2003) *The Northern Ontario Child and Youth Health Status Report*, NHIP report, Sudbury, Canada.
- Ontario Ministry of Transportation (1998) *Interim Evaluation of Ontario Graduated Licensing*, MTO, Toronto.
- Ontario Ministry of Transportation (MTO) (2000) *Ontario Road Safety Annual Report*, MTO, Toronto.
- Pelz, D. C. & Schumann, S. H. (1971) 'Are young drivers really more dangerous after controlling for exposure and experience?', *Journal of Safety Research*, vol. 3, pp. 68–79.

- Piaget, J. (1972) 'Intellectual evolution from adolescence to adulthood', *Human Development*, vol. 15, pp. 1–12.
- Potvin, L., Champagne, F. & Laberge-Nadeau, C. (1998) 'Mandatory driver training and road safety: the Quebec experience', *American Journal of Public Health*, vol. 78, pp. 1206–1209.
- Pressuer, D. F., Zador, P. L. & Williams, A. F. (1993) 'City curfew ordinances and teenage motor vehicle fatalities', *Accident Analysis and Prevention*, vol. 25, pp. 224–263.
- Prochaska, J. (1994) *The Transtheoretical Approach: Crossing Traditional Boundaries of Therapy*, Irwin Publishing, Chicago, IL.
- Riegel, K. (1972) 'Influence of economic and political ideologies on the development of developmental psychology', *Psychological Bulletin*, vol. 78, pp. 129–141.
- Romanowicz, P. A. & Gebers, M. A. (1990) *Teen and Senior Drivers*, Report, Department of Motor Vehicles, Sacramento, CA.
- Rothe, J. P. (1987) *Rethinking Young Drivers*, Insurance Corporation of British Columbia, Vancouver.
- Rothe, J. P. & Cooper, P. J. (1989) *Never Say Always: Perspectives on Seat Belt Wearing*, Transaction Publishers, New Brunswick, NJ.
- Saibel, C., Salzberg, P. & Thurston, R. (1996) *Observational Survey of Driver Compliance with the Pedestrian Crosswalk Laws, 1995*, Washington Traffic Safety Commission, Olympia, WA.
- Smith, D. (1984) 'Textually mediated social organization', *International Social Science Journal*, vol. 36, pp. 59–75.
- Smith, D. (1987) *The Everyday World as Problematic: A Feminist Sociology*, University of Toronto Press, Toronto.
- Smith, D. (1990) *The Conceptual Practices of Power: A Feminist Sociology of Knowledge*, University of Toronto Press, Toronto.
- Smith, D. (2002) 'Institutional ethnography', in *Qualitative Research in Action*, ed. T. May, Sage Publications, London.
- Soderlund, N. & Zwi, A. B. (1995) 'Traffic related mortality in industrialized and less developed countries', *Bulletin of the World Health Organization* 1995, vol. 73, no. 2, pp. 175–182.
- Statistics Canada (1999) *National Longitudinal Survey of Children and Youth: The Transition into Adolescence*, The Daily (July), Statistics Canada, Ottawa.
- Swidler, A. (1986) 'Culture in action: symbols and strategies', *American Sociological Review*, vol. 51, pp. 273–286.
- Tilliczek, K. & Hine, D. W. (2003) 'The meaning of smoking as health and social risk in adolescence', working paper, Department of Sociology, Laurentian University.
- Tilliczek, K. & Lewko, J. (2001) 'Factors influencing the pursuit of health and science careers for Canadian adolescents in transition from school to work', *Journal of Youth Studies*, vol. 4, pp. 415–428.
- Traffic Injury Research Foundation (2000) *The Canadian Driver Training Market and Ontario Road Tests*. Unpublished Traffic Injury Research Foundation Report, accessed by personal communication, 8 November 2002.
- Transport Canada (2001) *Canadian Motor Vehicle Traffic Collision Statistics* [Online] Available at: <http://www.tc.gc.ca/raodsafety/>
- Van Beek, E., Mackenbach, J. P., Loopman, C. N. & Kunst, A. E. (1991) 'Determinants of traffic accident mortality in the Netherlands: a geographical analysis', *International Journal of Epidemiology*, vol. 20, pp. 698–706.
- Washington Post* (2002) 'A parent and teen driving approach that works', Tuesday 8 October, p. 35.
- Williams, A. F. (1998) 'Risky driving behaviour among adolescents', in *New Perspectives on Adolescent Risk Behaviour*, ed. R. Jessor, Cambridge University Press, New York, pp. 201–240.
- Williams, A. F., Preusser, D. F., Ulmer, R. G. & Weinstein, H. B. (1995) 'Characteristics of fatal crashes of 16 year old drivers: implications for licensure policies', *Journal of Public Health Policy*, vol. 16, pp. 347–390.

- World Health Organization (1999) *Injury: A Leading Cause of the Global Burden of Disease*, World Health Organization, Geneva.
- Youniss, J., Yates, M. & Su, Y. (1997) 'Social integration: community service and marijuana use in high school seniors', *Journal of Adolescent Research*, vol. 12, no. 2, pp. 245–262.
- Youniss, J., McLellan, J. & Mazer, B. (2001) 'Voluntary service, peer group orientation and civic engagement', *Journal of Adolescent Research*.

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