

**Dine and Dash: A Test of Criminological Theory**

by

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### **Author's Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## Abstract

No known research has tested the etiological processes underlying “dining and dashing,” an act that has substantial financial implications for the restaurant industry. Dine and dash is defined as people using a food and/or beverage service that is expected to be paid for and leaving the premises with no intention of returning to pay. Predictors were drawn from social learning, rational choice, and social control theories. Using a survey sample of 358 undergraduate and graduate students from a Canadian university, we found partial support for social learning and rational choice theories. Individuals who knew someone else who had dined and dashed were more likely to dine and dash themselves (social learning theory) ( $OR=11.58, p<0.001$ ). When an individual thought they would suffer consequences (e.g., paying a fine), they were less likely to dine and dash (rational choice theory) ( $OR=0.77, p<0.001$ ). Lastly, individuals who committed a dine and dash were more likely to report that target hardening measures (e.g., security cameras) played a role in their decision to commit the act ( $OR=1.13, p=0.012$ ) which suggests they were more situationally aware. No variables drawn from social control theory were related to dining and dashing.

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## Table of Contents

Author’s Declaration.....	ii
Abstract.....	iii
Acknowledgements.....	iv
Table of Contents.....	v
List of Tables.....	ix
<b>Chapter 1: Introduction and Research Questions.....</b>	<b>1</b>
Introduction.....	1
Research Questions.....	8
<b>Chapter 2: Theory and Literature.....</b>	<b>10</b>
Social Learning Theory.....	10
Background.....	10
Differential Association.....	11
Imitation.....	12
Reinforcement.....	12
Definitions.....	14
Social Learning Theory and Dine and Dashes.....	15
Previous Literature.....	16
Criticisms.....	24
Social Control Theory.....	26
Background.....	26
Attachment.....	27
Commitment.....	28
Involvement.....	28
Belief.....	28

Social Control Theory and Dine and Dashes.....	29
Previous Literature.....	29
Criticisms.....	35
Rational Choice Theory.....	37
Background.....	37
Costs and Benefits.....	38
Limited Rationality.....	38
Situational Crime Prevention.....	39
Rational Choice Theory and Dine and Dashes.....	39
Previous Literature.....	40
Criticisms.....	47
The Current Study.....	48
<b>Chapter 3: Methodology.....</b>	<b>49</b>
Research Design.....	49
Pretesting.....	50
Sampling Procedure.....	51
Data Analysis.....	52
The Sample.....	52
Variables.....	53
Dependent Variable.....	53
Social Learning Theory Variables.....	54
Differential Association.....	54
Imitation.....	54
Reinforcement.....	55
Social Control Theory Variables.....	56

Attachment.....	56
Commitment.....	56
Involvement.....	57
Belief.....	57
Rational Choice Theory Variables.....	58
Costs.....	58
Benefits.....	58
Environmental Awareness.....	59
Control Variables.....	60
Socio-economic Status.....	60
Age.....	61
Gender.....	61
Race/ethnicity.....	62
Self-control.....	63
Selection of Friends.....	64
Bivariate Tests.....	65
Multivariate Models.....	65
<b>Chapter 4: Results.....</b>	<b>67</b>
Bivariate Analysis.....	67
Multivariate Analysis.....	69
<b>Chapter 5: Discussion and Additional Findings.....</b>	<b>73</b>
Prevalence.....	76
Limitations and Strengths.....	77
Ethical Considerations.....	82
Implications.....	83

Future Research.....	83
Policy and Practices.....	85
Conclusion.....	87
References.....	89
Appendix 1.....	106
Appendix 2.....	110
Appendix 3.....	112
Appendix 4.....	123
Appendix 5.....	124

## List of Tables

Table 1.	A description of the variables used in the current study.....	54
Table 2.	Results of bivariate logistic regressions executed between all independent variables on dining and dashing.....	68
Table 3.	Results of a multivariate logistic regression executed between the social learning theory and control variables on dining and dashing.....	69
Table 4.	Results of a multivariate logistic regression executed between the social control theory and control variables on dining and dashing.....	70
Table 5.	Results of a multivariate logistic regression executed between the rational choice theory and control variables on dining and dashing.....	71
Table 6.	Results of a multivariate logistic regression executed between significant variables from the prior models and the control variables on dining and dashing.....	72

"We know what we are, but not what we may be"

-William Shakespeare

## CHAPTER 1: INTRODUCTION AND RESEARCH QUESTIONS

### Introduction

Criminal and deviant acts that are often considered to be minor can cause substantial social and economic harm. In Canada, 79% of police reported crimes are non-violent, with property offences accounting for roughly 1.2 million offences (Allen, 2017, p. 21). Although these offences are considered minor, they cost billions of dollars in Canada alone. When considering the costs associated with using the criminal justice system, and other factors, such as penalties for the offender and victim compensation, the average cost for a single incident of theft is over \$2,600 (Gabor, 2016, p. 24). Other criminal acts under this category cost even more; the average cost of a single incident of fraud is over \$45,000 in Canada (Gabor, 2016, p. 24).

The impacts resulting from each of these impersonal and non-violent acts<sup>1</sup> can be major and unique. For example, the harms associated with cocaine use are very different from the harms associated with digital piracy. Cocaine users tend to experience poorer health (Chen, Scheier, & Kandel, 1996) which could lead to greater health care costs. Additionally, friends and family members of this individual may experience negative emotional reactions to this situation (e.g., stress, anger, sadness, anxiety) (Center for Substance Abuse Treatment, 2004). There may also be social status costs since cocaine use is not widely socially accepted in Canada. On the other hand, an individual who commits digital piracy by downloading songs and movies for free on the internet might impact the entertainment industry instead of the health care system by reducing profits for producers, directors, and actors. Additionally, businesses that sell these items might not survive (e.g., Blockbuster). Unlike cocaine use, digital piracy is generally socially accepted in Canada.

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<sup>1</sup> Some crimes in this category include theft, shoplifting, digital piracy, drug use, drunk driving, vandalism, identity theft, fraud, embezzlement, arson, and copyright infringement.

In addition to having differing impacts, motivations, benefits, and group dynamics tend to vary across different minor criminal acts. For example, an individual who uses cocaine might do so regularly with their friends both for its physiological effects and for the social acceptance it brings within their specific peer group. On the other hand, someone who illegally downloads music might do so alone in their bedroom at night. The primary motivator might be financial (avoiding paying to obtain files legitimately; profits obtained by redistributing the files). Similar to cocaine use, however, social acceptance among a specific reference group is likely to act as a motivator.

Despite differences across acts such as cocaine use and illegal music downloading, they have similarities that justify their mutual inclusion in a broader category of ‘minor, impersonal crime.’ They are both non-violent and perpetrators do not usually use cocaine or illegally download music because they are intending to harm someone. In many cases, people who participate in these acts view them as victimless. However, both acts can cause financial and emotional damage (e.g., stress to others). Furthermore, behaviours associated with both acts might be learned through others around them (e.g., people doing cocaine at parties, friends who show others how to download music); both acts involve a decision making process leading to participation; both acts are often associated with similar goals (e.g., happiness, peer approval, relief from boredom). In these ways, various forms of minor impersonal offending share many common characteristics.

If, as I have argued, there are similarities across multiple dimensions of seemingly distinct criminal acts, it becomes justifiable to examine the motivations and dynamics associated with specific acts as a way to work towards a more complete picture of these crimes. The study

laid out in this thesis focuses on an individual act that is currently unexplored (dine and dashes) in an effort to understand the etiology of minor, impersonal crime more broadly.

This research will examine dining and dashing as a representative example for the larger category of impersonal and non-violent crimes. Not only will this allow for increased knowledge and awareness of the dynamics and motivations associated with the act of dining and dashing, but it will also allow for increased knowledge and understanding of motivations and behaviours associated with a large variety of other criminal and deviant acts.

The thesis will proceed as follows. First, I will discuss the act of dining and dashing in general. Next, I present the research questions for this study. Then a discussion of the theoretical components of rational choice, social control, and social learning theories and their empirical standing will take place. This discussion is accompanied by previous literature in the field of criminology that has tested the explanatory power of these theories with related offences, such as theft. I then outline the methodology for the current study followed by a presentation of the results and discussion of implications for future research in the areas of dine and dashes, the theories being examined, and for policy and practices linked to the restaurant industry in Canada.

### **Dining and Dashing**

Restaurants and their employees appear to be highly impacted by people using their service and not paying ('dining and dashing'). Dining and dashing has come to be known as different names (e.g., chew and screw, dine and ditch, eat and run, doing a runner, beating the cheque). Technically, dine and dashes are mentioned under the Criminal Code of Canada as "fraudulently obtain[ing] food, a beverage or accommodation at any place that is in the business of providing those things"; dining and dashing is considered a form of fraud (R.S.C., 1985, c. C-

46). Although this is the case, dining and dashing is more commonly viewed as theft. This is partially due to a lack of dine and dash cases entering the courts. When the issue of dine and dashes emerge in the courts in Canada, they are mentioned as a side point to a more impactful crime, like armed robbery. In this research, dining and dashing will be treated as a criminal act. I define “dine and dash” as people using a food and/or beverage service that is expected to be paid for and leaving the premises with no intention of returning to pay.

Restaurants sometimes cover the losses caused by dine and dashes by withholding pay from servers. This can pose a financial burden on food industry workers. For example, in Ontario, the minimum wage for servers is currently \$12.20 (Government of Ontario, 2018), which is below the normal minimum wage of \$14.00; if a server makes \$150 in a night from hourly wages and tips ( in many cases, generous assumption), even if just one table of 4 people chooses to dine and dash, the earnings from this night can be essentially eliminated. Despite laws protecting servers’ wages and tips in Canada (e.g., Employment Standards Act, 2000), it can be difficult to prove that an employer has held back tips, especially those paid in cash. The server may also feel a sense of guilt or obligation to pay the bill left behind, or may not be fully knowledgeable about their rights in the workplace. In other countries that do not have laws protecting employees’ earnings, or have even lower wages, such is the case in the United States where minimum hourly wages range anywhere from \$2.13 to \$12.50 (U.S Department of Labor, 2018), the impact can be much greater. The servers may turn to the courts, but this alternative is pricey and time consuming.

One example of this impact on servers arose as a news story in August 2017 based on a restaurant in Toronto. The restaurant had been deducting tips from mistakes made by employees. One noted mistake for which the employees would get deducted was dine and dashes (Chiasson,

2017). The article also mentioned that these deductions for mistakes “created a culture of intimidation and fear” and “many employees refused to be on record when investigating the situation in fear that a whistleblower label” would harm their current and future jobs in the restaurant industry (Chiasson, 2017).

Similar stories of servers losing pay due to dine and dashes are mentioned in other places outside of news articles, such as online blogs. When looking at the comments section of blogs such as The Bitchy Waiter, one can see the impact that they have. One comment exhibited an individual’s experience of speaking out against having wages and/or tips held back due to a dine and dash. “I just got fired after 18 years in the business [...] I spoke up and now I’m unemployed. I could’ve paid, but I know it’s illegal and spoke up. All over a \$63 theft that I did not cause” (Bitchy Waiter). The employees who choose the alternative of paying for the dine and dash experience a different consequence. “I walked out with \$0 that day and I had to buy a \$90 chemistry textbook the next. Not good” (Bitchy Waiter).

These examples display two major issues dine and dashes cause. First, the act creates vulnerability for restaurant workers. Many servers earn a low wage and are at many times in need of keeping a job to support themselves and/or a family, pay for school tuition, etc. If a restaurant unofficially holds a policy of making employees pay for dine and dashes that occur, and the employees speak out or refuse, they risk losing their job or become scared that they will. At the same time, they might not be able to afford paying for the bills dine and dashers leave behind. Second, the act of dining and dashing can lead to a unique domino effect of people breaking the law; the initial act being the dine and dash itself and the following act being the potentially illegal act (depending on location) of restaurant owners and/or managers holding back

tips and/or wages from servers and other restaurant employees<sup>2</sup>. By researching why people dine and dash, it may be possible to develop ways to avoid these acts.

It is not the intention of this thesis to paint the restaurant industry as dishonest. Although I argue it is important to discuss the issue of employers holding back pay from restaurant workers as an issue caused by the initial act of dining and dashing, employers are not the focus. Even in restaurants where the servers do not have to pay for dine and dash bills, the money still has to be covered. Whether it comes from managers, franchise owners, or the companies themselves, money is being unjustly lost. Depending on their frequency, dine and dashes could have detrimental effects on profits at all levels of the restaurant industry. Not only does it become a profit issue for restaurant owners and businesses, but it is a source of frustration. This frustration is sometimes brought into the public eye through blogs (“Waitress Fired,” 2013), news articles (Brohman, 2016; Klingbeil, 2014), and posts on social media. This was the case for Zak’s Diner in Ottawa at the beginning of 2017:

CAUGHT IN THE ACT- Hello friends, we are seeking your help to find these two ladies who came into Zak’s on Tuesday night (Jan 3<sup>rd</sup>) and left without paying their bill. It is NOT OK to steal from a small business. It is NOT OK to stiff a server, a bus boy, a cook. Thankfully we now have some fancy cameras to protect our staff and guests [...] #stopthedineanddash #caughtintheact (“Zak’s Diner,” 2017).

This was attached to security footage posted on the diner’s Facebook page for a bill adding up to around \$30. Zak’s Diner had dealt with similar situations in the past, and even resorted to hiring a security guard during evening service. Dine and dashes do not only impact servers, but many other workers in the food industry as well.

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<sup>2</sup> Although briefly discussed in this thesis, the legality of dine and dashes and the impact on industry workers are not the focus of the current study.

Looking at the media, one can see that dine and dashes do not exclusively impact any one country or demographic of people; from a simple Google search, one can find calls to action to catch offenders, as well as assumptions and tips about how to prevent and spot dine and dashers in countries including Canada, Australia, England, South Africa, and others (Bruton, 2016; Hughes, 2011; Orichuia, 2009; Pijoos, 2016; news.com.au, 2015). Furthermore, the act of dining and dashing has been portrayed as harmless fun in TV shows like *That '70s Show* (2001) and *It's Always Sunny in Philadelphia* (2006), in movies like *Sydney White* (2007), and videos on YouTube ("Dine & Dash", 2011).

Despite its apparent prevalence based on the stated experience of workers online and in the media, the act of dining and dashing as a social phenomenon has received virtually no research attention. Not only does there appear to be no research on the topic in criminology and sociology, but there appears to be no research on dine and dashes at all, presenting a fairly large gap in the literature. The only information on the topic comes in the form of outcries from frustrated workers in the restaurant industry. There are many unanswered questions about dine and dashes (e.g., what does a dine and dash entail? Who is most likely to dine and dash? Are dine and dashes committed by individuals or groups? How prevalent are dine and dashes? Where do they occur?). The exploratory research presented in this thesis is focused on one main underlying question — Why do people dine and dash?

In this research, three well established theories in criminology were tested: rational choice theory, social control theory, and social learning theory. These three theories were chosen because they are strongly supported perspectives in criminology and appear to be the most relevant in the explanation of dine and dashes. The decision to test multiple theories in the first study of dine and dashes was to offer direction to future research on the topic.

In addition to theory, this study may have implications and relevance for a broad range of other criminal and deviant acts. In addition to gaining more of an understanding of why individuals dine and dash, researchers can use the outcomes and suggestions to inform future research on different crimes, such as theft, online piracy, or vandalism. Similar to dine and dashing, these acts are non-violent and could be considered minor. Because the theories being tested in this study on dine and dashes are the same theories that have been tested on a wide range of criminal and deviant acts in the past, similar offending dynamics and reasons for why individuals commit these offences may be found. In this case, for example, the same theoretical concepts known to be important for other acts may be found to be important in the act of dining and dashing. This would suggest a common etiological basis for a variety of acts. But if additional theoretical components are found to be significant predictors of dining and dashing, future research should then test those additional components on the other acts (e.g., theft, online piracy). The current study will not only present future pathways for other researchers to take on the act of dining and dashing, but it will suggest additional pathways for the study of a variety of criminal and deviant acts that may be related.

### **Research Questions**

My research questions are as follows: 1. Does associating with peers who dine and dash increase the likelihood of individuals doing it? According to social learning theory, the individuals dining and dashing, or verbally encouraging dine and dashing will act as models who could influence other people to behave the same way. 2. Are people who are less socially bonded to society more likely to dine and dash? Following social control theory, individuals who are less bonded to society (lower levels of attachment to conventional others, commitment to conventional goals, involvement in conventional pursuits, and belief in conventional norms)

should be more likely to dine and dash compared to individuals with strong bonds to society. 3.

Do individuals make a rational consideration of the costs and benefits of dining and dashing before doing so? If so, what factors contribute to the decision to dine and dash? Rational choice theory holds that offenders consider the benefits and costs associated with the act. Individuals might then dine and dash because a benefit, such as being viewed as “cool”, is important enough to them to risk being caught by the establishment or police.

## **CHAPTER 2: THEORY AND LITERATURE**

This chapter will discuss the theoretical components of social learning theory, social control theory, and rational choice theory. In relation to rational choice theory, some situational crime prevention aspects will be discussed as well. Current literature about these theories as well as how each theory might relate to the act of dining and dashing will also be explored.

### **Social Learning Theory**

#### *Background*

The first theory this research will examine is social learning theory. This is a theory that has been used for decades in both sociology/criminology (Akers, 1985) and psychology (Bandura, 1978). The fundamental statement of the criminological form of social learning theory first appeared in the idea of differential association proposed by Sutherland (1947). Operating on the assumption that human action is dependent on the social environment one is exposed to, the basic premise of differential association theory holds that people learn how to behave by interacting with others (Sutherland, 1947). Differential association theory is broken down into nine main points. First, criminal behaviour is not inherited; instead, it is learned (Sutherland & Cressey, 1978, p. 80). Second, individuals learn criminal behaviour through communicating with others. This communication is mostly verbal, but can include gestures. Third, individuals mainly learn criminal behaviour within “intimate personal groups” (p. 80). Fourth, when learning criminal behaviour, individuals also learn the “techniques” and attitudes associated with the behaviour (p. 81). Fifth, the “direction of motives” associated with the criminal behaviour depends on whether or not the individual defines the law as “favourable or unfavourable” (p. 81). Sixth, an individual participates in criminal activity when they hold more definitions that are favourable to breaking the law than they do ones that are unfavourable to breaking the law.

Seventh, differential associations can differ in “frequency, duration, priority, and intensity” (p. 81 – discussed below). Eighth, the process of learning criminal behaviour is similar to how individuals learn other behaviours. Ninth, although criminal behaviour is an “expression of general needs and values,” this does not explain the behaviour because engaging in behaviour that is legal is also an expression of these things (p. 82).

Burgess and Akers (1966) started to expand on this by incorporating Skinner’s (1959) ideas on operant conditioning in their differential association-reinforcement theory of criminal behaviour. Akers (1979; 1985; 2009) expanded this into social learning theory as it stands today, with four main components: differential association, imitation, reinforcement, and definitions.

#### *Differential association*

The first element of social learning theory is differential association. It states that individuals learn how to behave through socially interacting with others. Through this process, they also learn the attitudes and motivations connected with these actions. Throughout an individual’s life, they interact with primary and secondary groups. Primary groups are those most closely connected to the individual (e.g., family and friends). Secondary groups include those the individual comes into contact with mostly from a distance (e.g., watching people on the news or other stranger groups) (Akers, 2009). The influence of social interactions with others is thought to be stronger from primary (close) groups (e.g., friends compared to strangers) (Akers et al., 1979, p. 638).

The amount of influence another person or group has on an individual depends on the frequency, duration, intensity, and priority of social interactions with this person or group (Akers, 2009; Sutherland & Cressey, 1978). Frequency refers to how often the individual spends time with another group or person. Duration refers to the amount of time spent with this group

when they are spending time together. Intensity refers to the importance of the relationship to the individual; for example, interactions with your best friend will have more importance (higher intensity) than interacting with a stranger on the street. Lastly, priority refers to how early in life the individual was exposed to others; an individual's parent should have a heavy influence on their child's behaviours because they have known them since birth.

According to the differential association element of social learning theory, an individual commits a criminal act because they have learned the behaviours and motivations associated with this act by interacting with other individuals and groups who support and participate in this same behaviour. Not only this, but they have internalized these behaviours and norms through this interaction. Additionally, there is a higher likelihood that the individual learned this behaviour from someone they are close to, such as a parent or friend, than someone they do not know well or interact with less.

### *Imitation*

The second element of social learning theory is imitation. According to this, other people and groups act as behavioural models and examples; individuals learn how to behave by witnessing others acting before them (Akers et al., 1979). Social learning theory holds that because of this, individuals who commit crimes do so because they have been exposed to others around them committing crimes and demonstrating examples of deviant behaviour beforehand. Akers argued that imitation was most influential for initial acts but was less important for continuing acts (Akers, 2009, p. 53).

### *Reinforcement*

The third element that Akers (1979) lays out in his social learning theory is reinforcement. This element states that the likelihood of an individual repeating a learned action

is influenced by the type of reinforcement they receive. This idea is adapted from Skinner's (1959) idea of operant conditioning which holds that behaviour can be changed by associating negative or positive stimuli (reinforcements) with an act. Similar to a rational choice model of decision making, the reinforcement element of social learning theory refers to the consideration of risks and potential rewards associated with an act. Individuals may experience positive or negative reinforcements. These reinforcements are not only social experiences; they may be physical as well (Akers et al., 1979). Negative reinforcements refer to consequences an individual might experience for acting in a specific way (e.g., being socially rejected, getting caught, paying a fine). Positive reinforcements refer to benefits or rewards an individual may experience as a result of acting a specific way (e.g., excitement, getting free things, social approval).

Similar to how levels of influence differ under the differential association element, the influence of negative or positive reinforcements differ depending on three modalities (amount, frequency, and probability) (Akers & Sellers, 2013). The amount and frequency of a reinforcement refers to how much and how often an individual receives the consequences and/or rewards for behaving a certain way. Probability refers to the likelihood of the individual receiving the reinforcement when they behave that way (e.g., will it be reinforced every time?).

According to the reinforcement element of social learning theory, individuals offend because they have and/or expect to receive some form of reward (positive reinforcement) for offending. Conversely, individuals may avoid offending because they expect to receive (or have received) punishment (negative reinforcement) for offending.

## *Definitions*

The last element of social learning theory is *definitions (attitudes)*. According to this, individuals learn the meanings and perspectives associated with behaviours by interacting with others (Akers et al., 1979). While Sutherland and Cressey (1978) implied that exposure to other individuals' definitions was what shaped personal definitions of the law (p. 81), Akers viewed definitions as personal attitudes about the law without emphasizing the exposure to other individual's definitions as Sutherland does. These definitions may be general or specific. General definitions are wide perspectives on values (e.g., morality) (Akers & Sellers, 2013, p. 83). Specific definitions apply to the perspectives an individual holds towards a particular act. For example, an individual might hold the perspective that laws in general should be obeyed by members of society, but also think it is acceptable to drink under age or use illegal drugs.

Definitions may also be positive, neutral, or negative (Akers & Sellers, 2013). According to social learning theory an individual who associates a positive definition with a criminal act will be more likely to do it. For example, if an individual believes the criminal act is morally acceptable or will have a positive outcome (e.g., help for others), they will be more likely to commit the crime. On the other hand, if an individual associates negative definitions with the act, they will be less likely to do it. For example, someone who thinks committing the crime is not morally acceptable or will have negative outcomes (e.g., family getting hurt), will be less likely to commit the crime. When an individual holds a neutral perspective towards a criminal act, they may or may not do it depending on the circumstance. For example, an individual may use marijuana with their friends socially, but not on their own.

### *Social Learning Theory and Dine and Dashes*

From a social learning theory perspective, through socially interacting with others (differential association), an individual would be more likely to dine and dash because they have seen someone else dine and dash (imitation). After dining and dashing, the individual might get away with it and experience the reward of a free meal or acceptance by the social group. Alternatively, they might be caught and experience consequences, such as being banned from the restaurant or getting criminally charged (differential reinforcement). During this process, the individual learns about whether or not dining and dashing is a norm in the group, the behaviours associated with the act, and associate meanings and attitudes with the act (definitions). Social learning theory implies that individuals might dine and dash because that is what other people in their life do.

According to social learning theory, someone who has dined and dashed and/or is likely to dine and dash in the future is someone who has interacted with other dine and dashers, has been exposed to dine and dash, and has positive definitions of the act. Additionally, they may expect to receive positive reinforcements from participating in a dine and dash.

Conversely, individuals who do not participate in dine and dashes refrain because they have not had the same interactions with others as the individuals who do dine and dash. Instead, they are more likely to be individuals who have interacted with others who are against the idea of dining and dashing, have been exposed to the models who pay the bill at the restaurant, expect to suffer consequences from participating in a dine and dash, and have negative definitions towards the act of dining and dashing.

### *Previous Literature*

Pratt et al. (2010) conducted a meta-analysis to understand the empirical status of social learning theory. Through an analysis of 133 studies conducted between 1974 and 2003, the researchers found that in its entirety, social learning theory is well supported (p. 771). Although social learning theory appears to be strongly supported in general, this has not necessarily been found to be true of its parts (Pratt et al., 2010, p. 788). Multiple researchers in the field have found evidence supporting and discrediting the four elements of social learning theory: differential association, definitions, imitation, and differential reinforcement (Agnew, 1991; Ardelit & Day, 2002; Brauer, 2009; Sellers, Cochran, & Branch, 2005; Stafford & Warr, 1991).

Pratt et al. (2010, p. 788) specifies imitation as receiving particularly weak support in the research literature, but numerous studies have found support for this element (Dannick, 1973; Mullen, Copper, & Driskell, 1990; Trucco, Colder, & Wieczorek, 2011; Paternoster et al., 2013; Gallupe et al., 2016). Paternoster et al. (2013) conducted an experiment testing the imitation element with a sample of 91 university students (p. 482). They found that participants that were exposed to a deviant model cheating in a computer recall task were more likely to cheat, compared with participants who were not exposed to the model (p. 493). In a similarly designed experiment using undergraduate students, Gallupe et al. (2016) created a situation in which participants witnessed a confederate stealing a gift card. They found that being around peers who stole increased theft amongst participants, and that this effect was enhanced when the confederate also verbally encouraged the act or when more deviant models were present (p. 495).

Support for imitation has also appeared in studies examining other deviant acts. Dannick (1973) observed over 2,000 adults witnessing a confederate either jaywalking or obeying traffic signals. Dannick found support for imitation noting a significant number of participants in both

scenarios behaving in the same manner as the confederate. Interestingly, the confederate modeling the law violating behaviour by jaywalking had greater influence over the participants than when the confederate followed the law; individuals were more likely to mimic the confederate jaywalker than they were to mimic the confederate not jaywalking (p. 133). Mullen, Copper, and Driskell (1990) found similar results in their meta-analysis of jaywalking studies. Imitation has been empirically supported in some areas of the research literature, but has not been given enough attention.

Social learning theory has been applied to property crimes, such as theft, for decades. In a study examining the use of self-control theory, social learning theory, peer effects, and situational action theory, competing theories were applied to shoplifting and thefts in different contexts (Beier, 2014, p. 81). Using a sample of 4,012 high school students collected from the longitudinal Edinburgh Study of Youth Transitions and Crime, Beier (p. 80) found support for social learning theory as well as the idea that peer influence on offending is context specific; individual who had friends who stole at home were also more likely to steal at home, but that did not make them more likely to shoplift (p. 85). Regarding dine and dashes, this implies that even if individuals do not usually participate in stealing in other contexts, they may be more likely to steal in the form of dining and dashing if they have friends who also do.

In another study looking at 14 different crimes (e.g., theft, drugs, fighting), Payne and Cornwell (2007) examined social learning theory by focusing on the influence of indirect peers (p. 128). They used data from the National Longitudinal Study of Adolescent to Adult Health, which comprised students from high schools across the United States (p. 134). They found that although the behaviour of close friends was related to individual offending behaviour (p. 143), individuals' offending behaviour was also significantly related to indirect contacts up to twice

removed (e.g., friend of a friend) (p. 146). Payne and Cornwell suggested that future research should not solely rely on close friendships when examining peer influence (p. 145).

In a study directly linked to deviance in the restaurant industry, Pantaleo (2011) applied social learning theory to the deviance of restaurant employees. Pantaleo focused on acts such as theft, destruction of property, and giving away restaurant property (p. 12). One hundred and forty four restaurant employees participated in an online survey (p. 60). Pantaleo found that only the imitation and definition elements of social learning theory were significantly related to employee deviance; staff members who have seen other staff members act in a deviant way in the work place and perceived this behaviour as the norm, were also more likely to do so (p. 140).

Many studies have found support for a social learning theory explanation of digital crimes like software and music piracy. This is an important relationship to consider at this point. Although it differs from dine and dashes in that they take place in a digital space, music, movies, and software that are pirated online are examples of products that are expected to be purchased and are not being paid for. In a study conducted by Morris and Higgins (2010), social learning theory was applied to digital piracy. Using a questionnaire focusing on a vignette scenario of downloading with a sample of university students (n=585), they found that individuals who held pro downloading attitudes and associated with others who participated in illegal downloading were more likely to illegally download (pp. 473, 477). Digital piracy was also examined by Hinduja and Ingram (2009). Using questionnaire data from a sample of university students (n=2,032), they found that individuals who spent time with others who supported piracy were more likely to download illegally (pp. 412, 417). They also found that this relationship held up not only with peers the individual knew in person, but with online peers as well (p. 417).

Other researchers have examined social learning theory with other computer based crimes in addition to piracy. Using data from a questionnaire of 581 university students surrounding pirating software, guessing passwords, and manipulating files, Skinner and Fream found support for a social learning model (1997, pp. 504, 510); individuals who interacted with parents, siblings, teachers, and friends who participated in computer crimes and held pro computer crime definitions were more likely to participate in computer crimes themselves (p. 513). In another study, Holt, Burruss, and Bossler (2010) analyzed social learning theory with computer software piracy, stealing essays, hacking, and using wifi connections without permission (p. 39). Using survey data from a sample of university students (n=580), they found support for all four elements of social learning theory (p. 40); individuals who associated with others participating in these crimes, had positive attitudes towards computer crime, were exposed to computer crime activity, and were positively reinforced through participating in these crimes were more likely to participate in these computer crimes.

A third study examining a social learning theory explanation of hacking, guessing passwords, manipulating files, and installing malware was conducted by Morris and Blackburn (2009). Using questionnaire data from a sample of university students (n=600), they found that different elements of social learning theory were stronger for different crimes, but overall, all elements of the theory were supported (pp. 10, 19). For example, the element of imitation was most important when the individual was participating in the development of malware (p. 20), differential association was most important for predicting file manipulation behaviour, and holding pro computer crime attitudes was the most important factor for guessing passwords (p. 18). Since the act of dining and dashing is also one where the offender is not paying for a

service, it may also be linked to social learning theory in a similar way these studies have found with digital crimes.

Social learning theory has also been tested alongside self-control theory when examining digital piracy. Higgins and Makin (2004) tested this with questionnaire data collected from a sample of university students (n=318) (p. 5). They found that social learning theory elements were important for moderating the effect self-control on levels of digital piracy; individuals were found to learn about attitudes surrounding the offence and how to participate through interacting with others who participated in these types of crimes (p. 13). Two years later, Higgins, Fell, and Wilson (2006) examined this same relationship. Using questionnaire data from a sample of university students (n=392), they found that although self-control played a role in digital piracy behaviour, the individual first had to learn the behaviour by associating with others who did it and held attitudes supporting digital piracy (pp. 10, 16). This displays the importance of controlling for self-control in crime studies even when examining other theories like social learning and social control. I will account for this in my analysis of dine and dashes.

With the goal of applying social learning theory to deviance in different countries, Tittle, Antonaccio, and Botchkovar (2012) executed a study focusing on applying social reinforcement to property crimes and violent crimes (p. 888) in cities located in Greece, Russia, and the Ukraine (p. 869). Through surveys administered by face to face interviews (Greece n=400, Russia n=500, Ukraine n=500) (p. 869), the researchers found strong support for the reinforcement and definitions elements of social learning theory; prior reinforcement predicted definitions and likelihood of committing criminal offences (p. 880).

A study by Winfree, Backstrom, and Mays (1994) looked at gang involvement and criminal activity as it relates to social learning theory. They conducted a survey with a sample of

9<sup>th</sup> and 11<sup>th</sup> grade students (n=197) looking at criminal acts such as theft, other property crimes, and assault (pp. 151-153). Although social learning theory was not found to be significantly related to independent context crimes like theft, it was found to be related to theft and criminal activity in a group context; individuals who spent time with other gang members and had pro-gang attitudes reported more misbehaving in a group setting (p. 167), still lending support for a social learning model. Similar to Beier's (2014) research, this suggests that dining and dashing may be context dependent; individuals may be more likely to dine and dash when with a group compared to being by themselves.

Social learning theory has been supported through research on other offences as well, such as substance use. Akers et al. (1979) examined survey data on drinking and substance use in a survey sample of adolescents (n=3,065) and found support for all the elements of social learning theory (pp. 640, 651). Examining more serious drug use, Norman and Ford (2015) found support for social learning theory in a survey sample of 12-17 year olds (n=17,358) on ecstasy use (pp. 531, 535). Exposure to other ecstasy users predicted ecstasy use by participants. Although social control theory was also examined, more support was found for social learning (p. 535). In another study, Vito and Higgins (2013) tested social learning theory and self control theory on adolescent steroid use in a nationally representative survey sample of 12<sup>th</sup> grade students (n=14, 268) (p. 953). They found support for social learning theory, but not self control theory; individuals who associated with peers who used steroids were more likely to use steroids themselves (p. 958).

In a study focusing on the causal relationships between the reinforcement and definitions aspects of the theory, Brauer (2009) analyzed data on marijuana use and theft collected longitudinally by the National Youth Survey. He found that youths were more likely to engage in

illegal activities if they spent more time with friends, and placed high importance on their relationships with these friends (p. 953). Although peer influence appeared to be present amongst these individuals, there remained an unclear link in social learning theory between reinforcement, definitions, and behaviour regarding how the stages flowed to one another (e.g., it is unclear how internalizing definitions transformed into behaviour). Swenson (2002) examined social learning theory and social control theory on delinquent behaviours (substance and weapon use) in a sample of boy scouts (n=819) (p. 23). Their survey data revealed more support for social learning mechanisms than social bonds; being exposed to criminal behaviours (e.g., violent behaviours of caregivers, seeing someone get injured by a gun, exposure to drugs at school) predicted higher levels of deviant behaviour (pp. 41-48). Through questionnaire data on tobacco, alcohol, marijuana, and other drugs collected from two cohorts of grade 8 students (n=99) from public and private schools originally collected by the National Evaluation of the Gang Resistance Education and Training Program, Winfree & Bernat (1998) tested social learning theory and self-control theory. The researchers found mixed support for the social learning theory elements. Receiving reinforcement was not significantly related to substance use, but having pro substance use attitudes was related to higher levels of substance use (p. 546). Mixed support was also found for self-control theory elements (p. 546).

Winfree et al. (1989) analyzed marijuana and alcohol use by testing social learning theory with two culturally different groups in the United States (one Caucasian community and one Native American community) (p. 395). Focusing on the differential association and definitions elements of social learning theory (p. 402), they administered a questionnaire to students in grades 6-12 in these two communities (n=485) and found that individuals who had friends or parents who smoked marijuana were significantly more likely to do it themselves. They also

found similar support for differential association and alcohol use amongst the Caucasian community (p. 412). Miller et al. (2008) also examined social learning theory and substance use (cigarettes, alcohol, and marijuana) with students in a different cultural group. They collected survey data from 298 public and private school students from two municipalities in Puerto Rico (p. 267). While focusing on the individual and peer definitions of social learning theory with these deviant acts, the researchers found that students who perceived that their peers approved of the use of these substances were also more likely to participate in substance use themselves regardless of how they personally defined the act (p. 275).

Testing social learning theory alongside strain theory, social control theory, and self-control theory, Meneses and Akers (2011) examined marijuana use in a sample of university students located in the United States (n=367) and Bolivia (n=420) (pp. 334-336). Their survey data found support for all theories in explaining weed use in both groups, but social learning theory was found to be most supported (p. 345). In another study, Schroeder and Ford (2012) tested social learning theory, social control theory, and strain theory on prescription and illegal drug misuse (p. 4). Using data from the National Household Survey on Drug Abuse in the United States (n=17,705) (p. 10), they found that social learning theory predicted the use of all substances being examined, and was most strongly associated with marijuana use (p. 18). They also found that exposure to peers who also did drugs and individuals who had pro drug attitudes had more of an impact on illegal drug use than prescription drug misuse (p. 18). Lastly, they found that social control theory and strain theory had separate and significant relationships with drug abuse (p. 19). This implies that it is important to control for other theories when examining crime.

Researchers have examined social learning theory for other criminal acts such as stalking, intimate partner violence, and police misconduct. Fox, Nobles, and Akers (2011) conducted a study examining social learning theory and stalking behaviour (p. 39). Through a survey completed by 2,766 college students in the United States (p. 47), they found that social learning theory predicted both stalking and being a victim of stalking; spending time with other stalkers, having pro stalking attitudes, and being exposed to stalking behaviour lead to an individual being more likely to be a stalker themselves (p. 44). Receiving reinforcement however was not found to be related to stalking behaviour (p. 44). Chappell and Piquero (2004) applied social learning theory to police misconduct. In a survey of Philadelphia police officers (n=499), vignette scenarios were given regarding stealing from a crime scene, stealing money out of a lost wallet, and using excessive force (pp. 96-97). When a police officer had peers who supported theft, they were more likely to have misconduct complaints against them (p. 102). While investigating intimate partner violence, Sellers, Cochran, and Branch (2005) found support for differential association and reinforcement, but not for the formation of definitions and imitation. Stafford and Warr (1991) researched how attitudes were socially transmitted between individuals using data from the National Youth Survey. They found that peer behaviour (imitation) was a stronger predictor of participant behaviour than peer attitudes (p. 862).

### *Criticisms*

Although social learning theory has been supported when analyzing a variety of deviant acts such as partner violence (Sellers, Cochran, and Branch, 2005), theft (Gallupe et al., 2016), and substance use (Oygaard et al., 1995), it has been the focus of multiple criticisms. It does not take into consideration that humans may learn in different ways, some of which may not involve

the role of others; social learning theory only focuses on learning related to operant conditioning and vicarious learning mechanisms (Proctor, 2010).

Social learning theory has also been criticized for being a cultural deviance theory (Kornhauser, 1978). Cultural deviance theory holds that crime comes from socializing to community and cultural norms and values that are contradictory to the law; under this theory society is what causes crime instead of individuals (Shaw & McKay, 1942). Kornhauser expressed that social learning theory was actually a cultural deviance theory because it can only explain group differences wherein people socialize in accordance to subcultures. Akers (1996) has responded to this critique by emphasizing multiple reasons why social learning theory does not fall under cultural deviance theory. One reason is that social learning theory aims to explain variance amongst individuals, not groups (p. 232). Because of this, it cannot be claimed that social learning theory only applies to cultures. Additionally, Akers points out that Kornhauser misinterprets differential association theory and social learning theory's relationship with socio-demographic variables (p. 235); Kornhauser interprets differential association and social learning theory as a mediator between socio-demographic variations, but differential association and social learning theory uses socio-demographic variables to refer to an individual's position in society (p. 236). Therefore, social learning theory states that individuals are exposed to different definitions, not that different cultures are responsible for differences (p. 236). Additionally, the cultural deviance critique of differential association and social learning theory has an incorrect idea of learned definitions being the only motivations of crime; Akers (1996, p. 244) states that the theory does not say that they are the only motivations. As an example, Akers states that individuals might refrain from breaking the law even if their definitions are in favour of law violation because the costs associated with the act are too high (p. 239).

Social learning theory has also been criticized by Gottfredson and Hirschi (1990) in their discussion of self-control being the most promising predictor of criminal behaviour. Supporting the cultural deviance critique of the theory, they stated that social learning theory cannot explain individual variation in criminal behaviour (e.g., committing theft but refusing to participate in graffiti) because they thought social learning theory was implying that individuals should conform completely to deviant groups. Akers (2008) points out that this criticism is based on the incorrect assumption that socialization in groups is a perfect process resulting in no individuals deviating from those groups (p. 78). Akers had addressed this misinterpretation before (1996, 1998). Akers (2008, p. 78) emphasizes that social learning theory explains how individuals learn to engage in criminal behaviour, but also to refrain from the behaviour. He also points out that self-control is learned through this process as well.

### **Social Control Theory**

#### *Background*

The second theory this research will be testing is social control theory. Social control theory, developed by Hirschi (1969), has remained prominent in the field of criminology for decades. Unlike many other criminological theories (e.g., social learning theory), social control theory focuses on why individuals do not commit crimes instead of why they do. The theory states that everyone is equally motivated to commit crimes, but whether they act criminally depends on their bonds to society; individuals refrain from committing crimes because they have strong bonds to society (p. 16). Theoretically, according to social control theory, if everyone had no bonds whatsoever to society, everyone would commit crime. Social control theory focuses on four intersecting bonds specifically; these bonds are attachment, commitment, involvement, and

belief. When an individual has one weak bond to society, their other bonds are likely to be weaker as well compared to individuals with strong bonds.

### *Attachment*

The bond of attachment (Hirschi, 1969, pp. 16-19) refers to having good relationships with other people present in the individual's life. Individuals refrain from participating in criminal activity because they have social relationships they do not want to lose. The first attachment a human starts to build is with their parents or guardians (pp. 84-85). Individuals who have good relationships with their parents are thought to be less likely to act criminally because they want to maintain a good relationship. Individuals who are neglected as children or do not have a good relationship with a parental figure would be more likely to commit a crime because they do not care as much about preserving this relationship.

Another source that influences the attachment bond is other family members. Hirschi (1969) used the example of a divorced man to illustrate this bond (p.19); once an individual loses an important social connection (in this case a marriage partner), the attachment bond weakens and the individual is now more likely to commit crimes.

Another source of attachment is to friends and peers. Hirschi (1969, p. 152) asserts that individuals who have a strong attachment to their friends and peers will be less likely to commit crimes. Individuals honor their relationships with peers by conforming to society. Hirschi viewed peer offending as irrelevant because of this. According to social control theory, peer offending does not lead to individuals committing crimes. This is in contradiction to the social learning theory perspective on the role of peers.

Because of the amount of time youth spend in school, it is not surprising that an individual's attachment to society is also influenced by school relationships (Hirschi, 1969, pp.

120-131). Having a good relationship with a teacher makes the attachment bond stronger. On the other hand, an individual may have bad experiences interacting with their teachers and other members of the school environment, weakening their attachment bonds to society.

### *Commitment*

The bond of commitment (Hirschi, 1969, p. 20) implies that individuals do not commit crime because they have goals they are invested in accomplishing. The bond of commitment is about an individual's investment in their future. Individuals devote time and resources in education and work to reach goals. Committing a crime jeopardises these goals. According to social control theory, individuals refrain from criminal activity because of this. Conversely, individuals who do not care about their education or do not have future goals to be put at risk are more likely to commit a crime.

### *Involvement*

The third bond, involvement, is based on the idea that people will not commit crime if they are too busy spending their time on other things (Hirschi, 1969, p. 22). The involvement bond states that the more an individual spends time doing conventional activities (e.g., school, jobs, sports, hobbies, religious celebrations), the less likely they will be involved in criminal activity; this is because they simply do not have time to participate in criminal activity (p. 22). Individuals who have a weak involvement bond are those who spend less time doing these activities. They may become bored and have more time to think about doing a crime or actually committing one. As Hirschi points out, "idle hands are the devil's workshop" (1969, p. 22).

### *Belief*

The last bond mentioned by Hirschi is belief (1969, pp. 23-24). Conventional society is made up of laws and regulations for individuals and groups to follow. This belief bond implies

that people who support the law and think crime is wrong will be less likely to commit deviant acts. However, not everyone in society agrees with all laws. For example, prostitution Canada is a controversial crime; not everyone agrees it should be a crime in our legal system. Due to issues like this, an individual may commit a crime because they do not believe in the laws surrounding it.

### *Social Control Theory and Dine and Dashes*

According to social control theory, a person who does not commit a dine and dash chooses not to do so because of their strong bonds to society. Someone who is close to their family and friends may not dine and dash because they do not want to risk putting these relationships in jeopardy (attachment). These individuals also might not want to risk putting their schooling or future career at risk (commitment). A person may also be less likely to dine and dash, or go to a restaurant in general, if they are too busy participating in a soccer league, school play, or some other activity that takes up their time (involvement). Additionally, an individual might not dine and dash because they value the law (belief).

On the other hand, someone might commit a dine and dash because they do not have any relationships or future prospects to lose in the process. They also might not be involved with activities, work, or other things that take up time. They may also not believe in or value the laws in place. An individual might commit a dine and dash because they have weak bonds to society.

### *Previous Literature*

The research literature on social control theory, although supportive of the theory in general, has provided mixed findings on each of the four bonds to society (Agnew, 1991). Agnew (1991) has suggested that offence-specific analyses would be beneficial. In response, there have been a variety of studies examining specific acts.

Social control theory has been supported through studies on theft. In one study, Chapple, McQuillan, and Berdahl (2005) examined social control theory on theft and violent crimes in a survey sample of high school students (n=1,139) (pp. 363, 366). They found that having a stronger bond to society through peer and parental attachment was associated with lower levels of theft and violent offences (p. 374). They also found very few differences between genders, with the only major difference being that attachment had a stronger effect on violent crime for males than females (p. 374). Conger (1976) tested social control theory alongside social learning theory on delinquent behaviour (e.g., petty theft, vandalism, extortion, assault) (p. 30). Using data from two surveys on high school students in two US cities (Seattle n= 374 and San Francisco n=1,588), he found support for both theories; parental attachment and the behaviour of peers were found to be important predictors of offending (pp. 25, 36). In a 5-wave longitudinal survey of 359 adolescents, Longshore, Chang, and Messina (2005) examined social control theory and self control theory on property offences and rape (pp. 424, 427). They found that low self control was indirectly associated with higher levels of offending through the attachment bond and moral belief acting as mediators (p. 431). However, they did not find support for the commitment or involvement bonds of social control (p. 430). Self control theory and social control theory were also compared on the topic of theft in a study conducted by Li (2004). Using a survey sample of 10<sup>th</sup> grade students in the United States (n=4,866), Li found that all of the social bonds except for commitment were negatively associated with offending (p. 370). Additionally, although self control was also supported by the study, the effect of social bonds were found to be stronger (p. 370).

Junger-Tas (1992) examined longitudinal survey and interview data on property and violent offences (n=2,000) (p. 11). Junger-Tas found support for social control theory, with

failure in school (commitment) being the most supported predictor of offending (p. 26).

Participants who had bonds decrease over the two year period engaged in more offending and participants who increased their bonds committed fewer offences (p. 27). Alarid, Burton, and Cullen (2000) tested social control theory and differential association theory on offending (e.g., property, violent, and drug offences) in a sample of newly incarcerated felons (n= 1,153) (pp. 175, 178). They found that both theories predicted offending, with social control theory being weaker than differential association (p. 189). Costello and Vowell (1999) reanalyzed Hirschi's Richmond Youth Project data by testing social control theory and differential association theory on offences such as theft, vandalism, and battery (p. 842). In a sample of 1,090 males, they found more support for social control theory than differential association in predicting offending (p. 815); belief in law violating behaviour was a stronger predictor of offending than the delinquency of participants' friends (p. 834). Perhaps individuals dine and dash because they do not fully agree with the legal system and norms.

Social control theory has also been examined with theft and other forms of delinquency in countries outside of Canada and the United States. In one study, Alvarez-Rivera and Fox (2010) tested social control theory and self-control theory on 12 deviant behaviours (e.g., shoplifting, distributing copyrighted materials, substance use) using a survey sample of 298 high school students in Puerto Rico (p. 668). They found support for social control theory, but not for self control theory; having a strong bond through attachment to parents, school, and friends was associated with lower levels of deviance (p. 672). Ozbay and Ozcan (2006) conducted a survey with adolescents in Turkey to examine how social control theory would hold up outside of western countries. Using a sample of 1,730 students (p. 716), they found that social control theory could account for assault as well as school delinquency and public disturbance amongst

juveniles. In another test of social control theory in Israel, Cohen and Zeira examined stealing from the market place and driving without a licence (1999, p. 503). Their survey sample of 440 10<sup>th</sup>-12<sup>th</sup> grade students found support for all four bonds of social control theory; although these bonds were found to be weak, individuals with stronger bonds through attachment, commitment, belief, and involvement were less likely to commit the offences examined (p. 510). Trorstenon (1990) conducted a longitudinal study on social control theory and female delinquency on acts such as theft, assault, and vandalism in Sweden (n=791) (p. 103). Trorstenon focused on school and found that having an attachment to school and commitment to education predicted lower offending (p. 112).

Recently, Peterson et al. (2016) conducted a rigorous test of social control theory on 12 types of delinquency (e.g., stealing, smoking, assault) (p. 1344). In their 5-wave survey using a nationally representative sample of South Korean adolescents (n=2,967), they found general support for social control theory except for peer attachment (pp. 1343, 1351). Fukushima, Sharp, and Kobayashi (2009) analyzed social control theory on delinquency in Japan and the United States (p. 434). In their survey sample of university students (US n=442, Japan n=505), they found mixed support for social control theory (p. 441); the bond of belief was associated with lower levels of offending in both groups, but commitment was not found to be significant in either group (p. 455). Lastly, Chui and Chan (2012) tested social control theory on theft and violent crimes in Hong Kong (p. 375). Using a survey sample of students between the ages of 12 and 17 (n=1,377), they found support for all elements of social control theory except for involvement; belief in the legal system, attachment to parents, and commitment to school predicted lower levels of offending (pp. 374, 381).

Social control theory has also been tested in the area of substance use. In one study, Krohn and Massey (1980) conducted a survey with a sample of 3,065 adolescents on social bonds and different forms of deviance (e.g., alcohol use, marijuana use, stronger drug use, and theft) (pp. 533, 534). They found support for all four bonds of social control theory in that stronger bonds were predicted less serious deviant acts (p. 539). Durkin et al. (1999) using a sample of 247 college students found that belief was the most strongly related bond to binge drinking. However, they also found that the effects of commitment and involvement were weak, and that attachment had an opposite relationship with binge drinking than social control theory suggests; the more attached the respondent was to their parents, the more they participated in binge drinking.

In another study, Payne and Salotti (2007) tested social control theory and social learning theory on “college crime” (e.g., drug use, property offences, violent offences) (p. 558). Using survey data from the College Experience Inventory (n=747), they found that elements from both theories predicted offending (pp. 557, 567). However, belief in legal norms (social control) and peer drug use (social learning) were the only two variables that affected all three crime types (p. 568). Fagan et al. (2013) focused on parental control by testing social control theory on substance use (p. 348). Using survey data from 10<sup>th</sup> grade students (n=7,349), they found support for all parental controls on substance use; the more attached an individual was to their parents, the less likely they were to use drugs (pp. 353, 364). In another study, Booth, Farrell, and Varano (2008) tested social control theory on male and female delinquency (e.g., smoking, alcohol, fighting) (p. 434). In a survey sample of high school students (n=1,366), they found mixed support for social control theory; involvement was found to be a strong predictor of offending, but attachment to parents was only weakly supported (pp. 431, 446). They also found that

females and males differed in which bonds were most important; involvement in sports was associated with less delinquency amongst females but associated with more delinquency amongst males (p. 441).

Social control theory has been tested alongside a variety of other offences as well. Agnew (1993) tested social control theory alongside strain and social learning theories using data from the Youth in Transition Survey. He found partial support for social control theory; social bonds were related to offending, but it appeared that this connection was mediated by frustration and associating with delinquent peers (p. 261). Donner, Maskaly, and Fridell (2016) applied social control theory to police misconduct (e.g., fixing a ticket, unauthorized checks) (p. 421). Through a survey sample of police supervisors collected by the National Police Research Platform (n=101), they found support for social control theory; police supervisors who were attached to law abiding individuals, committed to legal institutions, and believe in the law are more likely to abide by the law (pp. 420, 421, 425). In another study, Eshuys and Smallbone (2006) examined the bond of involvement, specifically religious involvement, on sexual offences (p. 280). Examining data collected by a treatment program on 111 incarcerated males, they did not find support for social control theory's bond of involvement; those who had been involved with the religious community throughout their life were more likely to have sexual offences and more victims than others (pp. 281, 282, 284).

Like the religious involvement focus from the previous study, other researchers have focused on specific bonds of social control theory. Hass (2001) examined the role of sports involvement on violent, property, and drug offences (p. 39). Using data from the National Youth Survey (n= 1,725), Hass found no support for sports involvement in decreasing the likelihood to commit crime (pp. 33, 54). Hay, Meldrum, and Piquero (2010) focused on bonds presented

through school on 19 different types of delinquency (p. 3). Using longitudinal survey data in a sample of Swedish 8<sup>th</sup> grade students (n=788), they found that school bonds differed in their impact between females and males; low levels of attachment to school, teachers, and commitment was associated with higher delinquency amongst males, but only poor attachment to teachers was significant in predicting delinquency amongst girls (pp. 3, 7). Thornberry, Moore, and Christenson (1985) also focused on school in their study of delinquency (p. 3). Their survey (n= 975) and interview data (n=567) demonstrated that dropping out of school was associated with being arrested more often (pp. 7, 17). Hoeve et al. (2012) focused on attachment to parents and delinquency in their test of social control theory. Through their meta analysis of 74 studies, they found that stronger attachment to parents was associated with less delinquency and that this effect was stronger for attachment to mothers than fathers (pp. 774, 778).

### *Criticisms*

While social control theory has generally received empirical support in the research literature (e.g., Gardner & Shoemaker, 1989; Ozbay & Ozcan, 2006; Hart & Mueller, 2013), its theoretical value has been debated. One major criticism of social control theory relates to what individuals value. It assumes one system of values (Proctor, 2010, p. 75). More specifically, it assumes that individuals want to maintain relationships and desire culturally approved goals (e.g., getting a job). However, individuals and cultures differ in their desires and goals. There is not always consensus on what is valued. Because of this, the bonds to society may differ or operate differently than expected. A second issue that researchers have debated is the role of delinquent friends. Hirschi (1969) addresses the role of delinquent peers and how they should operate in the attachment bond; “the more one respects or admires one’s friends, the less likely one is to commit delinquent acts. We honor those we admire not by imitation, but by adherence

to conventional standards” (Hirschi, 1969, p. 152). According to this, individuals who have delinquent peers should not imitate their criminal behaviour as social learning states, but instead maintain the social relationships by following societal standards. However, research on the imitation element of social learning theory has shown otherwise (Beier, 2014; Payne & Cornwell, 2007; Skinner & Fream 1997; Trucco, Colder, & Wieczorek, 2011).

Social control theory has been met with skepticism by other researchers as well (Wiatrowski et al., 1981; Agnew, 1985; Matsueda & Heimer, 1987). Agnew (1985) analyzed data collected from the Youth in Transition Survey. This study was longitudinal and consisted of over 2,000 10<sup>th</sup> grade boys. Agnew argued that social control findings from cross-sectional designs had exaggerated the role of social bonds’ in explaining delinquency among adolescents (p. 58); the role of social bonds may not be as important longitudinally when compared to the findings of cross-sectional studies.

In addition to this skepticism of the theory in general, some bonds mentioned as part of social control theory, particularly the bond of involvement, have had mixed support. For example, Paternoster et al. (1983) found no support for involvement. This may be due to difficulties in measuring the concept. While some researchers have accounted for time spent on things like athletics, church attendance (Paternoster et al., 1983, p. 469), social youth groups like scouting (Gardner & Shoemaker, 1989), time spent at work (Durkin et al., 1999), and volunteer work (Huebner & Betts, 2002), some have only focused involvement measures on time spent on school related activities (Agnew, 1985). It is difficult to capture the complexity and the variety of activities each person engages with on a daily basis in survey measures. This is a challenge that I will attempt to account for in the measures presented in the current study.

## **Rational Choice Theory**

### *Background*

Rational choice theory was made popular in criminology by Cornish and Clarke (1986) in their book, *The Reasoning Criminal*. This framework was adapted from economics, applying the classic utilitarian perspective on human action (Akers, 1990). Utilitarianism states that humans are rational actors whose actions are reflective of a consideration of the consequences to the self and others before acting (Bentham, 1823). Through this, deterrence theory appeared in criminology; this theory holds that people would be deterred from committing criminal acts if the consequences associated with these acts were high (Akers, 1990). Rational choice theory expands this by stating that individuals, being rational actors, make a calculated decision to act or commit a crime based on costs and benefits associated with the act (Cornish & Clarke, 2014, p. 3).

Cornish and Clarke (2017) outlined six core concepts embedded in rational choice theory. First, individuals commit crimes because they have a purpose for doing it (p. 32). For example, an individual might steal food because they are hungry. Second, Cornish and Clarke point out that behaviour is rational (p. 32). A decision-making process is involved before a crime is committed. Third, decisions are specific to each crime (p. 30). The factors being weighed in the decision making process to commit murder is not going to be the same if the individual was deciding to commit petty theft. Fourth, the two major types of decisions are involvement decisions and event decisions (p. 35). Event decisions regard the choices made while preparing or carrying out the crime (e.g., choosing a target). Involvement decisions entail choosing whether or not to be involved in a criminal act or continue doing criminal acts in the future. Fifth, there are different levels of involvement in crime (p. 35). The costs and benefits considered in the

decision-making process may differ from the initial decision to commit a crime and further decisions to continue committing crimes. Lastly, crimes progress in relation to a series of decisions (p. 32). An individual may first make the decision to do the crime, but they then have to go through separate decision-making processes to carry out the crime (e.g., develop a plan, choose a target, choose a getaway, choose accomplices).

### *Costs and Benefits*

According to rational choice theory, people are rational beings who base their actions on calculated decisions. People weigh the costs and benefits associated with a particular act (Cornish & Clarke, 2014, p. 3). When looking at offending, costs are consequences an individual may experience if they offend (e.g., paying a fine, losing a friend, feeling ashamed, going to jail). Benefits are rewards an individual may experience if they offend (e.g., feeling excited, social approval, free things). Financial costs and benefits are usually emphasized when discussing rational choice theory. However, individuals may value social or other costs and benefits more (Cornish & Clarke, 2017).

### *Limited Rationality*

Although people go through this decision-making process, fully informed decisions are unlikely. This is due to people having limited rationality; limited rationality presents itself in the form of the individual not having every piece of information necessary to make the best decision (Cornish & Clarke, 2014). Earlier stages of cognitive development also play a role in this inability (Cornish & Clarke, 2014, p. 20; Akers, 1990, p. 661). When cognitive processes are not fully developed in the individual, as is the case in youths, the decision-making process may deemphasize the risks associated with the act.

### *Situational Crime Prevention*

In addition to the traditional rational choice theory elements, the current study will also include a measurement of situational crime prevention. Situational crime prevention applies rational choice theory to environments by suggesting 12 main ways that an environment can be manipulated, designed, or managed to “reduce the opportunities for crime and increase its risks” (Clarke, 1983, p. 225). According to Clarke (1995), these 12 methods include target hardening (making it more difficult to do the crime) (p. 110); access control (e.g., having only one entrance to an outdoor restaurant patio) (p. 111); deflecting offenders (e.g., signs) (p. 111); controlling facilitators (e.g., removing restaurant tables close to exits) (p. 112); entry and exit screening (p. 113); formal surveillance (e.g., having a security guard on staff) (p. 113); surveillance done by employees (e.g., having a hostess at the entrance and exit of a restaurant) (p. 114); natural surveillance (e.g., increasing the lighting in a restaurant) (p. 115); target removal (e.g., not keeping more money than what is needed in a cash register) (p. 116); identifying property (e.g., car registration) (p. 117); removing inducements (e.g., removing graffiti) (p. 117); and setting rules (e.g., being clear to customers and through the law that dining and dashing is unacceptable). Not all of these factors are likely to have an equal impact on dining and dashing.

The current study, drawing on ideas embedded in the situational crime prevention perspective, includes a measure of “environmental awareness” which addresses individual perceptions of factors in the environment that work to reduce the likelihood of dining and dashing. Further details on this measure will be discussed in the following chapter.

### *Rational Choice Theory and Dine and Dashes*

According to rational choice theory, individuals would commit a dine and dash because they might come to the conclusion that getting a free meal and/or pleasing their friends are strong

enough benefits to risk getting caught. Additionally, the individual may believe that getting caught is unlikely. Conversely, individuals may choose not to dine and dash because they come to the conclusion that the potential costs associated with the act (e.g., arrest, fine, shame) would be too great a loss to take the chance of pursuing the possible benefits. Furthermore, situational crime prevention holds that individuals should be less likely to dine and dash in restaurants that have decreased the opportunities and increased the risks associated with the act (e.g., having a security guard on staff, setting up cameras).

### *Previous Literature*

Rational choice theory has been tested through studies on various forms of stealing. In one study, Cherbonneau (2014) examined the decision-making process involved in automobile theft by conducting 35 interviews with active car thieves (pp. 1, 38). Cherbonneau found support for a rational choice model of offending; car thieves weighed risks and rewards (e.g., sexual attention from females, enhanced status, excitement) when deciding to steal a car (p. 209). Similarly, through 45 semi-structured interviews with active car thieves, Copes (2003) found that rational decision-making was involved and that benefits were often more than just financial (e.g., appearance, freedom to travel) (p. 328). Matsueda, Kreager, and Huizinga (2006) tested the rational choice model on theft and violence by analyzing data collected from the Denver Youth Survey (n=1,459) (p. 103). They found support for rational choice theory as well; individuals weighed rewards (e.g., being perceived as cool, excitement) with risks (e.g., arrest) while deciding to engage in criminal behaviour (p. 115).

Related to the topic of theft, other researchers have applied rational choice theory to burglary. Vandeviver, Van Daele, and Beken (2015) analyzed 2,387 burglary records on file with the police in Belgium. They found that people who committed burglary weighed the risks and

benefits associated with the act by taking into consideration environmental factors; factors such as the population density of the potential target's area were found to be significantly related to decreasing or increasing the distance the burglars would travel for the target (pp. 409-415). In another study, Snook, Dhimi, and Kavanagh (2011) tested rational choice theory amongst burglars in an experiment (p. 316). Forty male prisoners were shown 20 random photos of residences and were asked which one they would choose to target and why (p. 319). They found that the participants considered the costs and benefits of the target chosen as well as support for the presence of limited rationality emphasized by the theory (participants did not have all of the information and time required to make a fully rational decision) (p. 320).

Taylor (2014) shared similar findings in a study analyzing 30 interviews with convicted burglars in the United Kingdom; they found that burglars considered the risks and rewards of their targets, with limited rationality being an obstacle (pp. 489, 498). They also found morality to be an important factor in offender decisions of targets and items stolen (p. 498). A study by Pedneault et al. (2015) focused on testing rational choice theory on offenders in sexually motivated burglaries (p. 376). By looking at 224 incidents, they found support for a rational choice model; offenders chose residences that appeared easy to break into and that demonstrated low risk as well as residences where they could steal things of value to them. Although different, these studies imply that if a rational choice model holds for the act of dining and dashing, individuals might be more likely to dine and dash in restaurants that appear to be an easier target (e.g., no security cameras, less staff, sitting near an exit).

McCarthy and Hagan (2005) analyzed the role of perceived danger and physical pain in the decision to offend (e.g., theft, selling drugs, prostitution) (p. 1073). Through three waves of interviews and a survey using a sample of homeless youth in Toronto and Vancouver (n=482),

they found evidence supporting rational choice theory; thinking about the potential danger and physical harm of committing the offence was associated with a lower likelihood of offending (pp. 1071, 1086). In another study, Rosbough (2012) examined the theory by examining police data on theft at the Atlanta International Airport before and after a major change in security interventions after 9/11 (pp. 355, 357). Rosbough found support for rational choice and routine activities theory arguing that the drop in theft was most likely associated with the increased risk of committing the crime set in place after the security changes (p. 369). Baker and Piquero (2010) focused on the role of the benefits of crime (e.g., theft, assault, corporate crime) in a meta-analysis of 13 studies (pp. 982, 984). They found that perceived benefits of crime were associated with more offending and that this relationship was supported more in studies that controlled for self control (p. 986).

Nagin and Paternoster (1993) conducted a survey with 699 undergraduate students (p. 475). Participants were asked questions regarding scenarios around drunk driving, larceny, and sexual assault (p. 476). They found that the expected pleasure that offending would bring them, whether or not they would suffer consequences after the act, and other expected rewards all played into the participants' intention to offend (p. 489). Tibbetts (1997) investigated the role of shame in the decisions to shoplift and drive drunk (p. 234). While surveying a sample of university students (n= 604), they found support for a rational choice model; the anticipated shame of committing the offence was associated with reduced intentions to drive drunk or shoplift (Tibbetts, 1997, pp. 239, 246).

Bouffard (2007) analyzed rational choice theory and offending through hypothetical scenarios as well, but looked more in depth at the costs and rewards associated with the decision-making process by asking participants to state their intention to shoplift, drive drunk, or fight

(pp. 461, 470, 471). In their sample of university students (n=212), Bouffard found that individuals weighed costs and benefits when deciding to offend and that the costs emphasized differed between individuals (p. 472). Bouffard and Petkovsek (2014) examined how social control theory and rational choice theory might interact in offending. A survey looking at a drunk driving scenario in a sample of female and male offenders (n=1,013) found support for both theories; strong social bonds were associated with a lower likelihood of sharing an intention to drive drunk, but weighting the costs associated with this decision mediated the link between social control theory and drunk driving (pp. 290, 291, 301). Bouffard and Exum (2013) compared a sample of offenders (n=1,013) and university students (n= 760) on a similar drunk driving scenario (p. 440). They found that both groups weighed the costs and benefits associated with the drunk driving scenario in a similar way, also supporting the use of university student samples in research (p. 446).

In another study, Hochstetler, DeLisi, and Puhmann (2007) examined rational decision-making on crime (e.g., robberies, beatings, stealing cars) (p. 590). In their comparison of survey data from samples of inmates from California (n= 624) and Colorado (n= 313), they found mixed evidence for the rational choice framework; the perceived costs of crime had no relationship with offending, but the perceived benefits of crime had direct and indirect effects on offending by itself and through criminal identity (pp. 587, 595). Fagan and Piquero (2007) applied rational choice theory and legal socialization to various offences (e.g., theft) in a sample of adolescent offenders (n= 1,355) (pp. 6, 8). They found that the costs and benefits of the offence were considered in the decision-making process and that mental health and maturity levels moderated the perception of the costs and benefits of offending (p. 12).

In another study, DeHann and Vos (2003) applied rational choice theory to street robbery. By conducting focus groups with 49 adolescent delinquents, they found mixed support for the theory; they claimed that at first it appeared that the adolescents may have weighed the benefits and consequences associated with their offences, but found more of a theme of impulsivity and ambiguity driving their actions (pp. 49, 52).

Like social learning and social control theories, rational choice theory has also been applied to offences like digital piracy. In one study, Higgins (2007) examined the role of decision-making in software piracy (p. 39). Using survey data from a sample of college students in the United States (n= 382), they found support for rational choice theory and claimed that the theory may be compatible with self-control theory; when consequences associated with pirating software increased, the perceived value of the software decreased and was then associated with a lower likelihood of pirating (pp. 42, 47, 48). Additionally, when an individual had less self-control, they were more likely to pirate (p. 47). In another study, Vandiver, Bowman, and Vega (2010) also tested rational choice theory and self-control theory but with music piracy (p. 92). Using survey data (n=131), like the previous study, they found support for both theories; although the effects were weak, they found that the perceived costs of pirating music were associated with a lower likelihood of pirating (pp. 101, 105).

Rational choice theory has also been applied to other offences such as drug use and violence. Loughran et al. (2016) studied the transition into adulthood of 1,354 adolescents all found guilty of a serious offence. Using a longitudinal design consisting of 10 follow up interviews, the researchers found support for a rational choice model for a variety of offences. Even offenders who committed acts involving aggressive behaviour perceived the risks and benefits associated with the act. Piliavin et al. (1986) did this with a sample of offenders, drug

users, and adolescent school drop outs collected from the National Supported Work Demonstration (n= 3,300) (pp. 104, 105). Examining offences such as drug use and illegal money making, they found support for the consideration of rewards in the decision to offend, but not for the consideration of the consequences associated with the acts (p. 115). In another study, Paternoster (1989) conducted a longitudinal survey with high school students (n= 1,250) on offending (e.g., marijuana use, under-age drinking, petty theft, vandalism) (pp. 15, 20). Like Piliavin et al. (1986), Paternoster found no evidence supporting the weighing of costs in the decision to offend (1989, p. 37).

Paternoster and Simpson (1996) examined rational choice theory on corporate crime (e.g., fixing prices, bribery, manipulating sales statistics) (p. 558). Their survey consisted of hypothetical situations in a sample of MBA graduate students and corporate executives (n= 384) and found support for rational choice theory; individuals considered the risks and benefits of committing corporate crime, with their personal moral codes being a factor (Paternoster & Simpson, 1996, pp. 557, 576, 579). Tibbetts and Myers (1999) applied rational choice theory and self-control theory on cheating on tests. Analyzing scenario-based survey data from a sample of university students (n= 330), they found support for rational decision-making; the perceived pleasure of cheating was associated with a higher likelihood to cheat, and the anticipated shame associated with cheating was associated with a lower likelihood to cheat (pp. 184, 192).

Other researchers have focused on crimes of a sexual and/or violent nature in their tests of rational choice theory. Beauregard and Leclerc (2007) examined the decision-making process of serial sex offenders. By analyzing interviews with 69 offenders, they found that serial sex offenders weighed the risks and benefits in their target selection (pp. 119, 130). The same conclusion was found in the target selection of sex offenders by Beauregard, Rossmo, and Proulx

(2007). Like these and the studies on burglary discussed earlier, individuals might be careful in their decision of which restaurants to dine and dash at.

Some researchers have tested situational crime prevention methods with crime. Montoya, Junger, and Ongena (2016) tested situational crime prevention by examining how properties and their surroundings influence burglaries. By observing 851 houses from the sidewalk (half had reported a burglary before and half had not) (p. 525), they found that access to the house (e.g., height of fence, if it was a corner house, being close to neighbours, and location of a side door) and target hardening (e.g., window screening and alarm system) predicted night time burglaries (p. 527); a harder target that was also more difficult to access was less likely to experience a burglary (p. 534). In a similar study, Exum et al. (2010) examined robberies in 321 restaurants and 295 convenience stores (p. 276). They aimed to observe if target hardening strategies used in convenience stores (e.g., video cameras, alarm system, drop safe, height markers at entrance) (p. 277) were also helpful in preventing robberies in restaurants (p. 275). They found that most target hardening strategies did not impact robbery rates for either type of establishment (p. 285). They did however find that hiring a police officer as security decreased robbery rates in restaurants (p. 285). They suggest that situational crime prevention methods are not one size fits all (p. 287).

Other researchers applying situational crime prevention treatments have examined loss prevention in retail outlets. Hayes, Downs, and Blackwood (2012) tested two situational crime prevention methods; protective display fixtures and product handling procedures (e.g., keeping a low stock of a product). Examining these alterations in 57 stores, they found that both treatments were effective in decreasing theft; protective display fixtures reduced theft by 56% and the presence of handling procedures reduced theft by 58% (p. 9).

Other studies examining situational crime prevention have focused on the presence of cameras. Welsh and Farrington (2003) conducted a meta-analysis of 22 studies (p. 114) involving closed circuit television (CCTV) on crime in public (p. 110). They found that CCTV presence was related to a 4% drop in crime (p. 130). They also found that CCTV had no effect on violent crimes, but did reduce crimes involving vehicles (p. 131). In another study, McLean, Worden, and Kim (2013) examined the presence of 11 cameras in Schenectady, New York on general crime and disorder (p. 305). They found that the presence of cameras reduced both crime and disorder (p. 324). They also found that more visible cameras were associated with even lower rates of crime and disorder (p. 324). These studies show that crime prevention strategies may be effective, but they are not a complete solution for crime in society.

### *Criticisms*

Rational choice theory has been presented as controversial in the research literature. It has been argued that rational choice theory is an incomplete model of criminal behaviour; this is because researchers argue that most of its elements are present under social learning and social control theories (Akers, 1990, p. 655). The same rational decision-making process is present under the reinforcement element of social learning theory. Since social control theory states that individuals refrain from committing crimes to preserve social relationships and goals (the bonds of attachment and commitment) (Hirschi, 1969), the rational choice framework is expressed here as well.

Cornish and Clarke (2017) have defended against three other major criticisms to their rational choice model. First, researchers have suggested that individuals who offend do not act as rationally as the theory claims (p. 48). Second, researchers have claimed that some crimes are not rational in nature (p. 50). The defence for both of these criticisms boils down to relativity and

subjectivity. Individuals may not act rationally because of how rationality is defined. Individuals have different motives and values. Because of this, committing a crime may be rational to one person but not to another. As an example of this, Cornish and Clarke point to the issue of emphasizing financial gain when evaluating rewards (p. 50). Individuals might weight a different material item, feeling, or social reward as more valuable in their decision-making process. Another defence for these two criticisms is the idea of limited rationality already embedded in the rational choice framework (Cornish & Clarke, 2014). Individuals may not appear to act rationally because they had flawed or incomplete information when they were making their decision to do the crime. A third criticism Clarke and Cornish address is the issue that it is too simplistic to count as a theory (2017, p. 53). They claim that technically rational choice theory is more of a metatheory instead (Cornish & Clarke, 2017, p. 53; Cornish, 1993) or a framework to understanding the decision to offend; it is not a theory from their perspective; it is a framework that some other theories assume is functioning and underlying in their theories (e.g., social control theory).

A fourth criticism is based in the empirical testing of rational choice theory. Although it has undergone vigorous testing in the social sciences, Pratt et al. (2005) claim that according to their meta-analysis, its empirical support is weak. Despite this scrutiny, many studies have provided evidence for a rational choice model (Tibbets & Myers, 1999; Matsueda et al., 2006; Bouffard et al., 2008; Loughran et al., 2016).

### **The Current Study**

The current study will attempt to explain dining and dashing using social learning theory, social control theory, and rational choice theory. The next chapter outlines the methods used.

## CHAPTER 3: METHODOLOGY

### Research Design

In order to test my research questions, I collected data via web survey<sup>3</sup> from a convenience sample of students at the University of Waterloo. My study design was cross-sectional and was analyzed in a quantitative manner. Cross-sectional designs are beneficial for analyzing the association between variables, although they have difficulty establishing temporal order.

Data were collected during October 2017. I chose this time period as a better response rate was likely during the fall semester than the summer semester since many students are inactive during summer months. Further, October was selected as opposed to September to avoid my research recruitment attempt being overlooked by students, particularly first year undergraduate students experiencing orientation week and transitioning into university classes for the first time.

I chose to conduct an online survey as opposed to in person using paper copies as this method was less time consuming, cheaper, and made it easier to reach potential participants. I also chose an online platform for this survey with the hope that potential participants would be more comfortable and willing to be honest about their dine and dash experiences in their responses without a researcher being present (Tourangeau and Yan, 2007). At the same time, since the survey was online, participants may have felt less obligated to take the survey seriously (Meade and Bartholomew, 2011), leading to inaccurate answers. In response to this issue, I included a data screening question at the end of the survey as suggested by Meade and Bartholomew (2011, p. 5); this entailed asking the participant how true the answers they

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<sup>3</sup> See Appendix 3 for the full survey.

provided were. This question was located on a page by itself so that it was the only thing to focus on. Everyone in my sample claimed that their answers were all true.

The survey was composed mostly of close ended questions. These questions aimed to measure dine and dash behaviour amongst the participants and their peers, social control, rational perceptions of offending, and a variety of other correlates of offending behavior.

The survey was answered by students who have themselves committed a dine and dash and those who have not. Not only would it have been difficult to specifically target dine and dashers, but collecting information from individuals who have possibly been in situations where they were pressured to dine and dash and did not, or have been in situations where their friends or peers have explicitly told them about a situation where they committed a dine and dash, allow for important theoretical tests.

### **Pretesting**

The only group omitted from the sample were graduate students in the Department of Sociology and Legal Studies. I used this population to pretest my survey instead. I chose to pretest with the sociology graduate students instead of operating a pilot study with other members of the student population as many of these students were personal friends or otherwise knew about the research. My concern was that if this population was included in the actual survey, some of these students may have been subconsciously or consciously biased and inclined to answer the questions in a way that they think I wanted them answered or in a way that reflected well on them. In order to ensure that all questions were viewed at some point during the pretesting phase, participants were asked to answer the survey as a dine and dasher or as a non dine and dasher (regardless of their actual life experiences with dine and dashing) depending on their birth month.

In total 12 respondents participated in the pretesting. This pretesting sample mostly consisted of sociology graduate students. However, 1 or 2 professors may have participated after accidentally receiving the pretesting recruitment message. Comments received from the respondents indicated that there were some clarity issues with the socio-economic status measures as well as the involvement measures that were being used to test social control theory. These questions were revised and approved by an ethics committee.

### **Sampling Procedure**

The survey involved a non-probability convenience sample. The participants in the sample are not representative of, or randomly selected from, the entire population of individuals who have committed or could potentially commit dine and dashes in Ontario or Canada as a whole as the sample only consisted of students at the University of Waterloo. The majority of students at the University of Waterloo had the chance to participate in my survey. Both undergraduate and graduate students were recruited to participate in an attempt to widen the age range of respondents. Recruitment e-mails were sent to administrative staff in every department, along with a request to forward the e-mail to all of the undergraduate and graduate students in their department. This e-mail contained a link to the survey and all the information participants needed to be able to give informed consent to participate in my study. Assuming that every department assistant forwarded the recruitment e-mail to their students, over 39,098 active students should have received the e-mail. In reality, not all departments forwarded the recruitment e-mail, and many students would not have completed the survey either because they did not want to or because they did not read the e-mail.

In an effort to increase the sample size, a second wave of recruitment as well as a secondary recruitment method was employed. Reminder emails were sent to every department to

forward to their students two weeks after the original wave of e-mails. As a second recruitment method, e-mails were sent to all professors listed under department websites where departments expressed that they were unable to forward the original recruitment e-mail. Additionally, e-mails were sent to at least two professors from every course subject area at the University of Waterloo. These professors were asked to forward the study information to their students either because they taught large courses under their subject or because they were a professor that explicitly expressed interest to me regarding aiding with recruitment.

## **Data Analysis**

### *The Sample*

The survey resulted in 428 responses. When the survey was distributed in the fall 2017 semester, there were 39,098 undergraduate and graduate students enrolled<sup>4</sup> (University of Waterloo, 2018). If every undergraduate and graduate student received recruitment materials, this would mean the survey received a response rate of just over 1%. However, because I cannot know which departments and professors spread the recruitment materials, I cannot know how many students were exposed to the recruitment materials. Therefore there is a chance that the response rate for this survey was indeed higher in reality. Seventy cases from this were dropped due to lack of information given in the survey (e.g., participants who only answered the first section of questions). Three additional cases were dropped due to being part of a different demographic than most others and therefore risking deductive disclosure of these participants. The sample used for the analysis consisted of 358 participants in total.

Three hundred ten of these 358 participants supplied valid answers for every question included in the analysis. The other 48 participants answered the large majority of questions used in the analysis. Missing data imputations were used in order to maintain statistical power. I

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<sup>4</sup> This number includes full-time and part-time students.

manually scanned through all the cases to ensure that there were no remaining cases that had more than a couple of missing answers from the analysis. Little's (1988) MCAR Test showed that the missing data in the sample were missing completely at random ( $p=0.862$ ). Therefore, multiple imputation using chained equations was used. Twenty imputations were performed as researchers claim that this amount maintains statistical power, without executing additional "trivial" imputations (Graham, Olchowski, and Gilreath, 2007, p. 212). Three variables were imputed using logistic regression (gender, race/ethnicity, and imitation). Thirteen variables were imputed using predictive mean matching (age, SES, self-control, selection of friends, environmental awareness, costs, benefits, commitment, involvement, belief, attachment, reinforcement, and differential association). The dependent variable (whether an individual has ever dined and dashed) was not imputed (there were no missing values on this variable). The number of cases with missing values was fairly low. Out of all the question options on the 358 cases kept, 87 data points were imputed in total (some variables in the analysis had multiple items involved). Environmental awareness was the variable with the highest number of missing cases (17)<sup>5</sup>. Plotting each variable and comparing the mean, standard deviation, minimum, and maximum scores on the imputed data to the non-imputed data showed that the missing data imputations fit the data well.

## ***Variables***

### *Dependent Variable*

The dependent variable for this analysis is one dichotomous item – Have you ever dined and dashed? The variable was coded as 0=no and 1=yes. Five percent of participants claimed that they had dined and dashed before. Table 1 provides descriptive statistics of this variable and all of the independent variables.

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<sup>5</sup> See Appendix 5 for the amount of missingness that was imputed on each variable in the analysis.

Table 1.

Variables Included in Analysis.

	Mean	SD	Min	Max
Prior dine and dash	0.056	0.230	0	1
<b>Controls:</b>				
Gender (1=male)	0.346	0.476	0	1
Age	22.235	5.514	16	78
Race/ethnicity (1=non-white)	0.433	0.496	0	1
SES	5.806	1.778	1	10
Self-control	29.087	4.520	16	40
Selection of friends	4.581	0.692	1	5
<b>Social learning:</b>				
Differential association	0.352	0.478	0	1
Imitation (1=have seen)	0.239	0.427	0	1
Reinforcement	7.037	3.723	4	20
<b>Social control:</b>				
Attachment	45.42	7.519	13	60
Commitment	17.401	2.414	10	20
Involvement	34.899	22.095	0	160
Belief	24.305	3.217	12	30
<b>Rational choice:</b>				
Costs	18.349	7.760	6	30
Benefits	11.283	5.482	6	30
Environmental awareness	19.129	9.428	7	35

n=358

*Social Learning Variables**Differential Association*

Differential association was measured with one item. Participants were asked “do you know someone who has dined and dashed?” No was coded as 0 and yes as 1. Thirty five percent of the sample claimed that they did know someone who has dined and dashed before.

*Imitation*

Imitation was measured with the question “have you ever seen someone get away with a dine and dash?” No was coded as 0 and yes as 1. 24% of the sample claimed that they had seen someone else get away with a dine and dash.

### *Reinforcement*

Reinforcement was measured using 4 items. Participants were asked to rank how much the items influenced their decision from not influential (1) to very influential (5) during their last dine and dash or last opportunity that they could have dined and dashed. The items included “I thought the people I was with would like me more if I dined and dashed”, “I thought other people I was not with at the time would like me more for dining and dashing”, “I thought I would feel excitement from dining and dashing”, and “I thought I would be perceived as cool by at least one person for dining and dashing”. These items were chosen as measurements of reinforcement, because they represent positive social and physical outcomes that could have been associated with the idea of committing the act. For example, if an individual believed they were going to be liked more by peers as a result of committing a dine and dash and desired this, they would have been likely to score higher on an item like “I thought the people I was with would like me more if I dined and dashed”. This high score would mean that an individual was very influenced by the idea of this perceived potential positive reinforcement for committing the act. These items showed high internal reliability ( $\alpha=0.89$ ) and were summed. A high score on this scale indicates that an individual was highly influenced by these items when deciding to dine and dash or not (min=4 max=20). Most participants claimed that these factors did not have a high influence on them during their last opportunity to dine and dash or their last dine and dash (mean=7.03).

Definitions was not included in the analysis under social learning theory. This was due to the major theoretical overlap with the belief element under social control theory; they are both measured using the same items.

## *Social Control Variables*

### *Attachment*

The attachment variable for social control theory consisted of 12 items and focused on attachment to friends and parents/parental figures. These items were adapted from Chapple et al. (2005). Participants were asked how much they agree with a series of statements on a 5 point scale from strongly agree (1) to strongly disagree (5). These items were reverse coded so that a higher score indicated that they strongly agreed with the items. The items included “I talk over future plans with my parent(s)/parental figure(s)”, “I talk over future plans with my best friend”, “I would like to be the kind of person my mother or father/parental figure is”, “I would like to be the kind of person my best friend is”, “I share my thoughts and feelings with my parent(s)/parental figure(s)”, “I share my thoughts and feelings with my best friend”, “My parent(s)/parental figure(s) seem to understand me”, “my best friend seems to understand me”, “I am very close with my parent(s)/parental figure(s)”, “I am close with my best friend”, “I have lots of close friends”, and “People close to me would be disappointed if they discovered I had committed a crime”. These items showed high internal reliability ( $\alpha=0.84$ ) and were added together. A higher score on this scale indicated more attachment to friends and parents. Many participants claimed to have a high attachment to these people (min=13, max=60, mean=45.43).

### *Commitment*

The commitment variable consisted of 4 items adapted from Chapple et al., (2005). Similar to the attachment items, participants were asked to rank how much they agreed with statements on a 5 point scale from strongly agree (1) to strongly disagree (5). The items included “I usually finish my class assignments on time”, “I try hard in school”, “I have put in a lot of time and effort to ensure that I succeed in university”, and “It’s important to me that I have a

good job in the future”. These were reverse coded so that a higher score indicated that they strongly agreed with an item. These items had a high internal reliability ( $\alpha=0.79$ ) and were summed. A higher score on this scale indicated a higher level of commitment. Most participants demonstrated a high level of commitment to school and their future (min=10, max=20, mean=17.40).

### *Involvement*

The involvement variable consisted of the total number of hours participants claimed they spent on three items in an average week. These items were inspired by some of the items presented by Chapple et al. (2005). These items included how many hours they “participate in organized activities (e.g., sports, volunteer work, association or club meetings)”, “spend in class or doing graduate student research or thesis preparation”, and “spend at paid employment” (min=0, max=160, mean=34.89).

### *Belief*

The belief variable consisted of 6 items and were also adapted from Chapple et al. (2005). Like the attachment and commitment items, participants were asked to report how much they agreed with a series of statements on a 5-point scale from strongly agree to strongly disagree (1-5). These items included “most things people call crime don’t really hurt anyone”, “I have respect for the police”, “rules were made to be broken”, “it’s okay to get around the law if you can get away with it”, “the laws we have make society a better place”, and “in general, dine and dashes are acceptable”. All items were coded so that a higher score indicated a higher belief in the laws. Cronbach’s alpha indicated high internal reliability on this scale ( $\alpha=0.75$ ). The scale was created by summing responses to the six items. Participants generally believed in the law (min=12, max=30, mean=24.31).

## *Rational Choice Variables*

### *Costs*

The costs variable for rational choice theory consisted of 6 items. Participants were asked to rank how much influence different potential costs had on their decision to dine and dash their last time (for those who reported having dined and dashed) or at their last opportunity (for those who reported not having dined and dashed) on a 5 point scale from not influential (1) to very influential (5). The items included “I thought I would get caught by restaurant staff for dining and dashing”, “I thought I would get in trouble by the police for dining and dashing”, “I thought I would have to pay a fine for dining and dashing”, “I thought a friend would be mad or upset with me for dining and dashing”, “I thought a family member would be mad or upset with me for dining and dashing”, and “I thought I would feel upset or mad at myself for dining and dashing”. These items demonstrated high internal reliability ( $\alpha=0.91$ ) and were added together. A higher score on this scale indicated a higher amount of influence that these costs had on their decision to dine and dash or not (min=6, max=30, mean=18.36).

### *Benefits*

The benefits variable<sup>6</sup> consisted of 6 items. Like the costs variable, participants were asked to rank how much influence each item had on their decision to dine and dash or not at their last dine and dash or last opportunity on a 5 point scale from not influential (1) to very influential (5). The 6 items included “I thought the people I was with would like me more if I dined and dashed”, “I thought I would save money by dining and dashing”, “I thought other people I was not with at the time would like me more for dining and dashing”, “I thought I would be perceived as cool by at least one person for dining and dashing”, “I thought I would feel

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<sup>6</sup> Due to theoretical overlap, the benefits variable from social control theory and the reinforcement variable from social learning theory have some survey items in common. These measures never appeared in the same regression model together.

excitement from dining and dashing”, and “I thought it would be funny or entertaining to dine and dash”. These items showed high internal reliability ( $\alpha=0.89$ ) and were added together. A higher score on this scale indicated a higher influence of these benefits on the decision to dine and dash or not (min=6, max=30, mean=11.29).

### *Environmental Awareness*

An environmental awareness variable was tested as a part of rational choice theory to examine if dine and dashers were more aware of the environment they were in prior to dine and dashing than non dine and dashers. Under rational choice theory, individuals who have dined and dashed before should claim that factors of their environment at their last dine and dash had more influence on their decision-making process than non dine and dashers. This is because non dine and dashers would tend not to be assessing the suitability of the environment for a dine and dash if they are not contemplating the act.

This variable consisted of 7 items. Like the other rational choice items, individuals were asked to report how much influence factors had on their decision to dine and dash their last time or at their last opportunity on a 5 point scale from not influential (1) to very influential (5). These items included “there were security cameras that I was aware of”, “there was a host/hostess near the restaurant entrance/exit”, “the restaurant was busy”, “there was restaurant staff within sight”, “there was a bouncer or security officer at the restaurant”, “a manager was circulating through the establishment”, and “I was sitting close to an exit”. These items were added together and demonstrated high internal reliability ( $\alpha=0.96$ ). A higher score indicated greater influence of environmental target factors (min=7, max=35, mean=19.22).

## *Control Variables*

### *Socio-economic Status*

Prior research has found a link between socio-economic status and crime. For example, Heimer (1997) found that socio-economic and cultural context factors mix together to partially explain violent delinquency. She showed that youths that came from a lower socio-economic background were more likely to participate in violent delinquency (p. 820). Jarjoura, Triplett, and Brinker (2002) examined involvement in a variety of criminal acts (e.g., vandalism, assault, theft) over a 14-year period. They found that individuals who had been exposed to poverty were more likely to participate in delinquency (p. 181). They also state that research that has found no effect between socio-economic status and delinquency is potentially due to the use of cross-sectional samples (p. 181). Lastly, Thornberry and Farnworth (1982) noted that the link between socio-economic status and juvenile delinquency is weak, but the relationship between socio-economic status and participating in crime as an adult is strong; adults with a low socio-economic status are more likely to commit crimes (p. 516).

Given the prior research, I expect that students from lower socio-economic backgrounds will be more likely to dine and dash. However, because the sample being used solely consists of university students, a group with relatively high aggregate socio-economic status, the influence on crime may be attenuated. It is being included anyway because of its importance in the criminology literature. Participants were asked to select which number on a scale from 1 to 10 best indicated which income group their family fell into. One indicated the lowest income group and 10 indicated the highest. Participants were asked to include all wages, salaries, pensions, and all other incomes.

### *Age*

Prior research has found that people tend to participate in less crime as they get older (after the adolescent years). For example, Hirschi and Gottfredson (1983) explored the presence of age as a predictor of crime. They found age to be a consistent correlate, and that it has a relationship with crime independent from other life events (e.g., marriage, leaving school) (p. 580). Farrington (1986) found that in general, as individuals get older they are less likely to commit crimes, but that the peak of the age-crime curve varies between offences though for most criminal acts the peak is in mid- to late-adolescence (p. 236). Antonaccio et al. (2010) examined survey data from Greece, Russia, and Ukraine to explore which crime predictors hold up outside of western countries. They found that age was one predictor of crime that held strong in these different cultural contexts. They found that as individuals got older, they were less likely to participate in criminal activity (p. 316).

Based on prior research, I expect that older students in the current study's sample will be less likely to dine and dash than younger students. Participants were asked to report their current ages. Since the sample was collected from a university, it was not surprising to find that most participants reported being in their early twenties (min=16, max=78, mean=22).

### *Gender*

Previous research has found that males tend to commit more crimes than females. For example, Canter (1982) examined gender differences in a variety of offences (e.g., theft, assault, vandalism) amongst youth in the United States and found that there were more male than female offenders and that males committed crimes more frequently (p. 387). Rhodes and Fischer (1993) examined crime and gender differences among adolescents participating in a court diversion program. They found that males were more likely to be referred to the program for breaking the

law, more likely to have been arrested before, and more likely to engage in criminal acts such as assault and selling drugs (p. 887). More recently, Weerman et al. (2016) tested if situational action theory could account for gender differences in crime amongst youths. They found that even though situational action theory was able to explain part of the relationship between gender and crime, there was still an independent relationship between gender and crime; boys were more likely to participate in crime compared to girls (p. 1201).

Given the gender effect found in much prior research, it is likely that the males in the current study's sample will report a higher level of dining and dashing than females. Participants were asked to report their genders. The options were male, female, or other where they were able to write the gender they identified with. Females were coded as 0 and males as 1. Cases that reported being a different gender were dropped due to low numbers to minimise the risk of deductive disclosure. Females made up 66% of the sample and males made up the other 34% (mean=0.34). During the fall 2017 semester when the survey was distributed, 47% of students were female and 53% were male (University of Waterloo, 2018). This means that there was an overrepresentation of females in the sample used in the current study. This outcome is similar to other studies that use undergraduate student samples (Gallupe et al., 2016; Mercer et al., 2017).

#### *Race/ethnicity*

Although there is some research that has found evidence for racial/ethnic group differences in crime, some have found the opposite. Felson, Deane, and Armstrong (2008) examined race differences in delinquency using the National Longitudinal Study of Adolescent to Adult Health. They found that compared to white youths, black youths are more likely to commit violent offences and less likely to commit drug offences (p. 636). Markowitz and Salvatore (2012) also examined race differences in delinquency using the National Longitudinal

Study of Adolescent to Adult Health. They found that non-African Americans were more likely to participate in crime compared to African Americans at multiple waves (p. 601). They report that life course patterns differ between races and studies should not be colourblind when analyzing crime (p. 603). In another study, Piquero, Macdonald, and Parker (2002) examined race and life circumstance differences in crime amongst parolees. They found that although changes in life circumstances (e.g., marriage, employment) are related to criminal behaviour, the relationship between race and crime still exists independently.

Because dining and dashing has not been tested before, this variable is being included in the current study to avoid model misspecification in case it is an important factor. Participants were asked to report which race/ethnicity they identified with most. This was adapted from the 2016 Canadian Census (Statistics Canada, 2016). If more than one applied, they were asked to choose the one they identified with most. Participants were given the option of white, Aboriginal (First Nations, Métis, Inuk), South Asian (e.g., East Indian, Pakistani, Sri Lankan), Chinese, Black, Filipino, Latin American, Arab, Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian), West Asian (e.g., Iranian, Afghan), Korean, Japanese, or other. Due to low numbers in most categories, race/ethnicity was recoded white=0 and non-white=1. 57% of the sample was white and the remaining 43% reported identifying with a different race/ethnicity (mean=0.43).

### *Self-control*

The ability to exercise self-control was controlled for in this analysis because of its importance in the criminological literature (Pratt & Cullen, 2000; Antonaccio & Tittle, 2008). This scale consisted of 8 items and was adopted from Wikström et al. (2010) which has been originally adapted from Grasmick (1993). Participants were asked to rank how much they agreed

with statements about themselves (strongly agree (1)-strongly disagree (5)). The items included were “I often act on the spur of the moment without stopping to think”, “when I am really angry, other people better stay away from me”, “I sometimes find it exciting to do things that may be dangerous”, “I don’t devote much thought and effort to preparing for the future”, “sometimes I will take a risk just for the fun of it”, “I often try to avoid things that I know will be difficult”, “I never think about what will happen to me in the future”, and “I lose my temper pretty easily”. All items were summed. Higher scores on the scale indicated an increased ability to exercise self-control. The Cronbach’s alpha score for the scale was 0.669. Dropping items did not improve this score. Although this is below the usual accepted norm of .7, all items were kept in the scale to remain consistent with other literature that has used this scale and found high internal reliability (Wikström et al., 2010) (min=16, max=40, mean=29.09).

#### *Selection of Friends*

Selection of friends was the last variable controlled for in this analysis. This variable is meant to account for selection effects whereby individuals may be more likely to commit criminal acts if they choose to spend their time with other individuals like them who commit crime instead of being influenced by these individuals to commit crime like social learning theory states. It was included as a control because it has been found to be a potentially important factor in offending behaviour (Gottfredson & Hirschi, 1990; Jaccard, Blanton, & Dodge, 2005, p. 145; Gallupe, McLevey, and Brown, 2018) and because by including it as a control variable in the current study, it is possible to differentiate between individuals who are being influenced by their peers and those who are already involved in criminal behaviour like dining and dashing and just prefer to hang out with other people who do those things as well. Participants were asked on a scale ranging from strongly agree (1) to strongly disagree (5) whether they agree with the

statement “I would rather hang out with people who dine and dash”. A higher score on this variable indicated a preference for friends who follow the law. Most participants claimed that they did not prefer to hang out with dine and dashers (min=1, max=5, mean=4.58).

### ***Bivariate Tests***

Because the dependent variable (whether or not an individual had dined and dashed before) was dichotomous, bivariate logistic regressions were estimated to assess the relationship between this variable and each independent variable individually.

### ***Multivariate Models***

Four multivariate logistic regression models were used to address the research questions. Three logistic models were first estimated in which variables derived from each theory were entered separately; subsequently, all significant predictors from the first three models were entered into a final model. The first multivariate logistic model analyzed the relationship between the dependent variable (whether or not an individual had dined and dashed before), the control variables (age, gender, SES, race/ethnicity, selection of friends, and self-control), and the social learning theory variables (differential association, imitation, and reinforcement). A Pearson-Windmeijer goodness-of-fit test was used to check the model fit (Windmeijer, 1994). This test indicated that this model had good model fit ( $p=0.23$ ). Other diagnostic checks indicated no issues with expected cell counts of the categorical variables, multicollinearity, or outliers.

The second multivariate logistic model examined the relationship between dine and dash, the control variables, and the social control theory variables (attachment, commitment, involvement, belief). A Pearson-Windmeijer goodness-of-fit test indicated that this model was a

good fit to the data ( $p=0.30$ ). There were no issues found with expected cell counts of categorical variables, multicollinearity, or outliers.

The third multivariate logistic model analyzed the relationship between dine and dash, the control variables, and the rational choice theory variables (costs, benefits, and environmental awareness). A Pearson-Windmeijer goodness-of-fit test indicated that this model was a good fit for the data ( $p=0.96$ ). No issues were found with the model regarding expected cell counts, multicollinearity, or outliers.

The fourth multivariate logistic model examined the relationship between dine and dash, the control variables, and the social learning, social control, and rational choice theory variables that were found to be significant in the prior three models (differential association, costs, and environmental awareness). A Pearson-Windmeijer goodness-of-fit test indicated this model was a good fit for the data ( $p=0.83$ ). No diagnostic issues were found with expected cell counts, multicollinearity, or outliers.

The following chapter presents the results of these tests and models.

## CHAPTER 4: RESULTS

### Bivariate Analysis

Table 2 displays the bivariate logistic regressions carried out between the 16 independent variables and whether or not an individual had dined and dashed before. At the bivariate level, none of the socio-demographic variables (age,  $p=0.33$ ; gender,  $p=0.14$ ; SES,  $p=0.30$ ; race/ethnicity,  $p=0.87$ ) were found to be related to dining and dashing. The ability to exercise self-control was also unrelated to dining and dashing ( $p=0.29$ ). Selection of friends was found to be related to dining and dashing ( $OR=0.54$ ,  $p=0.02$ ). For every one unit increase on the selection of friends scale, the odds of reporting a dine and dash were 46% lower; individuals who strongly preferred to hang out with individuals who followed the law were less likely to dine and dash, and individuals who preferred to associate with individuals who dined and dashed were more likely to dine and dash themselves.

Two variables representing social learning theory were found to be related to dining and dashing at the bivariate level. Differential association was related to dining and dashing ( $OR=11.91$ ,  $p<.01$ ). Compared to individuals who did not know someone else who had dined and dashed before, the odds of reporting a dine and dash for individuals who did know someone who had dined and dashed before was 12 times higher. Imitation was also found to be related to dining and dashing ( $OR=4.30$ ,  $p<.01$ ). Compared to individuals who had never seen someone else get away with a dine and dash, the odds of reporting a dine and dash amongst individuals who had seen someone get away with dining and dashing was 4 times higher. Reinforcement was not found to be related to dining and dashing ( $p=0.79$ ).

Table 2.

Bivariate Logistic Regressions (DV=Prior dine and dash)

	<i>OR</i>	SE	<i>p</i>
Controls:			
Age	1.030	0.031	0.331
Gender (1=male)	1.991	0.920	0.136
Race/ethnicity (1=non-white)	1.076	0.498	0.874
SES	0.875	0.112	0.295
Self-control	0.948	0.048	0.290
Selection of Friends	0.539	0.137	0.015
Social learning:			
Differential association	11.905	7.583	<0.001
Imitation (1=have seen)	4.304	2.016	<0.01
Reinforcement	0.016	0.060	0.785
Social control:			
Attachment	0.987	0.029	0.656
Commitment	1.058	0.106	0.573
Involvement	1.014	0.009	0.116
Belief	0.893	0.059	0.086
Rational choice:			
Costs	0.879	0.031	<0.001
Benefits	1.028	0.041	0.499
Environmental awareness	0.988	0.024	0.636

Note: Logistic regressions were executed for all variables independently on dining and dashing.

All four variables representing social control theory were found to be unrelated to dining and dashing at the bivariate level (attachment  $p=0.66$ , commitment  $p=0.57$ , involvement  $p=0.12$ , belief  $p=0.09$ ).

Most of the variables representing rational choice theory were found to be unrelated to dining and dashing at the bivariate level. Perceived benefits ( $p=0.50$ ) and environmental awareness of the target ( $p=0.64$ ) were found to be unrelated to dining and dashing. However, perceived costs associated with doing a dine and dash was found to be related to dining and dashing ( $OR=0.88$ ,  $p<.01$ ). For every one unit increase on the costs scale, the odds of reporting a dine and dash were 12% lower.

## Multivariate Analysis

Table 3 displays the first multivariate logistic regression model. This model examined the relationships between the main control variables (age, gender, race/ethnicity, SES, selection of friends, and self-control) as well as the social learning theory variables (differential association, imitation, and reinforcement) with dining and dashing. Age ( $p=0.28$ ), self-control ( $p=0.65$ ), selection of friends ( $p=0.10$ ), gender ( $p=0.46$ ), race/ethnicity ( $p=0.97$ ), and SES ( $p=0.45$ ) were all found to be unrelated to dining and dashing. Differential association was found to have a significant relationship with dining and dashing ( $OR=8.8$ ,  $p<.01$ ). Similar to what was found at the bivariate level, the odds for reporting a dine and dash amongst individuals who knew someone else who had dined and dashed before were almost 9 times higher than individuals who did not know anyone who had dined and dashed. Although imitation had a relationship with dining and dashing at the bivariate level, this relationship was not present when accounting for other control and social learning variables ( $p=0.39$ ). Lastly, reinforcement was also found to be unrelated to dining and dashing ( $p=0.67$ ).

Table 3.

### Multivariate Logistic Regression of Social Learning Theory Elements on Dining and Dashing

	<i>OR</i>	<i>SE</i>	<i>p</i>
<b>Controls:</b>			
Age	1.045	0.043	0.282
Gender (1=male)	1.457	0.735	0.455
Race/ethnicity (1=non-white)	1.022	0.534	0.966
SES	0.899	0.126	0.448
Self-control	0.974	0.057	0.654
Selection of friends	0.619	0.179	0.097
<b>Social learning:</b>			
Differential association	8.818	6.140	<0.01
Imitation (1=have seen)	1.587	0.856	0.392
Reinforcement	1.031	0.073	0.665

Table 4 shows the results of the second multivariate logistic regression model. This model examined the relationships between the main control variables as well as the social control theory variables (attachment, commitment, involvement, and belief) with dining and dashing. Age ( $p=0.37$ ), self-control ( $p=0.37$ ), selection of friends ( $p=0.11$ ), gender ( $p=0.22$ ), race/ethnicity ( $p=0.80$ ), and SES ( $p=0.49$ ) were all found to be unrelated to dining and dashing. Attachment ( $p=0.87$ ), commitment ( $p=0.29$ ), involvement ( $p=0.39$ ), and belief ( $p=0.36$ ) were also found to be unrelated to dining and dashing.

Table 4. Multivariate Logistic Regression of Social Control Theory Bonds on Dining and Dashing

	<i>OR</i>	<i>SE</i>	<i>p</i>
Controls:			
Age	1.034	0.039	0.369
Gender (1=male)	1.810	0.872	0.218
Race /ethnicity (1=non-white)	1.133	0.566	0.802
SES	0.911	0.122	0.487
Self-control	0.949	0.055	0.371
Selection of friends	0.631	0.180	0.106
Social control:			
Attachment	1.006	0.034	0.865
Commitment	1.120	0.120	0.291
Involvement	1.009	0.010	0.385
Belief	0.933	0.070	0.359

Table 5 displays the third multivariate logistic regression model. This model examined the relationships between the main control variables as well as the rational choice theory variables (costs, benefits, environmental awareness) with dining and dashing. Age ( $p=0.54$ ), self-control ( $p=0.52$ ), gender ( $p=0.83$ ), race/ethnicity ( $p=0.98$ ), and SES ( $p=0.57$ ) were all found to be unrelated to dining and dashing. Perceived benefits associated with dining and dashing was also found to be unrelated to dining and dashing ( $p=0.09$ ). However, perceived costs was found to be related to dining and dashing ( $OR=0.72$ ,  $p<0.01$ ). Similar to the bivariate test examining

this relationship, for every one unit increase on the perceived costs scale, the odds of dining and dashing were 28% lower. Environmental awareness of target difficulty was also found to be related to dining and dashing ( $OR=1.1, p=0.01$ ). The odds of dining and dashing were 10% higher for a one unit increase on the environmental awareness scale. Additionally, selection of friends was found to be significant in this model ( $OR=0.53, p=0.05$ ). Individuals who preferred to hang out with individuals who followed the law had a 47% lower odds of reporting a dine and dash for every one unit increase on the selection of friends scale.

Table 5. Multivariate Logistic Regression of Rational Choice Theory Elements on Dining and Dashing

	<i>OR</i>	<i>SE</i>	<i>p</i>
Controls:			
Age	1.023	0.038	0.536
Gender 1=Male	1.119	0.603	0.834
Race/ethnicity 1=Non-white	1.017	0.542	0.975
SES	0.921	0.134	0.572
Self-control	1.042	0.068	0.524
Selection of friends	0.530	0.172	0.050
Rational choice:			
Costs	0.717	0.056	<0.001
Benefits	1.128	0.080	0.089
Environmental awareness	1.146	0.060	<0.01

Table 6 presents the final multivariate logistic regression model. This model examined the relationships between the main control variables as well as the significant variables from the prior three models (differential association, costs, and environmental awareness) with dining and dashing. Like the other multivariate models, age ( $p=0.39$ ), self-control ( $p=0.86$ ), gender ( $p=0.95$ ), race/ethnicity ( $p=0.74$ ), and SES ( $p=0.31$ ) were all found to be unrelated to dining and dashing. Differential association ( $OR=11.59, p<0.01$ ), costs ( $OR=0.8, p<.01$ ), and environmental awareness ( $OR=1.1, p<.01$ ) were found to be related to dining and dashing even when tested

together. The odds of reporting a dine and dash for individuals who knew someone else who had dined and dashed were almost 12 times higher than individuals who did not know someone else who had dined and dashed before; this demonstrates consistent support for the differential association element of social learning theory. For every one unit increases on the costs scale, the odds of dining and dashing were 23% lower. Additionally, the odds of dining and dashing were 13% higher for every one unit higher on the environmental awareness scale. These factors demonstrate consistent partial support for rational choice theory. Finally, the odds of dining and dashing were 50% lower for every one unit higher a person scored on the selection scale. This indicated that individuals who preferred to hang-out with individuals who followed the law were less likely to dine and dash.

Table 6.

Multivariate Logistic Regression of Significant Theoretical Variables on Dining and Dashing

	<i>OR</i>	SE	<i>p</i>
Controls:			
Age	1.038	0.046	0.391
Gender (1=male)	0.968	0.546	0.954
Race/ethnicity (1=non-white)	0.826	0.471	0.738
SES	0.854	0.133	0.312
Self-control	1.012	0.069	0.859
Selection of friends	0.496	0.177	0.050
Significant variables:			
Differential association	11.587	8.099	<0.001
Costs	0.769	0.049	<0.001
Environmental awareness	1.130	0.055	0.012

The following chapter presents a discussion of these results. Potential implications for theory, future studies, and restaurant practices will be included in this discussion as well as some possible explanations for these results.

## CHAPTER 5: DISCUSSION AND ADDITIONAL FINDINGS

Let us now re-examine the research questions proposed at the beginning of this thesis. The first research question asked was “does associating with peers who dine and dash increase the likelihood of individuals doing it?” This question was meant to test social learning theory. The current study found mixed answers regarding this question. Neither the element of imitation nor the element of reinforcement were significantly related to individual dine and dash behaviour. However, the element of differential association was related to dine and dashes. Although in this sample, witnessing someone dine and dash was not found to be an important factor, knowing someone who had dined and dashed was related to being more likely to dine and dash, providing partial support for social learning theory.

There are some potential reasons why the social learning elements of imitation and reinforcement were found to be unrelated to dining and dashing. Imitation may not be significant because individuals are exposed to the behaviour of paying for the bill at restaurants. Even if it is not at the table they are at, there is a good chance that individuals on many occasions (and around the time they dined and dashed) witness bills being brought to tables, individuals tapping their credit/debit cards, and giving cash to the staff. When it comes to dining and dashing, individuals might just be exposed to different behavioural models and differing opinions around the same time. This aligns with previous research that has been done on conformity and minority roles showing that dissenting opinions can lead to an individual not conforming (Rees & Wallace, 2014; Asch 1955; Kiesler & Kiesler, 1969).

Regarding the reinforcement element of social learning theory, there is a possibility that the items used to measure reinforcement in this study may not have been the reinforcements experienced by the individual. They may have experienced different reinforcements. For example, the items used to measure reinforcement in the current study focused on being liked,

being perceived as cool, and experiencing excitement. There is a possibility that an individual did not consider these things, but did consider other potential reinforcements (e.g., getting paid to dine and dash, or dining and dashing as a source of humour or entertainment).

The second research question asked was “Are people who are less socially bonded to society more likely to dine and dash?” This question focused on testing social control theory. In this study, the answer to this question is no. None of the bonds listed under social control theory (attachment, commitment, involvement, and belief) were found to be related to dining and dashing. This finding was surprising. There are at least two potential explanations for this finding in addition to the sample limitations that will be discussed later. First, it may be easier to justify this particular act to the self or for others to justify the act to an individual than other crimes. One example of a justification may be pointing out that the server is not paying attention to the table. This is not only to point out that they might not notice if they leave, but that they are not fulfilling the job the individual is paying for. Another justification might be related to the quality of food presented to them. This relates to the second potential reason. Individuals may be more open to dining and dashing because the situation is legally unclear. By this I mean that it may be unclear if dining and dashing is a criminal or contract offence. Individuals might feel justified in dining and dashing because they genuinely believe that the restaurant’s side of the contract was violated. Individuals might not always feel obligated to pay for the service. This is different from many other criminal acts. Going into Walmart and shoplifting or dealing cocaine on the streets might just be more clearly and consistently understood as criminal than dining and dashing.

In relation to social control theory, individuals might not perceive their bonds to society as being jeopardized by dining and dashing. If they believe they are justified in leaving the bill behind because they were unsatisfied with the restaurant’s performance, the findings regarding

the social bonds in this study would make sense. An individual might not see any consequences to their social relationships or future goals. Additionally, they might believe that what they are doing is okay. Regarding the involvement bond of social control theory, it might operate differently with the act of dining and dashing. Arguably, individuals might dine and dash at restaurants because they are busy, though this was not explored in the current study. Individuals might need more time to do other criminal activities. For example, to get and use a drug, individuals have to contact their dealer, go pick up the drug, prepare the drug, and then do the drug. On the other hand, individuals need to eat and going to a restaurant in some cases may be perceived as a quicker option than getting ingredients and cooking food themselves. Then, if they are at a restaurant and have somewhere to be or something to do, they may become frustrated about the time it is taking the restaurant to respond (e.g., cooking the food, bringing the bill). Although not the focus of this thesis, this might explain why the individuals who dined and dashed in my sample tended to start discussing the idea of dining and dashing when they did (78% of these individuals claimed that the idea of dining and dashing was first brought up at some point after the meal or drinks were consumed). If this was the case, it would loop back to the idea of potentially not feeling obligated to pay.

The third research question asked was “Do individuals make a rational consideration of the costs and benefits of dining and dashing before doing so?” This question focused on rational choice theory. In the current study, partial support for this theory was found. In this study, it appears that individuals did consider the costs associated with dining and dashing. This consideration of the costs was associated with individuals being less likely to dine and dash. Not only does this support the theory, but it provides an explanation for the example of Zak’s Diner given in at the beginning of this thesis; they hired security and stopped experiencing dine and

dashes. It was also found that individuals thought about target factors before dining and dashing. This finding potentially relates to what was found about perceived costs. Before individuals dine and dash, it appears that they are likely both considering the consequences of dining and dashing (e.g., paying a fine) as well as how likely it is that they would get caught and have to experience these consequences through crime prevention mechanisms (e.g., staff in sight).

Perceived benefits did not have a significant relationship with dining and dashing. It is possible that this is the case and only costs are thought of in the decision making process. Another potential explanation may come from the type of benefits measured in the survey. Similar to the previous discussion about the reinforcement element of social learning theory, perhaps individuals did rationally consider benefits associated with dining and dashing, but the benefits examined in this study were different from what they perceived as benefits in the moment. For example, perhaps one might consider the benefit of feeling like you have proven a point to the establishment by dining and dashing if the meal or service was horrible. Another benefit that was not measured in the current study that may be relevant is time; if an individual wants to leave the establishment or has somewhere they need to be on time and their server is taking a long time to return with the bill, dining and dashing might save them from being late.

### **Prevalence**

Because the phenomena of dining and dashing has not been explored before in the literature, I will provide a tentative estimate of the extent of the problem. In this sample, individuals who claimed to have dined and dashed were uncommon. 20 out of the 358 participants had dined and dashed before (5.6%). This prevalence rate represents a starting point for future research. However, it may not be an accurate reflection of the actual prevalence of the act amongst students or in the general population. First, university students may be less or more

likely to dine and dash. This would imply that university students may not be similar enough to members of the general public when it comes to crimes like dining and dashing. However, researchers have examined the use of student samples in criminological research and have generally found them to be valid and similar to other types of samples, even though they are unique from the general population (Payne & Chappell, 2008; Wiecko, 2010). Second, because there was no direct benefit to participating in this study since I did not offer an incentive, individuals who dine and dash may have been less inclined to participate. This might be because some individuals who dine and dash might not want to risk releasing information about their behaviour if they are getting nothing in return. Because of this, there is a chance that the prevalence of dine and dashes is substantially higher. Regardless, there is a need for future investigation on this topic as well as related issues which will be discussed.

### **Limitations and Strengths**

There are a number of other limitations to this study that should be addressed. One limitation surrounds the type and size of sample collected. The sample only consisted of 358 University of Waterloo students. Although valuable, this convenience sample is small and is not necessarily representative of the school or elsewhere. Payne and Chappell (2008) point out that some reasons for this include students being generally younger than the general public, having different interests, being part of a different income category, and coming from a specific subculture (p. 185). Being in school, students may also have more to lose and goals to put in jeopardy by participating in crime.

Despite this, choosing to conduct this study with a university student sample has many benefits. Payne and Chappell (2008) point out that conducting research with student samples is beneficial because they can be easily accessed for research and the students can also learn about

the research process. They point out that student samples are valid in criminological research because they are people still and are a good reflection of highly influential culture and attitudes towards crime and punishment (p. 184). In addition to this, other researchers have found student samples to be valid. While comparing students to non-students using survey data from the National Youth Survey on a variety of self-reported offences (e.g., theft, assault, drug use), Wiecko (2010) found no significant differences between the two groups (p. 1189). Despite that there may be some differences between student and general public samples on the surface, they found that using a student sample does not affect validity.

It is also important to discuss the idea of students being in a higher income bracket than the general public, a limitation presented by Payne and Chappell in using student samples. Students come from a variety of economic backgrounds and experience differences in financial stability as a student. Even though individuals in university are gaining a higher education, this does not mean that they are financially stable or come from a higher income bracket. Some even use services such as the student food bank on the University of Waterloo's campus (Feds, 2018). Overall, though, students tend to be from a higher socioeconomic background; a substantial proportion of students come from families that are able to financially support them as they attend university. Socioeconomic status has been an important factor in studies on crime for decades, with higher socioeconomic status usually being associated with lower crime levels (Aaltonen, Kivivuori, and Martikainen, 2011). Because of this, collecting a sample of individuals who are more likely to come from a higher socioeconomic background than the general public in the current study may have led to a lower prevalence of dine and dashes being reported than what may have been in a more general sample.

A second limitation relates to the design of the study as well. Because no longitudinal data were collected, the potential causal relationship between the variables examined and dining and dashing cannot be established. Because the data for the variables that are believed to be the cause and effect for the act of dining and dashing were collected at the same point in time, what is thought to be the temporal ordering for this relationship cannot be modeled.

The third limitation relates to two aspects of the recruitment strategy used. Because there is no way to know which departments forwarded the recruitment e-mail for the survey and how many students received the e-mail, an accurate response rate cannot be calculated. This is problematic because the current study cannot be generalized to the university as a whole. Additionally, there is no way of knowing what programs and faculties participants were drawn from. Responses from all social science students may be different from a sample of engineering students. One example of why this might lead to response bias is that social science students (especially those from psychology and sociology backgrounds) may be familiar with the theories and measurements that were used in the study. This is an issue because some participants may have had ideas about what the researcher was expecting and altered their answers, leading to participant bias. The issue related to knowing the academic backgrounds of students may be avoided in the future by including a survey question asking about which faculty they belonged to. Additionally, there is potential for a social desirability bias in this study. Some individuals may have answered questions in a more socially acceptable way, leading to less accurate portrayals of their true behaviour; by this I mean that some individuals may have been less than honest about their dine and dash behaviour to avoid judgement since it is not a socially acceptable behaviour. The design of the current study avoided this as much as possible by hosting the survey in an anonymous online setting.

Fourth, because there is no prior literature on dining and dashing, many survey items had to be created to measure theoretical elements in relation to dining and dashing; there is then potential that some of these items were not the most optimal way to measure the phenomena. For example, the rational choice items and social learning reinforcement variables were measured by asking how influenced they were by each item. Perhaps the scale should have been more specific to indicate how they were influenced (did it influence them to be more likely to dine and dash or less likely?).

A fifth limitation of this study's research design is that there is no qualitative component. Because of this I cannot provide an in-depth description of individual perceptions of why they dine and dash. A qualitative component to this research would have been beneficial in regards to gaining more of an understanding of why individuals dine and dash, and discovering reasons that may have not been elaborated on or tested in the current study's quantitative component. A sixth limitation is the fact that the current study's analysis only focused on the act of dining and dashing. There were no questions focusing on other criminal behaviour or other potentially important factors (e.g., type of restaurant, location, quality of food or service). Future researchers may want to apply these factors when examining dine and dashes in the future in addition to the ones outlined in the implications section of this chapter.

The last concern I will list here is regarding the survey platform. Because the survey was online and did not allow for a researcher to be present, participants were not able to ask questions for clarification during its completion. Online surveys also present the potential for computer glitches and browser incompatibilities. Additionally, there is a chance that the online platform allowed for more or less honest responses compared to paper copies. On one hand, individuals may have given more honest answers, like Tourangeau and Yan (2007) suggest. This is because

they were made aware that the information they gave could not be traced back to them and they never came face to face with the researchers or gave identifiers (e.g., IP addresses, names, e-mails). On the other hand, participants may not have taken an online survey as seriously as a paper copy or an in-person interview as Meade and Bartholomew (2011) suggest. This may be because they are aware there is less accountability on their behalf, and because there is little to no time prior to the completion of the survey to build rapport between the participants and the researchers. This potential issue was addressed by including a data screening question at the end of the survey on a page by itself.

The decision to do a quantitative online survey on the act of dining and dashing was beneficial not only because I was able to access a wide range of students on campus, but these students were able to complete the survey on their own time and where they felt comfortable. These benefits are not always granted by paper-based surveys. Additionally, by choosing a quantitative research design, I was able to assess basic relationships between the act of dining and dashing and theoretical components from multiple theories in criminology, laying the groundwork for future theoretical direction on this topic.

Despite these limitations, this study is valuable. The biggest strength of this study is that all of the data collected on dine and dashes represents information never before mentioned by literature in the social sciences. This study will better inform future research on dining and dashing, and testing of criminological theories. Not only this, but this study may have relevance for other criminal acts (e.g., software piracy, vandalism, theft). Similar to these other acts, dining and dashing appears to be impersonal in nature. The act also appears to share the same decision making and peer dynamics that have been established on different criminal and deviant acts in the past. Past studies on other criminal acts that were discussed in the literature and theory

review chapter of this thesis have found some similar results to the current study. For example, studies on online piracy have found support for the costs component of rational choice theory (Higgins, 2007) as well as the differential association element of social learning theory (Skinner and Fream, 1997). This study shows that not only should dining and dashing be explored as an individual act, but also potentially as an addition to a group of criminal acts that are impersonal in nature. This study and future research will also encourage more discussion in academia, the restaurant industry, and government on both dine and dashes and related acts (e.g., gas and dash, theft, piracy) and topics, such as how to handle dine and dashes and dine and dashers.

Although the majority of individuals in the sample did not dine and dash, some either did dine and dash or were impacted by dine and dashes in other ways. One may question why the current study did not only survey individuals who dined and dashed. The decision was made to include individuals who had not dined and dashed in the past to allow for a comparison between the two groups and to collect data on server impact (although only briefly discussed in this thesis).

### **Ethical Considerations**

There is no reason to believe that anyone was harmed by participating in this research. Individuals were not asked about personal identifiers such as their name or IP address. The dataset was kept in a password protected encrypted file on a password protected laptop. However, because it was an online survey that participants chose to complete when and where they wanted to, there is a possibility others could have seen participants completing the survey. This was not within our control. The age of participants in the dataset was screened to assure that each participant was above the age of 16 and could give consent to complete the survey. No one under this age participated. There is a possibility that some participants could have experienced

shame or embarrassment from answering questions regarding their criminal activity. However, participants were advised that they did not have to answer questions they did not feel comfortable answering. Additionally, they were given information for counselling services on campus and told that they could contact myself or my supervisor if they had an issue<sup>7</sup>. This study was reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414). No adverse effects were reported.

## **Implications**

### *Future Research*

There are multiple avenues for future research on and related to the topic of dining and dashing. It would be valuable to collect longitudinal data on the topic to allow for tests that respect the hypothesised temporal ordering suggested by the various theories. Qualitative data, such as interviews with individuals who have dined and dashed, would be of value to gain a deeper understanding of why individuals dine and dash as well as how they perceive the act. Regarding research design, I also suggest examining the act of dining and dashing in samples outside of the student population to start to gain more generalizable knowledge on the topic.

Regarding criminological theory testing on the topic of dining and dashing, I suggest further investigating the relationship between rational choice, social learning, and social control theory elements on dining and dashing to see if the findings from this study are replicated in future studies on the topic. Specifically, future researchers may want to examine the theoretical elements of differential association, costs, environmental awareness, and selection of friends in more depth in relation to dining and dashing. For other elements examined in this study, with particular attention paid to the benefits element of rational choice theory, researchers should

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<sup>7</sup> See Appendices 1, 2, and 4 for recruitment and information materials participants were given before and after the survey.

think of other items that may be important in the measurement of these elements in relation to dining and dashing (e.g., the benefit of saving time explored earlier).

Other pathways may be to test various situational and environmental theories, such as routine activities theory or social disorganization theory to understand different dynamics of dine and dashes. For example, one route may be to examine social disorganization theory by analyzing the relationship between dine and dashes and where the restaurants are located. It would be valuable to test if restaurants in areas with more disorganization and less stability experience more dine and dashes. Another route may be to test routine activities theory by examining the relationship between dine and dashes and restaurant factors (e.g., graffiti on tables or in the bathrooms, lack of staff).

There are various topics surrounding dine and dashes that were not analyzed in this study. The following suggested topics would add value to the criminological literature and clarification to the issue. First, it may be important to explore how individuals perceive the act of dining and dashing in Canada and in other countries. It seems to be unclear if everyone views it as a crime or not. It may in fact be more so viewed as a contract issue. Second, researchers should consider examining how and if dine and dash activity differs between types of restaurants. This may be well paired with the exploration of routine activities theory as discussed above. Third, researchers should examine if and how the criminological dynamics of dining and dashing relates to other potentially similar criminal acts that have been explored to date (e.g., online pirating) and those that have not (e.g., gas and dash). It would also be of value to explore how and if the act of dining and dashing and these other acts relate to other criminal acts (e.g., shoplifting, breaking and entering, substance use, assault). Fourth, I suggest that future research on dining and dashing extends beyond the offender. In the survey deployed in the current study,

32% (31/96) of individuals who claimed that they had been a server at some point in their life had been dined and dashed on before. It is then also valuable for the fields of criminology and sociology as well as individuals in the restaurant industry for researchers to explore the impact dine and dashes have on restaurant staff (e.g., servers) and owners. Lastly, I would seek to explore how these individuals handle dine and dashes when they occur, and how often employers are following the law regarding tips and wages of their staff in the event of a dine and dash.

### *Policy and Practices*

This study implies a number of suggestions for policy and restaurant practices. First, it is important for lawmakers to work towards a clearer definition of what dining and dashing is or the form of fraud that this falls under. They should also clearly outline this to the public. Second, it may be valuable to have some sort of tracking mechanism where restaurants keep a record of when a dine and dash happens. By this I only mean to suggest that restaurants should note that a dine and dash occurred when it does, and how the money was accounted for after the fact.<sup>8</sup> Currently, there is little known about the extent of the problem beyond the current research. This suggestion could lead to clearer base prevalence rates of dining and dashing which would be useful for the restaurant industry and future research. This may also create greater accountability of restaurant employers to take action towards preventing dine and dashes, to support future research in this area by having accessible data on the topic, and to make sure restaurant employees wages and tips are protected the way they should be when a dine and dash occurs.

However, it is important to acknowledge that there could be some unintended consequences result from increased surveillance, reporting, and tracking of dine and dashes, especially if the tracking I suggest goes above and beyond simply noting when a dine and dash

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<sup>8</sup> Similar to systems where establishments record when money goes missing out of a cash register or is missing from their inventory. I acknowledge that this suggestion would be difficult to enforce in the restaurant industry. It might be best to first encourage the idea amongst chain restaurant head offices.

occurs and how the money was accounted for. Restaurants might increase surveillance. This could lead to a decrease in privacy of customers. Increasing surveillance and the level of attention paid to dine and dashes might also lead to employers and restaurant staff keeping informal or formal track of descriptions of individuals that they notice dining and dashing in their establishments. These things may then lead to discriminatory practices towards individuals (e.g., seating, serving, cooking, unequal surveillance). This could also lead to servers taking on a policing role that they are not qualified for, whether they are asked to by their employer or not. This issue has been raised by researchers examining other positions where there is opportunity for loss (see Amicelle and Iafolla, 2017 for a discussion of this issue in the context of financial policing).

Due to the limits of the sample used in the current study as well as the absence of literature on dining and dashing, these next suggestions should be viewed with skepticism until more is understood about the act. First, the consequences associated with dining and dashing (social and otherwise) should be increased and these consequences should be communicated to the public. This is because in the current study, individuals who perceived high costs associated with the act were less likely to dine and dash. Some examples to do this might be to increase the probability of getting caught (e.g., security on staff, cameras),<sup>9</sup> to increase fines for individuals who are caught dining and dashing, to talk about dining and dashing as a shameful act, or to make individuals aware that the restaurant will prosecute dine and dashers. However, this could result in increased criminalization and damage to the reputation of a broader cross section of people.

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<sup>9</sup> See the paragraph above for potential consequences of increasing security measures and surveillance.

Second, because it was found that individuals who know others who dine and dash were more likely to dine and dash themselves, I encourage further discussion with individuals starting at a young age about how they can avoid falling into direct and indirect peer pressures.

### **Conclusion**

This thesis explores results from a survey conducted with university students on the act of dining and dashing, and finds partial support for both social learning theory and rational choice theory. Not only did this study add to the literature on these three prominent theories in criminology, but it acted as the first study on dining and dashing in the social sciences. As such, it provided a base description of the prevalence of the phenomena, and it highlights a plethora of other issues related to dining and dashing that go above and beyond offending to be examined in future work (e.g., impact on members of the restaurant industry, how employers are accounting for the missing money, murky legal and definition understandings). Additionally, this study may be relevant in the understanding of other acts and topics in criminology (e.g., peer influence, vandalism, theft, online piracy, offending in general, control and environmental theories) due to this study finding support for similar theoretical elements as the literature on other criminal acts have.

Because the current study focused on the actions of dine and dashers, I therefore cannot offer explanations past this topic; I can only offer potential reasons and ideas for future researchers. The current study was meant to further our understanding of why individuals dine and dash. This is only the start of needed research on dining and dashing. Not only should researchers further explore criminological theories that may explain why individuals dine and dash, but they need to explore related topics (e.g., gas and dashes, the impact of dining and dashing on restaurant staff). Researchers should continue to search out previously unexamined

topics and crimes, no matter how minor or uncommon they might appear at first glance.

Researchers owe it to the public to do this, especially when it occurs globally, there are signs of frustration (like in the case of Zak's Diner and The Bitchy Waiter), and when the social phenomena is a financial cost to many potentially vulnerable individuals.

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## Appendix 1: Recruitment Materials

### Department Request Email

Subject line: Seeking participants for criminology research

Dear (name of undergrad or grad department coordinator),

We are conducting a survey of UW students on dining and dashing. Would it be possible to forward the recruitment email copied in below to all undergraduate/graduate students in your department?

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414).

Thank you very much,

Owen Gallupe, Ph.D.  
Department of Sociology and Legal Studies  
University of Waterloo  
[ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca)

### Recruitment E-mail

My name is Ashley Ryan and I am a master's student in the Department of Sociology and Legal Studies at the University of Waterloo under the supervision of Dr. Owen Gallupe. This study, Dine and Dash: A Test of Criminological Theory, is being conducted for a portion of my thesis. The main objective of this research study is to try to better understand the behaviours and attitudes associated with dining and dashing. We are currently seeking volunteers to participate in this study. You may participate in this study regardless of whether or not you have ever dined and dashed. Your help in this research would be greatly appreciated.

If you decide to participate, you will be asked to complete an online survey that should take approximately 15 minutes to complete. Your answers will be anonymous. The questions you will be asked will focus on your experiences relating to dine and dashes. For example, you may be asked about the behaviour of your friends or how many times you have dined and dashed before.

Participation in this study is completely voluntary.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414).

If you have any additional questions about participation in this study, please contact myself at [alryan@uwaterloo.ca](mailto:alryan@uwaterloo.ca). You can also contact my supervisor, Dr. Owen Gallupe, at [ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca) or 519-888-4567 ext. 33361.

You must be an undergraduate or graduate student at the University of Waterloo to participate in this study.

If you would like to participate, please proceed to the following link for more information about what your participation will involve: <https://dineanddash.limequery.com/index.php/223318/lang-en>

Sincerely,

Ashley Ryan

Department reminder e-mail

Subject line: Seeking participants for criminology research

Dear (name of undergrad or grad department coordinator),

We are conducting a survey of UW students on dining and dashing. If you forwarded the original recruitment e-mail, thank you very much! It is greatly appreciated. Would it be possible to forward the reminder e-mail copied in below to all undergraduate/graduate students in your department? No further messages will be sent regarding this study.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414).

Thank you very much,

Owen Gallupe, Ph.D.  
Department of Sociology and Legal Studies  
University of Waterloo  
[ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca)

Second recruitment/reminder e-mail

This is a reminder message about a survey I am conducting. My name is Ashley Ryan and I am a master's student in the Department of Sociology and Legal Studies at the University of Waterloo under the supervision of Dr. Owen Gallupe. This study, Dine and Dash: A Test of Criminological Theory, is being conducted for a portion of my thesis. The main objective of this research study is to try to better understand the behaviours and attitudes associated with dining and dashing. We are currently seeking volunteers to participate in this study. You may participate in this study regardless of whether or not you have ever dined and dashed. Your help in this research would be greatly appreciated. If you have already participated in this study, you can disregard this message and we thank you very much!

If you decide to participate, you will be asked to complete an online survey that should take approximately 15 minutes to complete. Your answers will be anonymous. The questions you will be asked will focus on your experiences relating to dine and dashes. For example, you may be asked about the behaviour of your friends or how many times you have dined and dashed before.

Participation in this study is completely voluntary.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414).

If you have any additional questions about participation in this study, please contact myself at [alryan@uwaterloo.ca](mailto:alryan@uwaterloo.ca). You can also contact my supervisor, Dr. Owen Gallupe, at [ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca) or 519-888-4567 ext. 33361.

You must be an undergraduate or graduate student at the University of Waterloo to participate in this study.

If you would like to participate, please proceed to the following link for more information about what your participation will involve: <https://dineanddash.limequery.com/index.php/223318/lang-en>

Sincerely,

Ashley Ryan

Professor Learn Request Email

Subject line: Seeking participants for criminology research

Dear (name of professor),

We are conducting a survey of UW students on dining and dashing. Would it be possible to post the study information copied in below to your undergraduate and graduate Learn course pages for students to see? We would really appreciate it.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414).

Thank you very much,

Owen Gallupe, Ph.D.  
Department of Sociology and Legal Studies  
University of Waterloo  
[ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca)

## Learn post

My name is Ashley Ryan and I am a master's student in the Department of Sociology and Legal Studies at the University of Waterloo under the supervision of Dr. Owen Gallupe. This study, Dine and Dash: A Test of Criminological Theory, is being conducted for a portion of my thesis. The main objective of this research study is to try to better understand the behaviours and attitudes associated with dining and dashing. We are currently seeking volunteers to participate in this study. You may participate in this study regardless of whether or not you have ever dined and dashed. Your help in this research would be greatly appreciated.

If you decide to participate, you will be asked to complete an online survey that should take approximately 15 minutes to complete. Your answers will be anonymous. The questions you will be asked will focus on your experiences relating to dine and dashes. For example, you may be asked about the behaviour of your friends or how many times you have dined and dashed before.

Participation in this study is completely voluntary.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414).

If you have any additional questions about participation in this study, please contact myself at [alryan@uwaterloo.ca](mailto:alryan@uwaterloo.ca). You can also contact my supervisor, Dr. Owen Gallupe, at [ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca) or 519-888-4567 ext. 33361.

You must be an undergraduate or graduate student at the University of Waterloo to participate in this study.

If you would like to participate, please proceed to the following link for more information about what your participation will involve: <https://dineanddash.limequery.com/index.php/223318/lang-en>

Sincerely,

Ashley Ryan

## Appendix 2: Survey Information Page

### Title of Project: Dine and Dash: A Test of Criminological Theory

You are invited to participate in a research study conducted by Ashley Ryan, under the supervision of Dr. Owen Gallupe in the Department of Sociology and Legal Studies of the University of Waterloo, Canada. The objective of this research study is to try to better understand the behaviours and attitudes associated with dining and dashing. You may participate in this study regardless of whether or not you have ever dined and dashed. This study is being conducted as part of a Master's thesis.

If you decide to participate, you will be asked to complete an online survey that should take you approximately 15 minutes to complete. Your answers will be anonymous. The questions you will be asked will focus on your experiences relating to dine and dashes. For example, you may be asked about the behaviour of your friends or how many times you have dined and dashed before. Participation in this study is completely voluntary.

It is important for you to know that any information that you provide will be considered confidential. You will not be asked to provide your name at any point throughout the survey and no identifying information will be used in any thesis or publication resulting from this study. It is also important to inform you that when information is transmitted over the internet privacy cannot be guaranteed. There is always a risk your responses may be intercepted by a third party (e.g., government agencies, hackers). LimeSurvey is hosting this survey. All functions in LimeSurvey that collect machine identifiers such as IP addresses have been turned off.

You may decline to answer any questions that you do not wish to answer and you can withdraw your participation at any time by not submitting your responses. Please be advised that it will not be possible to withdraw your data once your answers have been submitted. This is because your responses are collected anonymously and the researchers will have no way of knowing which responses belong to you. Additionally, because this is an anonymous survey the researchers have no way of identifying you or getting in touch with you should you choose to tell us something about yourself or your life experiences. Some of the questions you will be asked regarding criminal activity may cause feelings of distress. If you have any questions or concerns relating to this, please contact the researchers (contact information below) or University of Waterloo Counselling Services at 519-888-4567 ext. 32655.

The data collected from this study will be saved in an encrypted, password-protected computer file. The data will be kept for a minimum of 1 year. All records are destroyed according to University of Waterloo policy. You must be an undergraduate or graduate student at the University of Waterloo to participate in this study.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE #22414). If you have any questions for the committee you can contact the Chief Ethics Officer, Office of Research Ethics, at 1-519-888-4567 ext. 36005 or [ore-ceo@uwaterloo.ca](mailto:ore-ceo@uwaterloo.ca)

For all other questions about the study, please contact either Ashley Ryan at [alryan@uwaterloo.ca](mailto:alryan@uwaterloo.ca) or Dr. Owen Gallupe at [ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca) (519-888-4567 ext. 33361). Further, if you would like to receive a copy of the results of this study please contact either investigator.

### Appendix 3: Survey Items<sup>10</sup>

1. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.  
Please choose one of the following:  
I agree to participate \_\_\_  
I do not wish to participate (please close your web browser now)\_\_\_
2. How old are you (current age in years)?  
Please write your answer here \_\_\_
3. What is your gender?  
Please choose only one of the following:  
Male\_\_\_  
Female\_\_\_  
Other-Please specify \_\_\_\_\_
4. What race/ethnicity do you identify with the most (if more than one applies, please select the one you identify with the most)  
Please choose only one of the following:  
White\_\_\_  
Aboriginal (First Nations, Métis, Inuk)\_\_\_  
South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)\_\_\_  
Chinese\_\_\_  
Black\_\_\_  
Filipino\_\_\_  
Latin American\_\_\_  
Arab\_\_\_  
Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian, etc.)\_\_\_  
West Asian (e.g., Iranian, Afghan, etc.)\_\_\_  
Korean\_\_\_  
Japanese\_\_\_  
Other-Please specify \_\_\_\_\_
5. Below is an income scale on which 1 indicates the lowest income group and 10 the highest income group.  
What group do you and your family fall into?  
Please specify the appropriate number, counting all wages, salaries, pensions, and other incomes that come in.  
Income 1 (Lowest income)\_\_\_  
2\_\_\_  
3\_\_\_  
4\_\_\_  
5\_\_\_  
6\_\_\_

---

<sup>10</sup> \*=only individuals who reported dining and dashing before received this question

\*\*=only individuals who reported that they had not dined and dashed before received this question

7\_\_

8\_\_

9\_\_

10 (Highest Income)\_\_

6. In which of the following groups does your total family income, including all sources, fall into?

Please choose only one of the following:

Under \$1,000\_\_

\$1,000 to 2,999\_\_

\$3,000 to 3,999\_\_

\$4,000 to 4,999\_\_

\$5,000 to 5,999\_\_

\$6,000 to 6,999\_\_

\$7,000 to 7,999\_\_

\$8,000 to 9,999\_\_

\$10,000 to 12,499\_\_

\$12,500 to 14,999\_\_

\$15,000 to 17,499\_\_

\$17,500 to 19,999\_\_

\$20,000 to 22,499\_\_

\$22,500 to 24,999\_\_

\$25,000 to 29,999\_\_

\$30,000 to 34,999\_\_

\$35,000 to 39,999\_\_

\$40,000 to 49,999\_\_

\$50,000 to 59,999\_\_

\$60,000 to 74,999\_\_

\$75,000 to \$89,999\_\_

\$90,000 to \$109,999\_\_

\$110,000 to \$129,999\_\_

\$130,000 to \$149,999\_\_

\$150,000 to \$169,999\_\_

\$170,000 or over\_\_

7. The following questions deal with dining and dashing. Dining and dashing is when people use a food and/or beverage service that is expected to be paid for, and leave the premises with no intention of returning to pay.

According to this definition, have you ever dined and dashed? Please remember that all of the answers you provide are completely anonymous.

No\_\_

Yes\_\_

8. Do you know someone else who has dined and dashed?

Please choose only one of the following:

No\_\_

Yes\_\_

9. How many times have you dined and dashed in your life?\*

Please choose only one of the following:

1 time\_\_

2 times\_\_

3 times\_\_

4 times\_\_

5+ times\_\_

10. Have you ever been caught for dining and dashing?\*

Please choose only one of the following:

No\_\_

Yes\_\_

11. Did you get caught for your most recent dine and dash?\*

Please choose only one of the following:

No\_\_

Yes\_\_

12. Who caught you?\*

Please write your answer here\_\_\_\_\_

13. NOT COUNTING your most recent dine and dash, how many other times have you been caught for dining and dashing?\*

Please choose only one of the following:

0 times (I have never been caught/haven't dined and dashed more than once)\_\_

1 time\_\_

2-5 times\_\_

6-10 times\_\_

More than 10 times\_\_

14. NOT COUNTING your most recent dine and dash, how many other times have you gotten away with dining and dashing?\*

Please choose only one of the following:

0 times (I have never been caught/haven't dined and dashed more than once)\_\_

1 time\_\_

2-5 times\_\_

6-10 times\_\_

More than 10 times\_\_

15. How old were you when you first dined and dashed?\*

Please write your answer here\_\_\_\_\_

The following questions deal with your *most recent* dine and dash.

16. When was your last (most recent) dine and dash?\*
- Please choose only one of the following:
- Within the last week\_\_
- Between 1 week and 1 month ago\_\_
- More than 1 month ago but less than 6 months ago\_\_
- Between 6 months and 1 year ago\_\_
- More than 1 year ago but less than 5 years ago\_\_
- More than 5 years ago\_\_
17. How old were you at your last dine and dash?\*
- Please write your answer here\_\_\_\_\_
18. Can you please briefly explain why you dined and dashed that specific time (your last dine and dash)?\*
- Please write your answer here \_\_\_\_\_
19. Can you please briefly explain why you have never dined and dashed?\*
- Please write your answer here\_\_\_\_\_
20. Did you think you were going to get caught for your most recent dine and dash?\*
- Please choose only one of the following:
- No\_\_
- Yes\_\_
21. How many people were you with during your most recent dine and dash?\*
- Please choose only one of the following:
- No one (I was by myself)\_\_
- I was with 1 other person\_\_
- I was with 2-5 people\_\_
- I was with 6-10 people\_\_
- I was with more than 10 people\_\_
22. Out of the people you were with during your most recent dine and dash, how many of them also dined and dashed in addition to yourself?\*
- Please choose only one of the following:
- No one else dined and dashed with me\_\_
- 1 other person dined and dashed with me\_\_
- 2-5 other people dined and dashed with me\_\_
- 6-10 other people dined and dashed with me\_\_
- More than 10 people dined and dashed with me\_\_
23. Who first brought up the idea (e.g. vocally, physically) of dining and dashing at your most recent dine and dash?\*
- Please choose only one of the following:
- Myself\_\_

- A friend\_\_
- An acquaintance (someone you know, but aren't friends with)\_\_
- Someone you were dating\_\_
- Your spouse\_\_
- Your parent/guardian\_\_
- Another family member that is not your parent or spouse\_\_
- A stranger\_\_
- Other-Please specify\_\_\_\_\_

24. How did this person communicate the idea of dining and dashing?\*

Please choose all that apply:

- Physically dined and dashed\_\_
- Said they were going to dine and dash\_\_
- Told someone else that they should dine and dash\_\_
- Told you that you should dine and dash\_\_
- Asked if the group should dine and dash\_\_
- Other-Please specify\_\_\_\_\_

25. How likely are you to dine and dash in the future?

Please choose only one of the following:

- Very unlikely\_\_
- Unlikely\_\_
- Neither unlikely or likely\_\_
- Likely\_\_
- Very likely\_\_

26. If you were to dine and dash in the future, how likely is it that you think you would get caught?

Please choose only one of the following:

- Very unlikely\_\_
- Unlikely\_\_
- Neither unlikely or likely\_\_
- Likely\_\_
- Very likely\_\_

27. Did you feel bad about dining and dashing (specifically for your last dine and dash? Why or why not?\*

Please choose only one of the following

- No\_\_
- Yes\_\_
- Make a comment of your choice here\_\_\_\_\_

28. Have you ever seen someone else get away with a dine and dash?

Please choose only one of the following:

- No\_\_
- Yes\_\_

29. What did you see?  
Please write your answer here\_\_\_\_\_
30. Have you ever seen someone else dine and dash and not dined and dashed yourself that same day?  
Please choose only one of the following:  
No\_\_  
Yes\_\_
31. Who have you seen dine and dash in the past? Please only count each person once when selecting categories (e.g. do not select both “friend” and “family member” to represent one cousin)  
Please choose all that apply:  
No one\_\_  
A friend\_\_  
An acquaintance (someone you know, but aren’t friends with)\_\_  
Someone you were dating\_\_  
Your spouse\_\_  
Your parent/guardian\_\_  
Another family member that is not your parent or spouse\_\_  
A stranger\_\_  
Other-Please specify\_\_\_\_\_
32. Have you ever been verbally encouraged to dine and dash?  
Please choose only one of the following:  
No\_\_  
Yes\_\_
33. Who has verbally encouraged you to dine and dash? Please only count each person once when selecting categories (e.g. do not select both “friend” and “family member” to represent one cousin)  
Please choose all that apply:  
A friend\_\_  
An acquaintance (someone you know, but aren’t friends with)\_\_  
Someone you were dating\_\_  
Your spouse\_\_  
Your parent/guardian\_\_  
Another family member that is not your parent or spouse\_\_  
A stranger\_\_  
Other-Please specify\_\_\_\_\_
34. When was the idea of dining and dashing first brought up during your most recent dine and dash?\*
- Please choose only one of the following:  
Before entering the restaurant/bar/etc/\_\_\_  
After entering, but before ordering\_\_\_

During the meal/drinks\_\_  
After the meal/drinks, but before getting the bill\_\_  
After being given the bill\_\_  
Other-Please specify\_\_\_\_\_

35. How much did your table dine and dash on during your most recent dine and dash?\*

Please choose only one of the following:

\$1-\$50\_\_

\$51-\$100\_\_

\$101-\$150\_\_

\$151-\$200\_\_

\$201+\_\_

36. How much out of this amount did you individually owe? (e.g. 05=None of it, 50%=Half of it, 100%=All of it)\*

Please write your answer here (0%-100%)\_\_\_\_\_

37. Have you ever been a server in a restaurant/pub/etc.?

Please choose only one of the following:

No\_\_

Yes\_\_

38. Are you currently a server?

Please choose only one of the following:

No\_\_

Yes\_\_

39. Has anyone ever dined and dashed on you?

Please choose only one of the following:

No\_\_

Yes\_\_

40. How many times have you been dined and dashed on?

Please write your answer here\_\_\_\_\_

41. Out of all these times, how many times have you paid for the bill the dine and dashers left behind?

Please write your answer here\_\_\_\_\_

We would like to reiterate how much we appreciate your participation. You are getting close to the end. The remaining questions should only take a few more minutes. Thank you!

42. How much do you agree with the following statements? (Strongly agree, Agree, Neither agree or disagree, Disagree, and Strongly disagree were the options for each)

Choose the appropriate response for each item:

I often act on the spur of the moment without stopping to think  
When I am really angry, other people better stay away from me  
I sometimes find it exciting to do things that may be dangerous  
I don't devote much thought and effort to preparing for the future  
Sometimes I will take a risk just for the fun of it  
I often try to avoid things that I know will be difficult  
I never think about what will happen to me in the future  
I lose my temper pretty easily

43. How much do you agree with the following statements? (Strongly agree, Agree, Neither agree or disagree, Disagree, and Strongly disagree were the options for each)

Choose the appropriate response for each item:

Most things people call crime don't really hurt anyone

I have respect for the police

Rules were made to be broken

It's okay to get around the law if you can get away with it

The laws we have make society a better place

In general, dine and dashes are acceptable

44. How much do you agree with the following statements? (Strongly agree, Agree, Neither agree or disagree, Disagree, and Strongly disagree were the options for each)

Please choose the appropriate response for each item:

I usually finish my class assignments on time

I try hard in school

I have put in a lot of time and effort to ensure that I succeed in university

It's important to me that I have a good job in the future

45. How much do you agree with the following statements? (Strongly agree, Agree, Neither agree or disagree, Disagree, and Strongly disagree were the options for each)

Please choose the appropriate response for each item:

I talk over future plans with my parent(s)/parental figure(s)

I talk over future plans with my best friend

I would like to be the kind of person my mother or father/parental figure is

I would like to be the kind of person my best friend is

I share my thoughts and feelings with my parent(s)/parental figure(s)

I share my thoughts and feelings with my best friend

My parent(s)/parental figure(s) seem to understand me

My best friend seems to understand me

I am very close with my parent(s)/parental figure(s)

I am very close with my best friend

I have lots of close friends

People close to me would be disappointed if they discovered I had committed a crime

46. On average, how often do you participate in organized sports (e.g., basketball) or other organized physical activities (e.g., yoga)?

Please choose only one of the following:

Never or almost never\_\_

A few times a year\_\_

Two or three times a month\_\_

Once a week\_\_

47. On average, how often do you attend religious services?

Please choose only one of the following:

Never or almost never\_\_

A few times a year\_\_

Two or three times a month\_\_

Once a week\_\_

48. How often do you participate in clubs or other activity groups outside of school?

Please choose only one of the following:

Never or almost never\_\_

A few times a year\_\_

Two or three times a month\_\_

Once a week\_\_

49. How many hours in an average week would you say you participate in organized activities (e.g., sports, volunteer work, association or club meetings)?

Please write your answer here\_\_\_\_\_

50. How many hours in an average week do you spend in class or doing graduate student research or thesis preparation?

Please write your answer here\_\_\_\_\_

51. How many hours in an average week do you spend at paid employment?

Please write your answer here\_\_\_\_\_

52. During your most recent dine and dash, how much did the following things influence your decision? (Not at all influential, Not influential, Neither influential or not influential, influential, very influential were given as options)\*

Please choose the appropriate response for each item:

There were security cameras that I was aware of

There was a host/hostess near the restaurant entrance/exit

I was sitting close to an exit

The restaurant was busy  
 There was restaurant staff within site  
 There was a bouncer or security officer at the restaurant  
 A manager was circulating through the establishment  
 I thought the people I was with would like me more if I dined and dashed  
 I thought I would save money by dining and dashing  
 I thought other people I was not with at the time would like me more for dining and dashing  
 I thought I would be perceived as cool by at least one person for dining and dashing  
 I thought I would feel excitement from dining and dashing  
 I thought it would be funny or entertaining to dine and dash  
 I thought I would get caught by restaurant staff for dining and dashing  
 I thought I would get in trouble by the police for dining and dashing  
 I thought I would have to pay a fine for dining and dashing  
 I thought a friend would be mad or upset with me for dining and dashing  
 I thought a family member would be mad or upset with me for dining and dashing  
 I thought I would feel mad or upset with myself for dining and dashing

53. The last time you had the opportunity to dine and dash, how much did the following things influence your decision to dine and dash or not? (Not at all influential, Not influential, Neither influential or not influential, influential, very influential were given as options)\*

Please choose the appropriate response for each item:

There were security cameras that I was aware of  
 There was a host/hostess near the restaurant entrance/exit  
 I was sitting close to an exit  
 The restaurant was busy  
 There was restaurant staff within site  
 There was a bouncer or security officer at the restaurant  
 A manager was circulating through the establishment  
 I thought the people I was with would like me more if I dined and dashed  
 I thought I would save money by dining and dashing  
 I thought other people I was not with at the time would like me more for dining and dashing  
 I thought I would be perceived as cool by at least one person for dining and dashing  
 I thought I would feel excitement from dining and dashing

I thought it would be funny or entertaining to dine and dash

I thought I would get caught by restaurant staff for dining and dashing

I thought I would get in trouble by the police for dining and dashing

I thought I would have to pay a fine for dining and dashing

I thought a friend would be mad or upset with me for dining and dashing

I thought a family member would be mad or upset with me for dining and dashing

I thought I would feel mad or upset with myself for dining and dashing

54. How much do you agree with the following statement?

I would rather hang out with people who dine and dash.

Please choose only one of the following:

Strongly agree\_\_

Agree\_\_

Neither agree or disagree\_\_

Disagree\_\_

Strongly disagree\_\_

55. How true are the answers you provided in this survey? Please remember that your responses are completely anonymous.

Please choose only one of the following:

All or mostly true to the best of my knowledge\_\_

Not true\_\_

56. Is there anything else you would like to say about dine and dashes in general or about your experiences with people who have dined and dashed? Please explain.

Please write your answer here\_\_\_\_\_

#### Appendix 4: Survey End Page

Thank you very much for taking the time to participate in this study, Dine and Dash: A Test of Criminological Theory. The information you provided will help to better understand why people dine and dash. This is useful to guide future research in criminology and policy in the restaurant industry.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 22414). If you have any questions for the committee you can contact the Chief Ethics Officer, Office of Research Ethics, at 1-519-888-4567 ext. 36005 or [ore-ceo@uwaterloo.ca](mailto:ore-ceo@uwaterloo.ca)

The data you provided is anonymous and will be stored in an encrypted file on a password-protected computer. Please remember that any data pertaining to you as an individual participant will be kept confidential. Once all the data are collected and analyzed for this project, I plan on sharing this information with the research community through conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or would like a summary of the results, please e-mail one of the researchers and when the study is completed, anticipated by August 2018, I will send you the information. In the meantime, if you have any questions or concerns about the study, please do not hesitate to contact me at [alryan@uwaterloo.ca](mailto:alryan@uwaterloo.ca) or my supervisor, Dr. Owen Gallupe at [ogallupe@uwaterloo.ca](mailto:ogallupe@uwaterloo.ca) (519-888-4567 ext. 33361). You may also contact Counselling Services at 519-888-4567 ext. 32655.

Appendix 5: Missingness of Variables used in Analysis

	n	% missing
Prior dine and dash	358	0
Controls:		
Gender (1=male)	358	0
Age	349	2.5
Race (1=non-white)	358	0
SES	350	2.2
Self-control	356	0.5
Selection of friends	358	0
Social learning:		
Differential association	358	0
Imitation (1=have seen)	356	0.5
Reinforcement	347	3.1
Social control:		
Attachment	357	0.3
Commitment	357	0.3
Involvement	349	2.5
Belief	357	0.3
Rational choice:		
Costs	344	3.9
Benefits	346	3.4
Environmental awareness	341	4.7