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# Quantitative Analysis of Differences Between Adaptors and Innovators for Decriminalization Attitudes

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# Walden University

College of Social and Behavioral Sciences

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2018

Abstract

Quantitative Analysis of Differences Between Adaptors and Innovators for

Decriminalization Attitudes

by

Aaron D. Solomon

MFS, National University, 2007

BS, Excelsior University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

Walden University

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## Abstract

Kirton's adaption-innovation theory suggests adaptors and innovators have different approaches to decision-making. The relationship between thinking styles in conjunction with decriminalization has not been investigated thoroughly, and this study addressed the relationship based on thinking styles and 6 demographics (race, age, gender, religion, education, and geographical location). The main research question examined whether innovators and adaptors have different attitudes about decriminalization. The hypotheses were tested with: (a) *t* tests to compare responses, (b) analysis of variance for comparing multiple groups and investigating moderator effects, and (c) correlation tests to determine whether Kirton's adaption-innovation inventory scores are associated with decriminalization attitudes. A correlational research design and 4 research questions were used to understand the relationships utilizing 123 participants. Results found that innovators are more open to the support of drug use and prostitution decriminalization while adaptors perceived danger and social threat of this step. Out of 6 variables analyzed, 3 (age, gender, and religion) significantly moderated the relationships between adaptor and innovator attitudes to decriminalization of prostitution, drug use, and drug possession. Race, education, and geographical location were found to be insignificant factors. The body of work is important, as there is a lack of empirical data on how thinking styles may affect people's perceptions of the legal status of certain activities. The findings of this study are relevant to the process of developing legal policies through legislative actions, as public opinions are considered for specific policy issues. More importantly, it highlights that people's perceptions regarding ambiguous social issues are complex and formed under the influence of numerous factors.

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## Dedication

This work is dedicated to my friend and former coworker, Rick A. Ulbright, who paid the ultimate sacrifice in 2004 after a mortar attack at Kirkuk Air Base, Iraq. Rick's steadfast determination, irreverent sense of humor, coupled with his fundamental belief in getting to the steadfast truth has always motivated me to go further.

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## Chapter 1: Introduction to the Study

### **Introduction**

According to Kirton's (1984) adaption-innovation theory, people are innovators or adaptors based on their thinking styles. Innovators prefer solving problems using creative solutions that might contradict traditional systems and frameworks, whereas adaptors prefer looking for solutions within known systems and frameworks. The purpose of this dissertation is to present the research design that will be used to investigate how decriminalization attitudes about prostitution, the use of illicit substances, and other criminal activities depend on adaptive and innovative thinking styles.

This study may be important for social change because the adaption-innovation theory has not been tested in the field of forensic psychology, even though learning more about the relationship between cognitive factors and public attitudes about decriminalization policies has had significant practical implications for policy development. For example, Cunningham and Shah (2014) found decriminalizing prostitution is associated with a reduced prevalence of rape and venereal disease, but the public could be against decriminalizing prostitution because of the social stigma associated with sex work. If policy makers take into consideration how psychological factors such as thinking styles are related to public attitudes about decriminalization policies, they will be able to develop policies that protect vulnerable populations and gain public approval.

This chapter contains the background of the problem that will be investigated and the purpose of the study. The research questions and the hypotheses tested to answer the

research questions are also provided. The theoretical and conceptual frameworks and the methodology that will be used are introduced. All terms used throughout will be defined before discussing the key assumptions, delimitations, boundaries, and limitations of the study. Finally, the significance of conducting a study to investigate the relationship between adaptive and innovative thinking styles and decriminalization attitudes is discussed before the summary at the end of the chapter.

### **Background**

The effectiveness of decriminalization for improving public safety and social well-being has been demonstrated in the scientific literature. Lutnick and Cohan (2009) found female sex workers believed decriminalization of sex work would facilitate development of an environment that would offer them legal protection and safe working conditions. According to Cunningham and Shah (2014), the decriminalization of indoor prostitution in Rhode Island resulted in a reduction of reported rape by 31% and a reduction of gonorrhea by 39%. The Dutch coffee shop model reduces the risk for using marijuana as a gateway drug was reduced because the soft drug market was separated from the hard drug market (MacCoun, 2011). Although a decrease in the number of marijuana users was not observed by Bretteville-Jensen and Williams (2011) after the decriminalization of marijuana in several Australian states, it is possible that decriminalization has had important implications in healthcare. The decriminalization of drugs creates new possibilities for improving the well-being of drug users; identifying substance abuse disorders and treating them successfully is more likely when a person does not have to fear criminal prosecution.



Although the positive effects of decriminalization have been researched and reported, attitudes about decriminalization still depend on various factors. Dillon (2014) found that decriminalization attitudes were significantly different within religious groups based on the racial and ethnic background of the participants. According to Morton, Klein, and Gorzalka (2012), men are significantly more likely than women to support legalization of activities such as prostitution and marijuana use. Jakobsson and Kotsadam (2011) found participants from Norway were more likely to support prostitution decriminalization than participants from Sweden. Nakagawa and Akpınar-Elci (2014) found medical students' attitudes towards sex workers depended on which country they were from because some countries included in the study had already legalized prostitution. Another example of the influence of geographic location included 63% of law enforcement officers in North Carolina agreeing syringe decriminalization would be good for public health (Davis et al., 2014). In contrast, local health jurisdictions in California experienced several barriers to implementing nonprescription syringe sales from law enforcement agencies (Rose et al., 2010).

Chambers (2011) and Patrick (2012) highlighted the significance of religion, cultural differences, and political affiliation in determining decriminalization attitudes. Nielsen (2010) found that attitudes towards drugs were subject to period effects. For example, during the second Bush administration, respondents were more likely to report that more money needs to be spent to resolve drug addiction, even though previous trends suggested that those views had been decreasing prior to the Bush administration.

Nevertheless, political trends and their influence cannot be neglected when exploring decriminalization attitudes.

Although several studies were conducted to investigate the relationship between demographic variables and decriminalization attitudes, previous researchers did not conduct studies to determine if differences in decriminalization attitudes among individuals depend on adaptive or innovative thinking styles. Understanding how thinking styles affect decriminalization attitudes is important because decriminalization is a more viable long-term solution to lowering crime rates and improving social well-being, but it is less common than criminalization, which can be considered the traditional approach to regulating social norms and behaviors. Therefore, it is more likely that thinking styles of policy makers, as well as public expectations, determine whether they choose decriminalization as an innovative approach or criminalization as the traditional approach to solving problems associated with crime.

Decriminalization attitudes can significantly affect the process of decriminalization, even when it is aimed at improving public health and safety. For example, Rose et al. (2010) found that local health jurisdictions in California experienced opposition from law enforcement agencies, pharmacies, and political parties when they implemented nonprescription syringe sales. The willingness to promote decriminalization tenets is significantly different between innovators and adaptors because of the differences in their thinking styles and decision-making approaches (Kirton, 1984). Understanding the psychology behind decriminalization attitudes is necessary for

developing policies, and improving public health and safety that receive as little opposition as possible.

### **Problem Statement**

Although several studies were conducted to investigate the relationship between demographic variables and decriminalization attitudes, the relationship between adaptive and innovative thinking styles and decriminalization attitudes has not been investigated. It has been established that religious affiliation, political views, cultural differences, and sociodemographic variables determined decriminalization attitudes within most populations around the globe (Dillon, 2014; Jakobsson & Kotsadam, 2011; Nakagawa & Akpınar-Elci, 2014; Patrick, 2012). None of those factors explained how psychological factors, such as thinking styles, affected decriminalization attitudes.

According to the adaption-innovation theory, thinking styles affect the decision-making and problem-solving approaches people use, and thinking styles can be either innovative or adaptive (Kirton, 1984). Innovators are people who use the innovative thinking style, so they challenge the rules and do things differently. Adaptors use the adaptive thinking style, so they are focused on following existing rules and traditional ways for resolving problems. According to Kirton (1984), adaptors will rarely challenge rules unless they are certain of strong support for change, but innovators will often challenge existing systems to find solutions if they think the system can be improved. Even though the positive effects of decriminalization on public health have been confirmed by various researchers (Cunningham & Shah, 2014; Hughes & Stevens, 2012; Matheson et al., 2013), there can be a gap between the legal status of certain activities

and public attitudes. Therefore, understanding how adaptive and innovative thinking styles affect decriminalization attitudes is the first step to developing decriminalization policies that improve public health and safety while taking in account the needs of both adaptors and innovators.

### **Purpose of the Study**

The purpose of this study is to explore the relationship between adaptive and innovative thinking styles and decriminalization attitudes using a quantitative paradigm. Specifically, the purposes of this study are: (a) to compare the decriminalization attitudes of innovators and adaptors, (b) to correlate the Kirton Adaption-Innovation questionnaire scores with decriminalization attitudes, and (c) to describe the relationship between demographic factors and decriminalization attitudes with innovative and adaptive thinking styles as moderator variables.

The independent variables used in this study are thinking styles and demographic factors. Thinking styles can be used as a continuous independent variable in certain tests such as correlation, but will mainly be used in this research as a categorical variable with two levels: adaptors and innovators. Adaptors are those individuals with a Kirton Adaption-Innovation questionnaire score below the population mean of 96, whereas innovators are those with a score higher than the aforementioned population mean. A more detailed description of the Kirton Adaption-Innovation questionnaire is provided in Chapter 3: Methodology. Demographic variables collected in this study include gender, age, education level, race, religion, and geographic location. The rationale for the selection of those variables as independent variables are the results of previous studies,

which showed significant association between demographics and decriminalization attitudes, and those studies will be discussed in the following chapter titled Literature Review.

Decriminalization attitudes are the dependent variable of this study, and quantitative data will be obtained by a survey. On a scale from 1 to 10, the participants will state whether they support or oppose the decriminalization of certain activities such as abortion, prostitution, drug use, polygamy, and other activities. On a scale from 1 to 10, they will also agree or disagree with various statements concerning the outcomes of prostitution and drug use decriminalization. Drug use and prostitution decriminalization attitudes warrant additional investigation because the decriminalization of those two activities has been researched extensively, whereas other activities receive much less attention from researchers. The statements used to collect quantitative data in the survey on the topics of prostitution and drug use decriminalization were based on the findings of previous researchers, and those findings, are discussed in greater detail in the following Chapter 2: Literature Review.

### **Research Questions and Hypotheses**

The main research question investigated in the study was: Do innovators and adaptors have different attitudes about decriminalization? A total of three specific research questions were developed, and one or more corresponding alternative hypotheses ( $H_a$ ) and a null hypothesis ( $H_0$ ) were developed for each RQ.

Research Question 1: Are innovators more likely to have positive attitudes about decriminalization compared to adaptors?

*H<sub>0</sub>1*: Innovators are not more likely to have positive attitudes about decriminalization compared to adaptors.

*H<sub>a</sub>1*: Innovators are more likely to have positive attitudes about decriminalization compared to adaptors.

Research Question 2: Do thinking styles, moderate the relationship between demographic variables and decriminalization attitudes?

*H<sub>0</sub>2*: Adaptive or innovative thinking styles do not significantly moderate the relationship between gender and decriminalization attitudes.

*H<sub>a</sub>2*: Adaptive or innovative thinking styles significantly moderate the relationship between gender and decriminalization attitudes.

*H<sub>0</sub>2.1*: Adaptive or innovative thinking styles do not significantly moderate the relationship between religion and decriminalization attitudes.

*H<sub>a</sub>2.1*: Adaptive or innovative thinking styles significantly moderate the relationship between religion and decriminalization attitudes.

*H<sub>0</sub>2.2*: Adaptive or innovative thinking styles do not significantly moderate the relationship between race and decriminalization attitudes.

*H<sub>a</sub>2.2*: Adaptive or innovative thinking styles significantly moderate the relationship between race and decriminalization attitudes.

*H<sub>0</sub>2.3*: Adaptive or innovative thinking styles do not significantly moderate the relationship between education level and decriminalization attitudes.

*H<sub>a</sub>2.3*: Adaptive or innovative thinking styles significantly moderate the relationship between education level and decriminalization attitudes.

*H<sub>0</sub>2.4*: Adaptive or innovative thinking styles do not significantly moderate the relationship between age and decriminalization attitudes.

*H<sub>a</sub>2.4*: Adaptive or innovative thinking styles significantly moderate the relationship between age and decriminalization attitudes.

*H<sub>0</sub>2.5*: Adaptive or innovative thinking styles do not significantly moderate the relationship between geographic locations and decriminalization attitudes.

*H<sub>a</sub>2.5*: Adaptive or innovative thinking styles significantly moderate the relationship between geographic locations and decriminalization attitudes.

Research Question 3: Do thinking styles affect the beliefs associated with the outcomes of prostitution decriminalization?

*H<sub>0</sub>3*: Innovators are not more likely to have positive beliefs about the outcomes of prostitution decriminalization compared to adaptors.

*H<sub>a</sub>3*: Innovators are significantly more likely to have positive beliefs about the outcomes of prostitution decriminalization compared to adaptors.

Research Question 4: Do thinking styles affect the beliefs associated with the outcomes of recreational drug use decriminalization?

*H<sub>0</sub>4*: Innovators are not more likely to have positive beliefs about the outcomes of drug decriminalization compared to adaptors.

*H<sub>a</sub>4*: Innovators are significantly more likely to have positive beliefs about the outcomes of drug decriminalization compared to adaptors.

### **Theoretical and Conceptual Framework for the Study**

Kirton's (1984) adaption-innovation theory will be used as the theoretical framework. According to the adaption-innovation theory, people can be described as adaptors or innovators based on their thinking styles and approaches to problem-solving. It is expected that adaptors, or traditional thinkers, will oppose decriminalization and support traditional approaches, whereas innovators will more likely support decriminalization compared to adaptors due to their tendency to think outside of traditional systems. A more detailed description of both adaptors and innovators is provided in Chapter 2: Literature Review.

The conceptual framework used in this study is Schmoke's (1990) hybrid approach to decriminalization. According to Schmoke's framework, there are three possible approaches and outcomes for solving issues associated with criminal activity. The first approach is criminalization, prohibiting certain activity and creating a variety of criminal activities. It is not recommended because it increases overall criminal activity. For example, black markets, public health issues, and drug-related violence are some side-effects of criminalizing drug use. The second approach is decriminalization, but it depends on the reallocation of resources to the public health system to make the decriminalization effective. For example, the decriminalization of drugs can lead to the reduction of disease transmission via syringes by developing programs for issuing and safe disposal of those items. The third approach is the most recommended: a combination of criminalization and decriminalization efforts by distributing the responsibility between the public health system and the criminal justice system. Most successful



decriminalization efforts used that hybrid approach, which will be further discussed in Chapter 2: Literature Review.

The hybrid approach was a relevant conceptual framework for the study because the adaption-innovation theory does not focus on a specific context and is concerned only with the differences in decision making and problem solving based on thinking styles. Therefore, Schmoke's (1990) approach was used to develop a context for Kirton's (1984) theory. Secondly, the framework was used to inform the development of the survey measuring decriminalization attitudes, which is the dependent variable of the study. According to Schmoke, the primary purpose of decriminalization is to solve problems associated with the criminalization of certain activities (e.g. drug markets) rather than to solve the problematic behavior itself. It is insufficient to determine whether people support decriminalization; their beliefs about the outcomes of decriminalization should be measured, as well, to understand how they perceive the purpose and potential outcomes of decriminalization.

### **Nature of the Study**

A quantitative design was utilized because all variables included in this study can be quantified using either standardized instruments, such as the Kirton Adaption-Innovation inventory for thinking styles, or by conducting a survey for obtaining demographic information and quantifying decriminalization attitudes. The main independent variable in this study is thinking style, which is a categorical variable with two levels: adaptors and innovators. Adaptors are those individuals who prefer to think within traditional frameworks, whereas innovators are individuals who prefer to think about

solutions to problems outside of familiar frameworks. Other important independent variables in this study are demographic variables, id est. gender, age, education level, race, religion, and geographic location. All demographic variables except age, which is a continuous variable, are categorical variables. For example, level of education is defined as a variable with four levels: (a) high school education, (b) general education development (GED), (c) bachelor's degree, or (d) master's degree. The dependent variables are decriminalization attitudes about specific activities, e.g., prostitution, abortion, polygamy, etc., or attitudes about the outcomes of decriminalizing certain activities, e.g., attitude about the possibility that prostitution increases the prevalence of venereal disease.

I measured variables using a sample obtained from the Walden University Participant Pool. All participants lived in the United States. The participant pool used an online bulletin board to connect the researchers and participants, so the sample consisted of Walden faculty members, current students, and former students and a national sample using social media. The data collected used the Kirton Adaption-Innovation inventory online, 32 questions that determined whether an individual was an innovator or adaptor, and a survey that collected the demographic information and decriminalization attitudes with responses on a scale from 1 to 10. For example, a participant could completely oppose (1) or completely support (10) the decriminalization of prostitution. The Kirton-Adaption-Innovation scores was used to group participants as either adaptors or innovators, so it was be possible to compare the decriminalization attitudes between the two groups. Because those scores can also be used as a continuous variable, a correlation

analysis between adaption-innovation scores and the survey results were conducted. The role of demographic variables in moderating the relationship between thinking styles and decriminalization attitudes were investigated using the analysis of variance.

### **Definitions**

The following are definitions of key terms used in this dissertation:

*Adaptors*: People that are focused on following existing rules and traditional ways for resolving problems and will rarely challenge rules unless they are certain of strong support for change (Kirton, 1984, p. 138).

*Adaption-innovation theory*: This theory concentrates on the thinking styles and attitudes in individuals that affect their creativity, decision-making processes, and problem-solving skills (Kirton, 1984).

*Decriminalization*: The legal process of repealing or amending those statutes that make certain activities criminal offenses. That means decriminalized activities are no longer subject to criminal prosecution.

*Geographic location*: This demographic is defined for participant sampling and results within the continental United States as it is broken into four regions as per the United States Census Map (United States Census Bureau, 2013).

*Hybrid approach*: The hybrid approach considers that criminalization has a supportive role in the decriminalization of illegal activities, so the two approaches to resolving legal issues should be combined (Schmoke, 1990).

*Innovators*: Individuals who challenge the rules and conduct themselves differently; however, these people will often challenge existing systems to find solutions if they think the system can be improved (Kirton, 1984, p. 138).

*Legalization*: When a formerly criminal activity is no longer classified as a criminal or civil offense. However, certain regulations may still apply. For example, there may be an upper limit of marijuana possession for personal use, and individuals who exceed the upper limit are in violation of possession laws.

*Partial decriminalization*: Partial decriminalization refers to the process that removes certain activities from criminal laws to facilitate offender processing and fines. For example, if driving under the influence is no longer a criminal activity, the police will be able to process offenders and impose fines immediately.

### **Assumptions**

Three key assumptions inform this study. The first assumption is that participants provided honest answers to the statements listed in the survey. Considering that the surveys are anonymous and cannot be traced back to the participants, it is expected that this assumption is correct.

Second, it was expected that the independent and dependent variables are in a linear relationship. The analysis of variance as a statistical model incorporated in the general linear model, so linearity is one of the assumptions for conducting an analysis of variance to explore the relationships between categorical variables with two or more levels and dependent variables. If this assumption proved false, the data analysis would be modified to include a nonparametric alternative to the analysis of variance. For

example, the Kruskal Wallis test can be used instead of a one-way analysis or a Sheirer-Ray-Hare extension of the Kruskal Wallis test can be used instead of a two-way analysis.

Third, it was assumed the sample would not contain any significant outliers that would skew the data. If the data is skewed, it would not be possible to conduct tests that assumed a normal distribution of data. Excluding outliers to improve the distribution of data is an unethical practice, so if this assumption proved false, nonparametric tests or data transformations, e.g., log-transformation, would have been used to analyze the data.

### **Scope and Delimitations**

The research problem, which regarded the relationship between thinking styles and decriminalization attitudes, had not been investigated, even though it could have important implications for solving problems associated with criminal activities. The focus on adaptors and innovators was chosen because Kirton's (1984) adaption-innovation theory is well established and because grouping participants into innovators and adaptors was considered appropriate for investigating topics like decriminalization, which contradict traditional approaches to dealing with crime-related problems. Considering the research problem and the focus on thinking styles as the key independent variable, the main internal validity threat in this study was confounding because various other variables could either moderate or mediate the relationship between thinking styles and decriminalization attitudes. To control the threat of confounding, all demographic variables that were associated with decriminalization attitudes would be collected and included in the analysis to include geographic locations of participants within the United

States. The role of those variables in determining attitudes about decriminalization is discussed in greater detail in Chapter 2: Literature Review.

The Kirton Adaption-Innovation questionnaire was previously used only to assess employees, usually those with a background in economics or engineering (Hipple, Hardy, Wilson & Michalski, 2001). Therefore, for this study, it is not possible to determine whether the previously observed population mean of 96 applied to the Kirton Adaption-Innovation scores of college students. However, the study produced new knowledge in terms of expanding the scope of application for the adaption-innovation theory and improves the understanding of decriminalization attitude determinants, so the limited generalizability was considered insignificant compared to the potential benefits of the proposed study.

### **Limitations**

Two limitations of the research need to be discussed. The first limitation is the cross-sectional nature of the data, which means that it is collected at one point in time, so it will not be possible to infer causal relationships based on the results or understand how decriminalization attitudes change over time. However, the study investigated the type of correlation in the relationship between adaptive and innovative thinking styles and decriminalization attitudes, so no causal inferences were made based on the data analysis results. Cross-sectional data were considered appropriate for the study.

The second limitation of this study was associated with the characteristics of the sample. The Walden University Participant Pool and social media flyer targeting a national sample consisted of individuals from different age groups and geographic

locations, which made the sample diverse in terms of demographic factor within the United States. However, it was expected that the majority of the sample would consist of university students and staff with higher education degrees, making it impossible to generalize the findings of this study to individuals who never went to college. Addressing this limitation is best left for future research, which should be conducted since correlational relationships were shown between thinking styles and decriminalization attitudes.

### **Significance**

Based on the results of this study, it was possible to determine if the differences between adaptive and innovative thinking styles could affect decriminalization attitudes. Understanding the relationship between thinking styles and decriminalization attitudes had two important implications for the discipline of forensic psychology and future research in the discipline. First, models that can be used to explain the relationship between psychological factors and decriminalization attitudes are not developed, and the results of this study can contribute to the development of a psychological theory that explained decriminalization attitudes. Second, there are no standardized instruments for quantifying decriminalization attitudes, so the survey results that were obtained from this study can be used as a foundation to develop a structured survey for investigating decriminalization attitudes. The development of standardized instruments in the future could encourage more researchers to investigate the topic of decriminalization and improve the current understanding of public opinions about decriminalization and how individuals develop those opinions.

The study also has important implications for the development of policy. Understanding the factors that affect decriminalization attitudes is considered important because the development of public policy needs to be consistent with the public perception of decriminalization, which is rarely based on empirical evidence but rather on assumptions and predetermined viewpoints. The study clarified how differences in thinking styles determine decriminalization attitudes. It is possible to recommend interventions aimed at aligning public decriminalization attitudes with the empirical evidence that supports the effectiveness of completely or partially decriminalizing certain activities. The results of the study could contribute to the development of decriminalization policies that consider public attitudes and improve public safety at the same time. That would be the most important contribution the proposed study makes for social change.

### **Summary**

This chapter outlines two opposing legal mechanisms, criminalization and decriminalization, which are both designed to enable the reduction of overall crime rates. Initially, the adaptive thinking style is seen more as a method to further legislate reactionary improvements to predetermined legal systems. On the other hand, the innovative approach to resolving legal issues is constructed so as to legally reduce conflict factors by removing ineffective legislation and replaces it with a new innovative legal approach to enable long-term solutions. The latter tends to be more in line with public thinking and social norms. This chapter begins to develop a concept or theme, which suggests that, rather than just view the differences found between these two



thinking styles, effort should also be directed at ascertaining possible similarities or positive attributes that together can be the hybrid alternative to the achievement of decriminalization objectives. The following chapter will continue to support the importance of conducting the proposed study by discussing the findings on the topic of decriminalization in the past 5 years.

## Chapter 2: Literature Review

### **Introduction**

Although adaptors and innovators have different thinking styles, which might influence their attitudes about decriminalization, the relationship between adaptive and innovative thinking styles and decriminalization had not been investigated.

Understanding how psychological factors such as thinking styles determined public attitudes is important for the development of public policies that are based on a compromise between evidence obtained from decriminalization case studies and public attitudes about decriminalization of specific activities. It was important to address the gap in the literature because understanding how thinking styles affected attitudes about decriminalization may have contributed to the development of decriminalization strategies that considered the needs of both adaptors and innovators.

The decriminalization of prostitution and illicit substances proved to be effective for improving public health and safety. Some examples of successful decriminalization efforts included decreasing the rates of venereal disease and drug-related crimes (Cunningham & Shah, 2014; Holmes, 2014). The public attitude towards decriminalization still depended on various factors such as religion (Chambers, 2011; Patrick, 2012), geographic location (Jakobsson & Kotsadam, 2011; Nakagawa & Akpinar-Elci, 2014), gender (Morton et al., 2012), and race, as well as ethnicity (Dillon, 2014). It is also important to emphasize that decriminalization was successful only when designed to address the causes of problems associated with criminal activities targeted toward decriminalization. For example, the case of personal drug use decriminalization in

Mexico failed because most of the drug-related crime was associated with cartels instead of personal use (Russoniello, 2013). Decriminalization is not considered to be a superior solution to criminalization, as its effectiveness depends on the situational factors.

The Literature Search Strategy section in this chapter contains the keywords used to conduct the literature search and the parameters used to find and include articles in the review. The adaption-innovation theory, which was developed by Kirton (1984), is introduced and discussed in the Theoretical Foundation section. The Conceptual Framework section includes a discussion of the hybrid approach framework developed by Schmoke (1990), who proposed that the purpose of decriminalization is to solve the problems caused by criminalization and that successful decriminalization focuses on the distribution of responsibility between the public health system and the criminal justice system. The Literature Review Related to Key Variables and Concepts contains the presentation and discussion of the current literature on the topic of decriminalization. The articles included either discuss the effects of decriminalization and criminalization of various activities (e.g., prostitution and illicit substances) or investigate the predictor variables associated with decriminalization attitudes. Finally, in the Summary and Conclusion section I restate the gap identified in the current literature that will be the research problem of the study.

### **Literature Search Strategy**

The literature search was conducted using the search term “decriminalization attitudes” in conjunction with each of the following search terms: *drugs*, *marijuana*, and *prostitution*. I used Google Scholar to search terms and the results were filtered to include

only peer-reviewed articles that have been published in the past 6 years (2011-2017). The exception to that rule was the work of Kirton (1984, 1994), as well as the seminal work by Schmoke (1990), who proposed the hybrid approach as a model for developing policies that combined criminalization and decriminalization to solve crime-related problems. Those two exceptions were included in this chapter because they are important to the theoretical and conceptual foundation of the proposed study. All other articles were included in the literature review if they were: (a) case studies of decriminalization in a country or multiple countries, (b) empirical studies in which the researchers investigated the predictor variables of decriminalization attitudes, or (c) review articles on the topic of decriminalization effects in society.

### **Theoretical Foundation**

Central to the problem statement and research questions discussed in this proposal, conceptual theories categorized or known as the adaption-innovation theory are directed at the way thoughts are processed or how actions are implemented. Kirton (1984) maintained individual thinking styles determined how decisions were processed, creativity was enacted, and how problematic issues were resolved. The research study I conducted, pertaining to the adaption-innovation theory, ascertained the role and functionality of management, this proposal contends that these thinking styles can be applicable to almost any aspect of human behavior, including that pertaining within the field of forensic psychology.

Kirton's theory placed emphasis in part on the methodology rather than on the measurement of results, or the process in which thoughts were enacted rather than on the

outcomes derived by thoughts. Therefore, this proposal suggested thinking styles depicting the way innovators and adaptors process decriminalization would determine the outcome derived by attitudes. Depending on whether an individual tackled a problem from either an adaptive or innovative approach allowed variables to be chosen within the thought process. This is exemplified by looking at an initiative to leverage opportunities, creating the wherewithal to optimize them.

It could be argued that if an individual adopts both adaptive and innovative styles depending on the nature of the problem, a greater level of flexibility could be attained during processing and completion. However, Kirton (1984) argued that one of these two styles is predominant within a human's personality and characterizes their approach to meeting variable challenges. For the purposes of answering the research questions, the assumption was made that an individual adopts or is primarily possessed by one of the following definitions of thinking styles.

Kirton (1984) found that adaptors characteristically, "produce a sufficiency of ideas based closely on, but stretching, existing agreed definitions of the problem and likely solutions" (p. 1). In this scenario, an adaptor would be more compliant with predetermined factors or rules and seek to enable a measure of improvement within a given set of parameters. The research findings went on to illustrate how innovators preferred to change or create new parameters or rise to challenges that were found when seeking to discover or establish new ideological or conceptual territories. More specifically, the findings concluded that innovators, "are less concerned with 'doing things better' and more with 'doing things differently'" (p. 2), which inferred innovators

are driven by the process rather than on expected outcomes. It could be argued that the innovator is more individualistic in approach rather than an adaptor who employs collectivism to form decisions based on existing parameters designed by society.

Table 1.

*Characteristics of Adaptors and Innovators*

Adaptors	Innovators
Solve problems that turn up	Proactively look for problems to solve
Focus on solutions with continuity and stability	Solutions can be abrasive and create dissonance
Perceived as sound, safe, and dependable	Perceived as ingenious, unsound, and impractical
Improve existing decision-making and problem-solving systems	Create new decision-making and problem solving systems
Solutions are based on average expectations	Solutions challenge the average expectations
Feel comfortable and take control in structured situations	Feel comfortable and take control in unstructured situations
Rarely challenge rules and adhere to social traditions	Often challenge rules and tend to have little regard for social traditions
Decisions and solutions are subject to pressure from society and/or authority	Maintain their ideas when faced with opposition
Essential for maintaining stability in organizations, but need to be forced to accept change once in a while	Important in transitional periods, but should never be trusted to maintain routine systems in organizations
Maintains group cohesion and cooperates when working in teams	Insensitive to other team members when proposing new solutions

*Note.* Adapted from Kirton (1984)

Table 1 offers a more defining and detailed insight into what motivates and drives the thought processes in these two types of human approaches to various problems found in society. The two different styles can be viewed in terms of the adaptive approach as a safer and more logical stance based on accepted norms and morals. An individual possessing a more innovative mindset would be less likely to be concerned with elements

of risk and more driven by the desire to express or assert their individuality despite the potential failure to achieve societal expectations. Based on the definitions found in Table 1 perhaps the individualistic and riskier approach may be seen as a more relevant or preferable asset when unexpected challenges or crises occur or when accepted norms and practices fail to achieve anticipated results as supported in Table 1.

In an increasingly globalized and uniform society, diversification outside of known or accepted parameters may be viewed as antisocial or as a failure to conform to the common good of humanity. However, as technology and online media has expanded and placed the spotlight on legislated behavioral norms and morals, it has also facilitated or accommodated the adaptive type of personality. Inevitably the ability to conform or challenge systemized parameters extended to how decriminalization is approached and processed and how attitudes to decriminalization are impacted by each of these two different thinking styles. Furthermore, it should be noted that there were references in Table 1 to adaptors that, “when collaborating with innovators: supplies stability, order and continuity to the partnership” (as cited in Kirton, 1984, p. 138). This suggested some form of an alliance or relationship between these two thinking styles. It could then be inferred that the adaptor played a more supportive role to the concept of a hybrid thinking style. Kirton (1984) referred to the innovator as also collaborating with the adaptor, stating, “when collaborating with adaptors: supplies the task orientations, the break with the past and accepted theory” (p. 138). Perhaps this may be a less supportive or supplementary stance, but the term “break” indicated a new approach, still interconnected with the adaptive approach.

Previous applications of the adaption-innovation theory were mainly conducted in business settings that employed individuals with a degree in economics or engineering (Hipple et al., 2001). Some researchers also investigated the correlation between thinking styles and other variables to determine if the theory could be applied in different contexts. Leong, Fischer, and McClure (2014) reported that innovative thinking styles and holistic cognitive styles were associated with greater connectedness with nature, even after emotional status and well-being were accounted for. The theory was also used to investigate the relationship between innovative and adaptive thinking styles and various psychological constructs, including personality traits and creativity (Wang, Chen, Zhang, & Deng, 2016). The adaption-innovation theory appears applicable across contexts, and is expected to be a good base for research in the field of forensic psychology as well.

### **Conceptual Framework**

#### **Decriminalization**

The seminal work in the field of decriminalization by Schmoke (1990) concluded that in terms of addictive drugs, such as alcohol, cigarettes and narcotics, criminalization played a supportive role to decriminalization, perhaps as an adaptive measure being created to support an innovative response in the form of decriminalization. Schmoke (1990) further justified this hybrid approach by stating, “any form of decriminalization must be accompanied by a reallocation of resources to education, treatment, and prevention programs designed to keep non-users away from drugs and current users off drugs” (p. 525). The necessity for this resource reallocation had been observed in the decriminalization of drugs in Portugal and Mexico because no investments were made in



the healthcare system or related systems that could have supported the decriminalization of drug use (Russoniello, 2013).

### **Further Attempts**

Using the Prostitution Reform Act of 2003, which was passed in New Zealand, it was possible to observe how the hybrid approach worked in practice. According to Kismödi, Cottingham, Gruskin, and Miller (2015), the decriminalization of sex work was based on the labor rights, so the policy developed health and safety standards for the sex market that would reflect on the safety of sex workers and the health of both sex workers and the public. At the same time, the law criminalized sex work of underage persons and all forms of coerced sex work (Kismödi et al., 2015). Selecting an innovative style to address decriminalization issues could be viewed as a more long-term solution that meets the problem causation. In the case of New Zealand, the approach considered both the long-term solution to problems in the illegal sex market, but also defined and punished illegal activities or those sex work institutions that did not adhere to public health standards. As such, the decriminalization of sex work in that case could be defined as a hybrid model.

The hybrid approach to solving the decriminalization of drug abuse was determined by those who already had prior experience with this problem, which suggested the attitude and behavior displayed by those with an adaptive approach to problem solving may be due in part to ignorance, lack of understanding, or simply little to no experience. Based on this assumption, personal or subjectively acquired knowledge can influence the style regarding what way a problem is tackled without prior

consideration to expected outcomes. Moreover, the innovative style can motivate how actions are implemented with the added benefit of improved outcomes. These results can be argued to be a hybrid model in which the innovative method is employed within the thought process, but the outcome is that which initially motivated the adaptive style.

### **Drug Use and Decriminalization**

In terms of illicit drugs consumed globally, Marijuana is the most popular and widely used. Enormous attention has been devoted to it regarding its possession and whether it should be decriminalized, as well as what regulations should be enacted by law. Until recently, marijuana was only legalized for medicinal purposes or for medical use in certain states in the United States.

Today 30 U.S. states, as well as the District of Columbia have legalized the use of marijuana in some variance, with eight states and the District of Columbia legalizing it for recreational use, and the remaining states legalizing it for medicinal use (Miron, 2017). Restrictions in the remaining states vary from incredibly strict laws in North Carolina, allowing only the most severe epileptic patients to obtain a low-grade THC oil, to Michigan's relaxed laws allowing nearly anybody to obtain it for medicinal purposes. The changes are innovative and perhaps risky decisions concerning decriminalization as technically each of these states are in violation of United States federal law by allowing the planting, production, distribution, and consumption of marijuana for recreational purposes. As such, the federal government could shut down these operations should they so choose. However, the federal law has been interpreted in such a way so as to allow state or local decriminalization decision-making to be taken and as such, "has proven to

be a useful source of insight in regards to policy and implementation” (p. 1). Both Colorado and Washington completely reversed existing federal law and implemented innovative legislated solutions. The threat of possible future federal intervention or unforeseen side-effects from the free use of marijuana means these states need to develop a hybrid solution regarding decriminalizing marijuana. Without it, this may not be sustainable in the long term.

Considering the current legal status of marijuana in the United States, Shoemate (2015) contends that such an innovative approach within the United States legal system, “makes it perfect for examination and analysis of implementation processes” (p. 2). This rationale is supported by the claim that they both, “carry the heavy burden of successfully implementing and regulating this new policy in a way that mitigates the potentially negative consequences” (p. 2). The study went on to describe potential challenges concerning allowing this innovative approach from succeeding, including federal government intervention, a lack of growth in the marijuana industry, and a significant impact on public health. It could be argued that decision-makers in these two states will need their innovative and perhaps risky decriminalization actions to be supported by adaptive measures that are both protective, or preventative, possibly both. There is little research or information about similar scenarios as these two states through innovative thinking styles has broken new ground in terms of criminal law and narcotics.

### **Hybrid Solution**

In order to construct a valid hybrid model that will incorporate the theoretical framework needed, a three-pronged strategy was planned and implemented as follows:

“(a) top-down approach, or the idea that all policy-related decisions are based on the central directive; (b) a bottom-up approach, or emphasis of the role of the ‘street-level bureaucrat’ as a main decision maker, or (c) hybrid approaches, the incorporation of elements from both bottom-up and top-down approaches” (Shoemate, 2015, p. 2).

Shoemate (2015) further states that the rationale behind this hybrid approach to decision making is so support is obtained for the venture both politically and from the constituents. In addition, this hybrid two-way approach allows the construction of, “streamlined decision processes” (p. 3) while also ensuring that adequate financial and human resources are in place.

Another feature that was introduced by the aforementioned approach was despite the enormous changes to the local citizens after the decriminalization of marijuana in Colorado and Washington was that supportive measures should be designed to develop confidence within the local populations. These measures were constructed to occur incrementally. Another reason to apply an incremental approach was because recreational states had conducted an innovative experimental model as the state decriminalization of marijuana had not been enacted before in the United States. Essentially, it was new and experimental in nature. This model meant that the, “lack of information on the behavioral and institutional impacts of legalization (e.g. drug use, the criminal justice system, banking, and the economy, public health) essentially makes these states’ efforts experimental” (p. 5). Despite the lack of data and information, perceptions exist both at federal and state levels in which it is considered that such decriminalization measures and subsequent support mechanisms are a financial drain on all stakeholders,

both internally and externally. However, those possessing more innovative thinking styles conclude the opposite in that the costs associated with criminalization outweigh the costs of decriminalization.

The added challenges derived when the decriminalization process is still in an experimental stage necessitate incremental smaller or minor changes being enacted. As such it, “is a highly utilized form of decision making” (Shoemate, 2015, p. 12). With an incremental way of implementing each step of the process, changes will appear in a step-by-step process. By adopting a two-way street allowing all stakeholders to participate in the support of new decriminalization, a common objective or “goal consensus” (p. 16) is achieved, providing a greater likelihood for decriminalization to succeed. Such goal consensus should include important components of societal expectations such as the enhancement of state economics, upliftment of public health, and an increase in public safety. Ideally the successful implementation of new innovative Recreational Marijuana (RME) decriminalization should be, “partially dependent on how local communities decide to evaluate the costs and benefits of the new law within the context of their communities and values (p. 16).

The above noted concept behind innovation implementation addresses the incremental process and steps that are behind the adoption of innovations. “In order for adoption to occur, communities’ values will likely have to be largely homogeneous (i.e. little intra-group differences) in support for RME adoption” (p. 16). This means for both small or large population groups, certain ideologies or political beliefs may be instrumental in how decriminalization is addressed and if a successful outcome can be

achieved. Perhaps those United States citizens who are of a liberal disposition may be more inclined to accept and welcome the decriminalization of such hotly debated topics such as the consumption of marijuana.

It is worth noting that while looking at issues of decriminalization, especially that pertaining to the legalizing of marijuana for recreational use, references to an experimental design have been made. This offers a whole new insight and perspective on how the legal justice system may regard either any decriminalization or certain specified decriminalization such as has been discussed above. New innovative thinking styles that create such important legal initiatives are perhaps experimental both in design and functionality and therefore such initiatives can be inferred as incomplete, whereas it could be argued that an adaptive approach is merely an improvement of existing laws or legislation therefore based on an existing either proven or unproven working model, and as such possesses little capacity for risk.

By adopting decriminalization as an experimental design perhaps the concept of a hybrid model becomes more of a justifiable approach. Table 1 suggests this innovative thinking style is challenged by risk and uncertainties. According to Shoemate (2015), such challenges are due to the experimental nature of this legal phenomenon. Based on Shoemate, the thinking style behind such an innovative legal approach can be viewed as arguably incomplete and, therefore, is an ongoing process that requires additional and perhaps supplementary support including what can be offered by an adaptive thinking style. Numerous examples have and will be offered by this proposal that supports the

thesis that a hybrid approach is essential to ensure that decriminalization initiatives are sustainable and successful over the long term.

### *Other Models*

Hoz Schilling (2015) supports the idea of the decriminalization model being incrementally transferred to other countries. It is claimed that Uruguay was the first country in the world to legalize cannabis and due to this brave, risky innovative approach it has been subjected to global analysis since the decriminalization of cannabis, also known as the, “experimental legalization model” (p. 21). Hoz Schilling (2015) claimed that this model will need to be regarded in transnational terms as any measures used to combat the impact of drugs will need to cross multiple borders and access numerous markets. It is apparent that all countries which have implemented decriminalization have done so within a relatively unknown experimental working environment. As in all testing and experimentation techniques, mistakes and successes will need to be factored into the construction of a hybrid model that is supported by innovation and adaptability. As such decriminalization may need to be redefined or included as a vital component of the legalization process.

### **Literature Review Related to Key Variables and Concepts**

Various controversial behaviors and activities, including drug use and prostitution, are often the subjects of social policies aiming to resolve them, either through prohibition and criminalization or through decriminalization. Prostitution and illicit substances are common topics in the literature because their decriminalization in certain locations allows researchers to measure the effects of decriminalization on

society, as well as compare its effectiveness against criminalization. Several determinants of decriminalization attitudes associated with those activities were identified, including religion, morality, political affiliations, and various others that will be discussed later in this chapter.

### **Prostitution**

**Adaptive solutions for prostitution.** A complete decriminalization of prostitution for all parties involved in the activity, from customers to brothel owners, was associated with higher levels of sex trafficking in countries like Germany and the Netherlands (Dempsey, 2015). Well-known models include the Nordic model, which is implemented in the Nordic countries (i.e., Sweden, Norway, Finland, and Iceland) and is characterized by decriminalizing sex workers and criminalizing sex buyers (Dempsey, 2015). In other words, sex workers are considered victims, whereas all other parties involved in prostitution are criminally prosecuted. Norway and Sweden are generally regarded as exponents of a liberal progressive society and the appreciation of human rights values. However, Jakobsson and Kotsadam (2011) discovered that geolocation differences varied pertaining to how the decriminalization of prostitution was perceived by the public. Norway was considered as being more lenient in their attitudes towards the need to criminalize prostitution than by Swedish citizens. For reasons not entirely clear, the Swedes have decriminalized selling sex but have refrained from removing legislation prohibiting those buying sex.

Their study further found that their reluctance to decriminalize buying sex was evident prior to legislation enacted to ban this activity. This suggests that legislation was



ineffective in that such attitudes were derived from more cultural or other influences and such legal formality only served to attempt to improve or reinforce previous attitudes pertaining to the situation rather than to address the causation of the underlying problem. In addition, it was noted that Norway had previously allowed both the buying and selling of sexual services but for reasons not disclosed their legislative body sided with the Swedes and criminalized buying sex. Although relatively liberal in terms of global attitudes towards prostitution, these more recent adaptive measures have served to punish rather than to remove the problem, perhaps a reverse of a global trend in which a more innovative approach is being taken with regard to this problematic issue.

Even though the destigmatization of sex workers proved to be unsuccessful after decriminalizing selling sex and criminalizing buying sex, an adaptive approach to decriminalization of prostitution can be beneficial for victims of sex trafficking. According to Dempsey (2015), a person is considered a victim of sex trafficking is characterized by one of the following: (a) child prostitution; (b) sex work due to fraud, force, or coercion; or (c) sex work enforced by power or vulnerability.

Prostitution is associated with a high degree of social stigma, and most adaptive thinkers justify the prohibition of prostitution based on morality and public satisfaction (Dempsey, 2015). Even a partial decriminalization aimed at improving the legal status of sex trafficking victims is difficult because a clear definition of such victims is hard to develop (Dempsey, 2015). The partial decriminalization of prostitution in the Nordic countries also showed that challenging the negative public attitudes associated with

prostitution is difficult. Therefore, the effectiveness of the adaptive approach for solving prostitution remains questionable.

In 2012, several states in the United States enacted the Safe Harbor laws, which redefined sexually exploited children as victims rather than criminals, so they were redirected from the criminal justice system into the child welfare system (Barnert et al., 2016). Although the enactment of Safe Harbor laws was not a complete decriminalization of prostitution, it was a hybrid approach that aimed to redirect a part of the load caused by prostitution away from the criminal justice system. Furthermore, those children will no longer be treated as criminals but as victims they are according to Dempsey (2015), and Barnert et al. (2016) reported significant paradigm shifts in locations that enacted Safe Harbor laws concerning sex workers. Therefore, the hybrid approach that combined strategies of both criminalization and decriminalization approaches proved to be successful than the complete criminalization of prostitution.

**Innovative solutions for prostitution.** Most governments prohibit prostitution because of moral concerns, as well as the risks for venereal disease transmissions and sex worker victimization associated with the prostitution market. However, the illegal sex market is still active despite the efforts to reduce prostitution, and it is currently shifting to indoor markets (e.g., massage parlors, escort services), which now makes up around 85% of the total sex market in the United States (Cunningham & Shah, 2014). Moving to an indoor market makes it harder for law enforcements to shut down the establishments that serve as fronts for prostitution. The possibility of decriminalization as a solution for reducing prostitution might be a feasible alternative.

The legal sanctions of prostitution are often driven by social values and public opinions, and the risks associated with prostitution warrant its criminalization, but Hubbard and Prior (2013) argued that decriminalization is possible and might be a better alternative to criminalization. Organized home-based prostitution is associated with significantly lower risk for violence against women, and fewer public health concerns because indoor markets are more likely to use condoms, so a policy based on decriminalizing indoor sex markets is a promising solution to problems associated with sex work (Hubbard & Prior, 2013).

The various benefits associated with the decriminalization include (Cunningham & Shah, 2014):

1. *Reduced violence against sex workers*: Prostitutes are more likely to report violence or theft if prostitution is decriminalized, thus leading to a reduction in violent crimes that often go undetected.
2. *Reallocation of police resources*: The police can focus on solving other crimes, so the decriminalization of prostitution could cause an overall crime reduction.
3. *Public health*: Indoor sex workers are more likely to follow procedures that minimize the risk for sexual disease transmission.

Measuring the effects of indoor prostitution decriminalization in Rhode Island between 2004 and 2009, Cunningham and Shah (2014) reported that rape reduced by 31% (i.e., 824 fewer reported cases) and that gonorrhea reduced by 39% (i.e., 1,035 fewer cases). The decriminalization of indoor prostitution has been empirically supported, but it is not clear whether policy-makers will accept that approach and start

treating sex workers as victims, rather than prosecute them and deny them the opportunity for increased safety and security.

Contrary to popular opinion, the decriminalization of prostitution is not associated with an increase in the prevalence of buying services from sex workers. According to Rissel et al. (2016) the only determinants of buying sex among males are living without a partner or sex partner and being older than 19 years of age. The legal status of prostitution was not associated with the number of sex buyers, so it is possible to conclude that the failure to decriminalize prostitution can be attributed to social stigma and adherence to legal traditions rather than evidence collected in countries that decriminalized prostitution.

### **Illicit Substances**

#### **Adaptive solutions for drug-related crime.**

The criminalization of narcotics in the United States was for drug possession outside of government control and was implemented due to curb the activities of the opium trade and to regulate it. Narcotics were not seen as a health issue therefore narcotics were allowed if sourced via official channels, so essentially it was controlled via an economic regulation. However, it became an increasingly lucrative source of income for those operating outside of official legislation. Eventually, the possession of all narcotics becoming criminalized. Although the United States and many other important economies have importantly implemented the criminalization of advertising addictive drugs and other activities noted above, the possession and use of narcotics have been largely unaddressed and allowed to worsen by being subjected to criminalization

and therefore determined as illegal. The criminalization of illicit substances affects the prevalence of other crimes, which is why the current status of drugs as illicit substances.

Adaptive thinking styles can also be looked at in terms of the argument concerning the criminalization and decriminalization of narcotics. An adaptive technique employed within law enforcement is to apply under-enforcement of the law and in some cases to completely ignore it. Due to recent amendments to the law in Massachusetts, the use of less addictive drugs such as marijuana, and the possession of small amounts for personal consumption is seen as a “paltry civil penalty”, or alternatively law enforcement can disregard such minor offenses.

Librett (2012) pointed out that while a measure of decriminalization had taken place various activities such as the intent to distribute still constituted an illegal offense. So the adaptations of current laws only served to create confusion among law enforcement personnel, which in turn had an influence on their attitudes to those they were paid to protect. Moreover, many other details regarding what was defined as distribution was left up to the discretion of police officers which in turn created inconsistent parameters from which they could interact with the local community as there was a lack of clarification and clear consensus regarding what was decriminalized and what remained illegal. This lack of clarity and direction by such adaptive strategies led to the erosion of law enforcement authority and their confidence in their ability to maintain an effective presence. In turn this lack of clarity has led to police training programs being compromised due to confusion regarding what constituted an offense and what was decriminalized. According to Librett checks regarding the consumption of certain

narcotics prior to the resumption of training or being enlisted as a police cadet have been removed.

Another adaptive effort to reduce drug addiction was described as a “temporary policing experiment” (Adda, McConnell, & Rasul, 2014, p. 3). It was designed to operate for a six-month period; however, the policy was extended until 13 months had elapsed though by that time media and other institutions had claimed that “crime, drug tourism, and drug use by children began to steadily increase” (Adda et al., 2014, p. 3).

### **Innovative solutions for drug-related crime.**

Werb et al. (2011) found that the association between drug law enforcement and drug-related violence is positive and significant, so the researchers argue that increasing drug regulation and law enforcement cannot reduce other crimes associated with the drug market. Drug prohibition does not affect the supply of and demand for drugs, so alternative approaches to resolving drug problems and drug-associated crimes are warranted (Werb et al., 2011). The main concern regarding the decriminalization of drugs is the increase in drug use and other crimes, which should negatively reflect on public safety. However, that is not the case. Holmes (2014) analyzed crime data from states that legalized medical marijuana and compared them to states that did not legalize it, but only property crimes increased significantly the period was expanded between 1995 and 2010. Holmes warns that several lurking variables can affect the rise in property crimes, so there is not enough evidence to support a causal relationship between medical marijuana legalization and the increase in property crimes. Furthermore, Jacques, Rosenfeld, Wright, and Gemert (2016) analyzed drug-related conflicts in the

Netherlands and found that violence and victimization were the most common among illegal street sellers, whereas coffee shops had lower drug-related victimization even compared to alcohol-related victimization of regular cafés.

The Transnational Institute (TNI, 2011) suggested that the decriminalization of drugs in Portugal did not increase drug use and dependency significantly, but it did decrease drug use problems among adolescents between 15 and 19 years of age. Of course, the TNI warned that decriminalization should not be considered as a universal solution to all drug-related problems, but replacing punishment with treatment opportunities does create an environment in which the demand for drugs can reduce once addicts receive proper treatment. Instead of treating drug use as a criminal activity, the decriminalization of drugs could encourage open communication about drug addiction, so it can be treated as a medical problem rather than a legal one. The addiction that fuels the illegal investment, supply and distribution of narcotics is the demand, which can be reduced if drug use is decriminalized and treatments for drug addiction available to addicted individuals.

In an evidence-based analysis of the Portuguese decriminalization of illicit substances, Hughes and Stevens (2012) looked at decriminalization in terms of the possession and use of illicit drugs. They found that repeated attempts to improve law enforcement efforts and legislation failed to address the problem. Adaptive measures to rigorously apply criminal justice policy and look for alternative measures in order to reinforce existing legislation resulted in divisive debates among criminal justice personnel. In 2001, an innovative approach was adopted in which the entire approach to

the problematic issues to narcotics was rethought and an entirely new mindset was applied. Their study redefined the terminology existing in the new Portuguese criminal justice initiative as follows.

This innovative approach did not try to reform or amend existing legislation but effectively invented a new set of rules. The sales of illicit drugs were still considered a criminal offense, but buying, using and possession for personal use were decriminalized. However, it is important to note that decriminalization simply means that a person does not face criminal sanctions, but the use of administrative sanctions (e.g. civil fines or court-ordered rehabilitation) can still be used. This proactive approach was designed to heal rather than punish, to deal with the causation rather than the ‘act’.

Supporting decriminalization rather than legalization as a thinking style that is both innovative and preventative in nature, this innovative style allowed the adoption of a new decriminalization attitude which designed a new legal mechanism that subsequently defied predictions as this legislative innovation was successful at reducing drug use and drug-related incidents (Hughes & Stevens, 2012, p. 999). In fact, Hughes and Stevens (2012) compared the drug use habits in the general population, ages 15-64 years of age, in Portugal to the drug use habits of the general populations of Spain and Italy. The two countries have similar geographic locations and drug issues, but Portugal was the only country in which the use of drugs declined, and their rates of drug-related deaths were significantly lower compared to the other countries (Hughes & Stevens, 2012, p. 109). The above example clearly points to the extent to which thinking styles can significantly affect decriminalization attitudes, which in turn can result in unexpected outcomes. The



above new initiative points to a win-win scenario not only for those plagued by social diseases or challenges but also for the criminal justice system as the drain on financial and human resources was reduced.

Matheson et al. (2013) supported the aforementioned concept by noting in a research study conducted into public opinion pertaining to drug treatment policy, that those who had personal experience of the problem abandoned the adaptive approach which facilitated the “harm reduction” (p. 407) concept but rather opted for a “recovery-based” (p. 407) practice which closely resembles the same approach taken by the Portuguese criminal justice system. Matheson et al. further expanded on the ineffectiveness of the adaptive approach by suggesting that under-achievement of expectations derived by this attitude to decriminalization can be viewed as “self-inflicted” (p. 407).

Decriminalization in Portugal was considered as a natural experiment rather than as a true experiment conducted under scientific and legal constraints and as such is still young and therefore can be viewed as a work in progress. The Netherlands has a longer tradition of marijuana decriminalization compared to Portugal, so it is possible to study the long-term effects of decriminalization. The prevalence of marijuana use in the Netherlands is no different than its prevalence in countries where marijuana is illegal (MacCoun, 2011), which suggests that innovative approaches to criminal issues are not necessarily going to result in adverse long-term consequences.

The implementation of the Dutch cannabis coffee shop system was influenced by an innovative approach to thinking about the gateway theory. According to gateway

theory, cannabis is the gateway to other drugs, but the Dutch assumed that separating soft drugs from hard drugs would resolve that problem because it would disconnect the drug users' and sellers' "social and economic networks" (MacCoun, 2011, p. 1899). In other words, people who used marijuana would not be criminally prosecuted, but they were also cut-off from suppliers and users of hard drugs, thus reducing their chance of using substances other than marijuana. The Dutch authorities have innovatively separated and defined narcotics as either a hard or soft drug. By allowing the soft drugs to become part of their daily lifestyle, criminal elements have been prevented from participating in the supply and distribution of drugs, so the separation of the soft and hard drug markets was the driving force behind the successful decriminalization of marijuana in the Netherlands (MacCoun, 2011).

However, decriminalization is still an experimental model and as such cannot be considered as a complete solution to the reduction of crime. In terms of addictive drugs, research admits that results derived from Portuguese and the Netherlands cannot be solely utilized as a basis to implement global drug control. An excellent example of a failed innovative intervention to solve drug-related problems was the case of Mexico, which decriminalized the personal use of drugs. However, the drug-related problems in Mexico mostly stemmed from drug cartels, which are involved in enforcing their products, conflicts over territories, and exporting illicit substances (Russoniello, 2013). The innovative approach does not encourage drug use and may show positive effects, as was the case in Portugal, but its application is limited depending on the problems associated with drugs.

Research concedes that shifts in public attitude, or demographically driven changes may have also resulted from innovative decriminalization strategies. Cao and Zhao (2012) found that “only 47 percent of respondents in Netherlands believe that soft drug taking is never justifiable” (p. 300). The tolerance of soft drug use is significantly lower in the Netherlands compared to the other 29 countries included in the study. The second most tolerant country in terms of soft drug use was Denmark with 62.3% respondents who claimed that it is never justifiable, and the least tolerant attitudes were observed in Malta, where 95.9% of the respondents stated that it is never justifiable to use soft drugs (Cao & Zhao, 2012). Therefore, decriminalization and all the changes accompanying it is regarded as a more natural experiment rather than an experiment that is conducted within more clinical and supervised parameters. It is also believed that more countries should adopt a more innovative and riskier approach to solving problems such as drug addiction, via the decriminalization experimental model (Yablon, 2011, p. 28).

It is important to mention that the decriminalization of drugs is often considered to be synonymous with the legalization of drugs, but that is not the case. Research points out that “legalization rarely enters the discussion among mainstream economists and politicians; far more economists support decriminalization than legalization” (Yablon, 2011, p. 29). This suggests that legalization requires more effort by the criminal justice system to recognize and implement; as such decriminalization be regarded as incomplete and merely a transitional part of the legal process even though derived from innovative

thinking styles. As noted earlier in Table 1, the innovative approach is not so concerned with results but more to enabling a different approach to solving crime.

The public often considers that marijuana in the Netherlands is legal, but it is in fact, just decriminalized because criminal law still applies in certain circumstances. The Dutch authorities allow personal possession and sale of up to 30 grams of cannabis (MacCoun, 2011), so possession or sales of anything above that limit would constitute a criminal offense. Therefore, even in the Netherlands, which has a long tradition of soft drug decriminalization, the innovative policies did not exacerbate the use of hard drugs, crime rates, or social disorganization. The “slippery slope” towards legalization argument against the decriminalization of drugs cannot be considered valid if the Dutch system is used as a model for decriminalization.

### **Other Criminal Activities**

Compared to prostitution and illicit substances, other criminal activities such as polygamy or abortion receive much less attention from researchers. Since 2011, only Faúndes and Shah (2015) discussed the effects of abortion decriminalization. In countries where abortion is legally defined as a criminal activity and significantly restricted, women are often denied abortion even when their pregnancy is the result of a situation beyond their control (e.g., sexual abuse). Consequently, a lot of women choose unsafe abortion, which accounts for approximately 14.5% maternal deaths worldwide. Although abortion goes against the religious or moral beliefs of certain social groups, Faúndes and Shah (2015) propose that a partial decriminalization of abortion can reduce the unnecessary deaths caused by unsafe abortion. In countries where abortion is

decriminalized or legal, the abortion rates are not higher compared to abortion rates in countries where abortion is restricted, so allowing abortion to women who were victims of sexual abuse should be both morally and legally acceptable.

### **Strengths and Limitations of Adaptive Solutions**

Adaptive solutions do not need to challenge public attitudes and expectations because decriminalization does not always imply depenalization, i.e. the lack of punishment for certain behaviors. Macdonald et al. (2013) looked closely at laws that were designed to save lives and avoid injury. Their study looked at the partial decriminalization of driving under the influence of alcohol. Even though driving under the influence was no longer a criminal offense, the police were granted the authority to fine the offender immediately on the scene, thus eliminating the legal steps that would often lead to unprocessed charges and no punishment. Supporting this criminalization was a public awareness campaign that sought to illustrate the enormous differences in driving attitudes and styles when alcohol was present. Their findings conclusively found “significant reductions in all types of alcohol-related collisions, consistent with a positive effect of the intervention” (p. 203). The intervention was an adaptive measure brought in to supplement existing law so as to reduce fatalities and injuries and as such was widely viewed as an essential improvement by both law enforcement and the general public. Therefore in some instances it can be seen that the adaptable thinking style is perhaps a more viable option when the issues are directly related to physical harm or violence.

Three important limitations of adaptive thinking styles in the development of criminal law need to be considered. First, negative outcomes of adaptive solutions to

criminal activities can also arise because in the “subculture of policing can be expected to either withdraw or eventually push back by assuming reluctance to engage in order maintenance strategies” (Librett, 2012, p. 15). Librett (2012) also found that innovative tactics may present some possible solutions to the problems derived from an adaptive approach; as such, highlighting the necessity to adopt an innovative thinking style.

Second, the adaptive approach lacks the flexibility required to address various complex social problems. For example, Long, Mollen and Smith (2012) found that economic well-being is the main motivation for prostitution among college students, so it is possible to assert that not all sex workers can be considered victims. The adaptive thinking style requires a clear definition of right and wrong so that wrongs can be punished accordingly. Therefore, it cannot be expected to solve social problems in which it is difficult to find objective evidence that would determine whether a person’s behavior is coerced or purposeful.

The third limitation of adaptive solutions is that they tend to be informed by social stigma rather than available, objective evidence. The degree of stigmatization associated with a certain type of behavior depends on the preexisting negative stereotypes (Hughes, 2015). Therefore, in order to deter individuals from unwanted behaviors, criminal law is designed to produce stigma so that offenders consider the consequences of their actions, i.e. the way society labels them. Hughes (2015) points out that “changes in stigma require changes in public attitudes” (p. 38), and uses the decriminalization of sex works in Sweden of an example how legal changes do not lead to destigmatization. Criminalization and decriminalization can have only a marginal effect on social stigma.

Therefore, it is possible to suggest that criminal law will continue to criminalize activities based on the beliefs and values expressed by the public opinion rather than the evidence from locations that showed successful crime reductions and improved public health after decriminalizing certain activities, such as drugs and prostitution.

### **Strengths and Limitations of Innovative Solutions**

The main strength of the innovative approach is that it can affect public attitudes. The decriminalization of marijuana in the Netherlands occurred in 1976, and the public attitude towards soft drug use in the Netherlands is more tolerant compared to other countries (Cao & Zhao, 2012). Tolerance of drug use is important to create an environment in which drug use is not stigmatized, but recognized as a psychological and social problem that needs to be addressed through healthcare rather than criminal law. Although the effects of decriminalization on public attitudes was observed in the Netherlands, Hughes (2015) pointed out that decriminalizing sex work in Sweden did not improve public opinions about sex workers, so it is not clear how long it takes for decriminalization to alleviate social stigma associated with certain activities. Therefore, the positive effects of decriminalization on social stigma may not be evident immediately after the implementation of decriminalization plans.

Two limitations of the innovative approach need to be recognized. First, it leads to the “liberalization of only the demand side of the illicit drug market” (Yablon, 2011, p. 29). Therefore, the decriminalization of drugs in Portugal fails to “address the fundamental problem with drug prohibition most commonly cited by economists who advocate the liberalization of drug policies – a black market which entails violent conflict

resolution and other negative externalities, such as a lack of regulation of product quality” (p. 29). Therefore, although decriminalization initially appears to provide innovative law enforcement solutions according to external trends appearing in Germany, France, Italy, Spain, Sweden and the United Kingdom, other external factors such as product quality control appear to remain unanswered, suggesting that the innovatively designed decriminalization-working model is far from complete.

The second limitation of the innovative model is that it depends on the efforts of multiple social institutions to reduce crime rates. The effort to decriminalize drugs in Mexico was not as successful as the decriminalization in Portugal (Russoniello, 2013). According to Russeniello (2013), the different outcomes can be explained by the different motivations and specifics of decriminalization policies, but the success of the Portuguese system was determined mostly by forming national standards for monitoring and addressing drug use. Without a developed infrastructure outside of the criminal justice system, a country cannot hope to support an innovative approach to resolving crime-related issues.

### **Determinants of Decriminalization Attitudes**

#### **Religion**

The influence of religion is enormous throughout almost every aspect of society and impacts decisions made in business, education, politics, etc. In addition to its many perceived roles within society it is seen as a support for those more vulnerable groups. However, sex workers are often marginalized by certain religions yet Nakagawa and Akpinar-Elci (2014) sought to address such attitudes by conducting a study and using



regression analysis found that knowledge and attitude are closely linked. The research looked closely at the attitudes of medical students and went on to describe how these students regarded prostitutes as untruthful, and uncooperative.

Currently, both in the United States and around the world the issue of abortion has increasingly been the subject of bitter debate between those seen and defined as pro-life and those from a more liberal and perhaps secular background. However, in less developed and poorer countries such as Nepal, abortion was seen in part as a medical necessity due to the high rate of infant mortality and the deaths of pregnant mothers. Not only has abortion become decriminalized it has also become subject to legalization, or methods of control resulting in a decrease in mortality rates due to abortions. In turn, this has led to an increase in those turning to government appointed abortion centers; such has included unmarried women. This has resulted in a negative reaction among the general population as they see this 'interference' as a threat to their culture and even identity. This opposition has been reinforced by the advent of repeat abortions, which they reported was tantamount to encouraging an increased level of sexual activity among single men and women (Puri et al., 2012).

Chambers (2011) conducted extensive studies in countries such as Holland, Belgium and Canada in order to establish a rationale for the decriminalization of euthanasia. On the one hand there are moral absolutes such as the sanctity of life, which many religious beliefs adhere to, and the more modern mindset, which considers this religious absolute as inappropriate when compared to thinking styles found in the evolution of libertarianism. Religious influence especially that pertaining to Christians

contends that euthanasia is part of a slippery slope in which God's authority over life and death is ignored.

Therefore, there is enormous opposition by many Christians to the decriminalization of euthanasia, so Chambers (2011) looked at a group of Canadian doctors who looked at the risks of decriminalization "rather than debate the results of empirical data" (p. 71). It was found that their reluctance to engage in a debate was due to religious beliefs. During the study the 'right-to-die' movement became involved and their influence contributed to a fierce resistance by those doctors with some form of religious beliefs. While the researcher conceded that the study had only been conducted in Alberta, it was shown that other studies conducted in countries such as Belgium found that religion was the primary influence behind any significant movement pertaining to the decriminalization of euthanasia.

However, Chambers (2011) found that it was those Christian doctors who attended church who were the greatest opponents of decriminalizing euthanasia. The study allocated four different sample groups and the statistics were as follows; "church-going respondents (31.6%), infrequently church-going respondents (14.7%), atheists (23.2%), and doubters (30.5%)" (p. 73). The study found that the first group was the main opposition to the decriminalization of euthanasia. In addition, the other three groups indicated some form of acceptance of decriminalization with the atheists being most in favor of creating a legal framework that supported euthanasia. In addition, other external factors such as age, gender and experience were found to pose no perceivable influence on the debate (p. 73), except that relating to culture.

Chambers (2011) maintained that “a lack of cross-cultural exposure played some role in the rejection of euthanasia and assisted suicide” (p. 73) therefore acting as a mechanism that opposes the decriminalization of euthanasia. The research findings claim that: “more exposure to such perspectives could have played a dual role by (1) expanding doctors’ opinions surrounding the death-hastening practices of other cultural groups and by (2) demonstrating how Christian normative assumptions have historically restricted these practices within non-Christian settings” (p. 77).

The research concedes that although other external influences and variables could have led in part to the construction of the doctor’s attitudes pertaining to the criminalization of euthanasia, it is clear that external influence in the form of strong Christian beliefs and the absence or lack of any cross-cultural viewpoints have contributed at best to an adaptive thinking style utilizing existing legislation as a non-negotiable parameter or foundation from which to effect improvements or change.

Seen within the context of adaptive and innovative thinking styles, perhaps atheists may be most likely to adopt an innovative approach due to the absence of any religious parameters that may otherwise have compromised their ability look at solutions without concerns about risk, traditions, and other beliefs. In terms of religion as an external influence this is perhaps better defined or understood as depicted in Table 1 as “Is catalyst to settled groups, irreverent of their consensual views; seen as abrasive, creating dissonance” (Kirton, 1984, p. 138).

## **Morality**

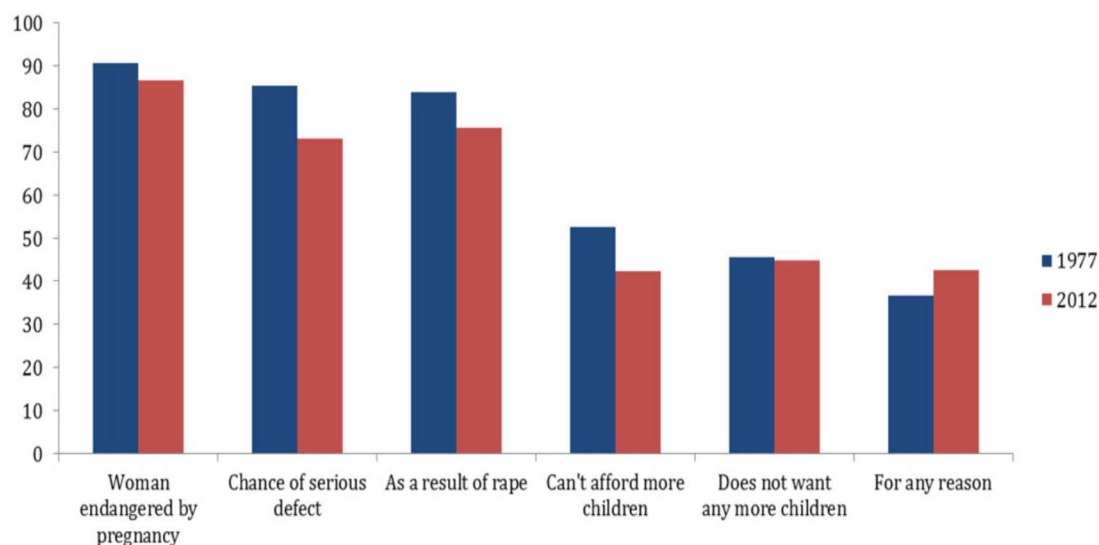
Magnani (2012) found that society is possessed by many kinds of different moralities; therefore it develops different “moral frameworks (e.g. religious, civil, personal, emotional, etc.” (p. 26). In terms of criminality, these different constructs interconnect and disconnect in multiple ways in a “strict interplay between morality and violence” (p. 26). Included in these frameworks is pseudo-morality, which is essentially a fake or unrealistic interpretation of moral values found in society. Moral proponents of criminalizing prostitution and the possession of narcotics argue that decriminalization discharges legal responsibility from the individual. Magnani (2012) suggests that in order to counter this shortfall, a “new analysis of the interplay between over criminalization and decriminalization” (p. 34) be implemented, and how the influence of morality can negatively impact the rights of the individual.

Prostitution is an example of an activity was interpreted by moralists as a form of female promiscuity. According to Jakobsson and Kotsadam (2011), the public attitudes regarding the decriminalization sex work and criminalization of buying sex in Sweden was determined by the debate on gender equality. Females were less likely to support the policy changes than males, possibly because females were more likely to associate prostitution with female behaviors and traits they considered to be immoral (Jakobsson & Kotsadam, 2011).

In another study into gay rights and abortion conducted by Dillon (2014), it was found that in countries such as the United States both public opinion and legislation go through a series of swings pertaining to sentiment; much of which is based on media

exposure and social media. There are multiple reasons why Americans believe that exceptions should be made so that abortion is now been decriminalized in terms of some exceptions and remains criminalized in other areas.

These two parameters regarding what and what does not qualify as an exception have led to an underground industry that at best can threaten the health of the pregnant woman. Although public opinion has largely remained constant or stable regarding the mix of proponents and opponents, the instability has been derived in part from the political establishment (Dillon, 2014). This is because the more liberal political party (Democrats) are largely perceived as supporting the woman's right to choose thereby avoiding any morality concerns offered by right wing political groups which claim that only God can take away life.



*Figure 1. Stability in circumstantial views of abortion. Note: Extracted from “Asynchrony in attitudes toward abortion and gay rights: The challenge to values alignment,” by M. Dillon, 2014, *Journal for the Scientific Study of Religion*, 53(1), p. 4.*

As can be seen from Figure 1 above there has been a remarkable similarity between rationales formed in 1977 and in 2012; and there are many reasons why women may want to terminate their pregnancy. Some of these reasons can be seen by some as essential of perhaps morally justified as in potential medical problems or violent crime. However, reasons derived from economic considerations as well as “for any reason” suggests that perhaps morality as an external factor plays a more important role in determining attitudes regarding if this issue should be afforded the decriminalization process.

## **Politics**

Politics plays an important role in the development of decriminalizing policies, but the effects of politics on the decriminalization of certain activities is typically negative. For example, the efforts to decriminalize the use of medical marijuana in several states of the United States meet significant resistance from government agencies at local, state, and national levels (Hall, 2013).

The examples of successful implementation of decriminalization policies regarding drug use and prostitution throughout the world suggest that politics is not always a barrier to decriminalization, but specific political orientations can affect how decriminalization is perceived and whether it is implemented. From the perspective of morality politics, a policy is considered “good” if it improves human rights and reduces negative effects (Wagenaar & Altink, 2012). However, morality politics is at the same time “vulnerable to abrupt and drastic changes” (Wagenaar & Altink, 2012, p. 284). Institutions interested in maintaining the status quo will resist such changes, thus creating a barrier to decriminalizing certain activities, even if it would lead to the improvement of both human rights and public health.

Perhaps an even more important deciding factor of decriminalization attitudes is the cultural context of a specific country. The United States are characterized by a high effect of religious beliefs on the attitudes about various social issues, including abortion, gender equality, and divorce (Adameczyk, 2013). Even though the United States is a country characterized by a strong self-expressive culture, which is typically associated with more tolerance towards issues like drug use, they are less likely to justify soft drug

use (Cao & Zhao, 2012). Therefore, the cultural context in which politics operates is perhaps a more important predictor of decriminalization attitudes than politics itself.

### **Gender**

Research conducted into prostitution have found that gender does not play such a specific role in how decriminalization should be applied, but gender can play a role in determining decriminalization attitudes when the subject of decriminalization of certain activities is associated with either gender. For example, males are more likely to accept the decriminalization of prostitution, whereas females were more likely to have a negative opinion about decriminalizing prostitution, probably because sex workers are typically associated with a negative representation of their own gender and possibly with gender inequality (Jakobsson & Kotsadam, 2011).

The attitudes about abortion also differ by gender, but surprisingly, women are more likely to have a more liberal attitude about abortion than compared to males (Adamczyk, 2013). A possible explanation is the fact that women are more aware than males when it comes to alternative reasons for abortion, such as abortion after rape, and possibly because they are concerned how illegal abortion affects the health and safety of women who seek it.

In addition, females and feminists viewed prostitution as not involving economical necessity but rather contended that it was the absence of male responsibility towards women their refusal to place women on an equal platform. Feminists were also seen as more likely to oppose both decriminalization and legalization as a means to



combat prostitution as the rights of women were in part still controlled by legislation or the lack of it.

### **Ethnicity**

Research conducted in Canada discovered that around 50% of interviewee participants were Caucasian who indicated their preference for prostitution to be decriminalized. However, participants from other ethnicities such as East Asians were found to support the criminalization of prostitution. Their study maintained that this second group was more conservative therefore leading to the assumption that other ethnicities such as Caucasian may be perceived to be more liberal in their attitudes (Morton, Klein, & Gorzalka, 2012).

This raises the question whether adaptive and innovative thinking styles can be linked to ethnic influences; based on the above scenario, conservative East Asians can be seen as more adaptive rather than seeking new complete changes. This raises the possibility that conservatism can be viewed as an indicator of a certain thinking style; namely an adaptive approach.

Dillon (2014) found that external influences such as religion and morality did not explain the many variables that were found when comparing decriminalization attitudes towards certain gay activities and abortions. For example, it was found that black Protestants in the United States had no problem with abortion yet were against many gay activities. Furthermore, other variables came to light when introducing racial perceptions; yet largely it was not conclusively found that if one group favored decriminalization of abortion they would also support the legalization of gay rights.

It was found that ethnic backgrounds and cultures played a significant role in how these two issues were viewed in terms of decriminalization. For example, within the wide range of Christian denominations, almost half of certain black Christian denominations viewed gay rights as against culture and as immoral, whereas a significant portion of white Christian denominations supported gay rights yet were bitterly opposed to abortion.

Dillon (2014) found that external influences such as ethnicity were sometimes constructed via religious identity or identity with a specific religious group or denomination. The research noted that attitudes are formed by “everyday lived contexts in which people live, and how these experiences and the commonsense reality that they affirm” (p. 13). Moreover, attitudes and value commitments are inter-connected to education, racial segregation, region, social class and other variables and so decriminalization can be left solely to external influences as they can be inconsistent and without a clear set of values.

However, the research concedes that effort should be directed at researching why such variances are found in so many external influences and to determine a reason for every single variation. The study found that the rationale behind these variances could be best found from those with “lived experience.” Dillon (2014) goes on to state that the “on-the-ground circumstances in individual lives and in specific community environments can give a different practical and moral valence to one particular issue than to another” (p. 14). Whatever methodology is implemented to establish the relevance of

external ethnic influences in mediating attitudes it needs to look at viable alternatives to such traditional external influences.

These alternatives will need to accept the validity and influence of such external factors as in part some are based on real experiences and lived contexts. Value pluralism can engender an approach from outside any traditional external influences such an innovative approach that accepts the pluralism that exists in values and moral perceptions.

Perhaps a new and more risky approach would allow the introduction of fresh and new ideas that are acceptable to many or all-ethnic groups, but more specifically address the concerns of some of the main stakeholders; gay people, pro-abortionists and the criminal justice system. According to the research American demographics and ethnicities will undergo significant changes within the next few years therefore tried and tested methods of yesterday may not be enough to answer the decriminalization of societal problems tomorrow.

### **Demographics and Economics**

Despite the claim by most Western legislators that the rationale behind decriminalization is supposed to be pertaining to crime reduction and protection of civilians, evidence suggests that legalizing narcotics possession is driven more by popular public opinion and other factors such as economics. However, before looking at the influence of cost and pricing, it is important to mention the most common rationale or arguments used by Western legislators to criminalize the possession of addictive drugs:

*Drug users may engage in violent crimes.* While it is true that violence and fraud are possible behaviors among addicted individuals who want to finance their addiction, the majority of drug-related violence is “produced by large drug-trafficking organizations” (Russoniello, 2013, p. 413). Most drug users have criminal records for petty crimes both prior to and after quitting using drugs, so their tendencies to perform violent or non-violent crimes is not dependent on drugs and can be attributed to other demographic factors.

*Drug use causes increased public spending on health.* The decriminalization of drugs warrants a system to reduce harm and treat addicted individuals rather than penalize them. Portugal consolidated multiple drug use monitoring and rehabilitation agencies into one effective agency, and the government also created a national standard for harm reduction programs (Russoniello, 2013). Here the need to criminalize is directly related to the financial costs incurred by government in order to maintain public health. This suggests that decriminalization drivers such as popular public opinion, free will, etc. do not have the capacity to challenge government economics.

*Drug use is a public inconvenience.* The question of whether or not this so-called informational externality should be taken into account has been discussed among economists, but even if one decides to include this type of externality, prohibition would probably not be the welfare maximizing solution, as discussed by Shoemate (2015).

*Decriminalization of drugs exposes potential users to higher risks for drug use.* The above two reasons although appearing to be weak do possess a measure of concern for parents as pre-adult citizens are perhaps more easily influenced by external factors such as the lifestyles of celebrities; such can be accessed simply by watching TV. According to Hughes and Stevens (2012), the initial drug use rise among students was observed after the decriminalization of drugs, but that was only a period of experimental cannabis use, and the prevalence of cannabis use reduced afterwards. Therefore, even though potential users may experiment with drugs if they are decriminalized, the trend will not be permanent.

*Drug users are less productive and have a higher risk of premature death.*

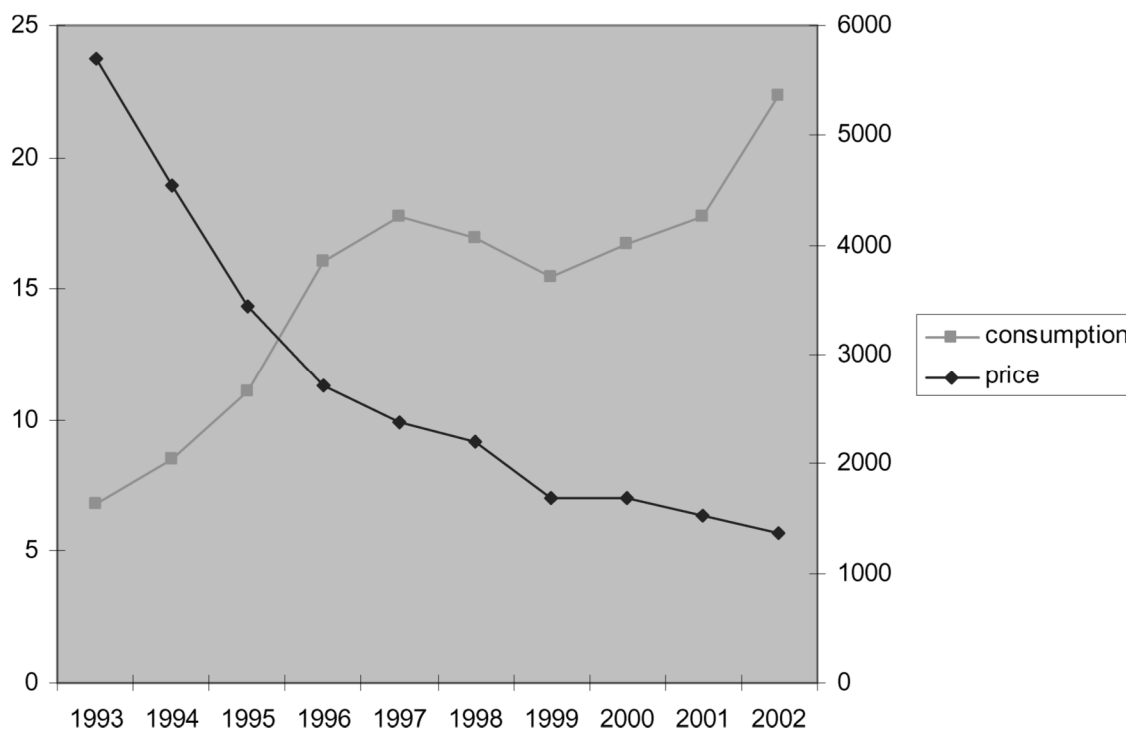
This argument only holds as an argument for intervention when there is a persistent scarcity of labor in an economy.

*Drug users must be protected against themselves as they obviously act in a self-destructive manner.* This argument cannot be evaluated in relation to economic theory as microeconomics assumes that every individual is rational and able to consider what is best for him or herself. Drug use does harm individuals and their self-awareness, which inhibits their ability to identify drug use as a problem, but penalizing drug use does not effectively solve the problems that motivate people to use drugs, whereas the decriminalization opens the possibility of treatment and increase the chances of successful rehabilitation (Hughes & Stevens, 2012; Russoniello, 2013).

While many of the above six reasons do possess a measure of validity and perhaps justification, proponents characterized by an innovative style of thinking could argue that the huge costs associated with fighting drug addiction related problems and serious health issues far outweigh any additional costs (argument 2 above) derived from the outcome of decriminalization.

This is supported by Hughes and Stevens (2012) noted earlier, who argued that the decriminalization of all narcotics in Portugal resulted in significant savings both in terms of financial costs and human resources. However, whereas addictive drug consumption fell overall in Portugal as decriminalization impacted many factors such as pricing, Figure 2 below depicts a different scenario. Here it is clearly seen that subsequent to legalization, prices inevitably drop yet in Oslo, the uptake in heroin consumption increased not decreased as in Portugal.

However, on a cautionary note Figure 2 only depicts an increase with heroin users not users of all narcotics. Moreover, it does not indicate if demographics play a part in terms of geographical location (Norway) and also there is no data concerning if the increase in consumption was absorbed by an equal increase in the number of new users. If pro-rata the rate of new users rose quicker than the consumption figures, then the actual amount consumed per heroin addict would have fallen.



*Figure 2.* Average monthly consumption in grams and gram prices of heroin among drug injectors in Oslo from 1993 to 2002.

Extracted from “To legalize or not to legalize? Economic approaches to the decriminalization of drugs,” by A. L. Bretteville-Jensen, 2006, *Substance use & misuse*, 41(4), p. 558.

Regardless whether demographics or economics played any significant part either prior to or after decriminalization of narcotics (either in part or full), contradictory outcomes derived from different research conducted in separate locations indicate that the argument pertaining to external influences such as demographics and economics as a primary causation factor of decriminalization, at best suspect and unsubstantiated. On the other hand, this plays into the argument that thinking styles may be more influential and have more bearing on the ability of decriminalization as an effective mechanism to

combat many of global societal problems, which are increasingly highlighted by the world spotlight.

### **Summary and Conclusion**

Various factors such as religious identity, ethnicity, race, gender, political affiliations, and morality were all associated with differences in decriminalization attitudes. However, the literature search did not identify studies in which the researchers investigated how thinking styles affect decriminalization attitudes. The relationship between thinking styles and decriminalization attitudes is considered important because it may reveal overlooked themes for future studies and contribute to the development of policies that are in alignment with the beliefs of both adaptors and innovators.



## Chapter 3: Methodology

### **Introduction**

The purpose of this study investigated the relationship between adaptive and innovative thinking styles and decriminalization attitudes. This chapter presents the methods that were used to access and collect all the necessary data and information needed to provide findings that will meet questions derived from the problem statement. The section Research Design and Rationale revisits the variables and the research design of the proposed study. The Methodology section is divided into four parts. The first part “Population” defines the target population and provides an estimate of the population size. The second part, Sampling and Sampling Procedure, presents the sampling strategy, sampling frame, recruitment methods, and the power analysis used to determine the sample size. The part “Procedures for Recruitment, Participation and Data Collection” contains the description of procedures from recruitment to debriefing the participants. The part “Instrumentation and Operationalization of Constructs” discusses the Kirton Adaption-Innovation questionnaire used in this study, as well as the survey for investigating decriminalization attitudes created by the researcher. Finally, the threats to internal and external validity are discussed in the “Threats to Validity” section, which also contains the section “Ethical Procedures” that covers the privacy, confidentiality, and risks associated with human participants.

### **Research Design and Rationale**

The main independent variable in this study is thinking style, which is a categorical variable with two levels: adaptors and innovators. Other important

independent variables in this study are gender, age, education level, race, and religion. The dependent variables are decriminalization attitudes about specific activities or attitudes about the outcomes of decriminalizing certain activities. A correlational design was utilized to investigate the relationships between the independent and the dependent variables.

The purpose of correlational studies is to investigate the patterns of relationships between two or more variables without controlling any of the variables measured during the study. Although finding a correlation between two variables does not allow the researcher to make causal inferences, true experiments are not feasible because the independent variables include thinking styles and demographic variables, which cannot be controlled by the researcher. The survey method was selected to collect data because it allows the researcher to cost-effectively recruit a large and random sample of participants. The Statistical Package for the Social Sciences (SPSS) was used to evaluate the data and to respond to research questions.

### **Research Questions and Hypotheses**

The main research question investigated in the study was: Do innovators and adaptors have different attitudes about decriminalization? A total of three specific research questions were developed, and one or more corresponding alternative hypotheses ( $H_a$ ) and a null hypothesis ( $H_0$ ) were developed for each RQ.

Research Question 1: Are innovators more likely to have positive attitudes about decriminalization compared to adaptors?

*H<sub>0</sub>1*: Innovators are not more likely to have positive attitudes about decriminalization compared to adaptors.

*H<sub>a</sub>1*: Innovators are more likely to have positive attitudes about decriminalization compared to adaptors.

Research Question 2: Do thinking styles, moderate the relationship between demographic variables and decriminalization attitudes?

*H<sub>0</sub>2*: Adaptive or innovative thinking styles do not significantly moderate the relationship between gender and decriminalization attitudes.

*H<sub>a</sub>2*: Adaptive or innovative thinking styles significantly moderate the relationship between gender and decriminalization attitudes.

*H<sub>0</sub>2.1*: Adaptive or innovative thinking styles do not significantly moderate the relationship between religion and decriminalization attitudes.

*H<sub>a</sub>2.1*: Adaptive or innovative thinking styles significantly moderate the relationship between religion and decriminalization attitudes.

*H<sub>0</sub>2.2*: Adaptive or innovative thinking styles do not significantly moderate the relationship between race and decriminalization attitudes.

*H<sub>a</sub>2.2*: Adaptive or innovative thinking styles significantly moderate the relationship between race and decriminalization attitudes.

*H<sub>0</sub>2.3*: Adaptive or innovative thinking styles do not significantly moderate the relationship between education level and decriminalization attitudes.

*H<sub>a</sub>2.3*: Adaptive or innovative thinking styles significantly moderate the relationship between education level and decriminalization attitudes.

*H<sub>0</sub>2.4*: Adaptive or innovative thinking styles do not significantly moderate the relationship between age and decriminalization attitudes.

*H<sub>a</sub>2.4*: Adaptive or innovative thinking styles significantly moderate the relationship between age and decriminalization attitudes.

*H<sub>0</sub>2.5*: Adaptive or innovative thinking styles do not significantly moderate the relationship between geographic locations and decriminalization attitudes.

*H<sub>a</sub>2.5*: Adaptive or innovative thinking styles significantly moderate the relationship between geographic locations and decriminalization attitudes.

Research Question 3: Do thinking styles affect the beliefs associated with the outcomes of prostitution decriminalization?

*H<sub>0</sub>3*: Innovators are not more likely to have positive beliefs about the outcomes of prostitution decriminalization compared to adaptors.

*H<sub>a</sub>3*: Innovators are significantly more likely to have positive beliefs about the outcomes of prostitution decriminalization compared to adaptors.

Research Question 4: Do thinking styles affect the beliefs associated with the outcomes of recreational drug use decriminalization?

*H<sub>0</sub>4*: Innovators are not more likely to have positive beliefs about the outcomes of drug decriminalization compared to adaptors.

*H<sub>a</sub>4*: Innovators are significantly more likely to have positive beliefs about the outcomes of drug decriminalization compared to adaptors.

## **Methodology**

### **Population**

The sampling frame of this study constituted the Walden University participant pool and social media flyers attached to online bulletin boards, where the faculty and students become participants, as well as, a national participant pool for the increased sample size required. The national sample size was needed due to poor turnout from the Walden pool. The exact demographic characteristics of the participants are difficult to predict because former Walden students and social media participants were recruited from the participant pool and flyers, so a diverse sample in terms of age and geographic location were gained.

### **Sampling and Sampling Procedures**

The researcher obtained approval from Walden University to use the institution's participant pool and obtain IRB approval for the social media flyer. To participate in the study, the participants will have to satisfy three inclusion criteria: (a) 18 years of age or older, (b) graduated with a high school diploma or GED, and (c) no prior felony convictions.

### **Procedures for Recruitment, Participation, and Data Collection**

The KAI questionnaire and the surveys were administered online. The first screen presented the consent form that included information about the purpose of the study, procedures, the voluntary nature of the participation, the ability to withdraw at any time, protection of their privacy, and confidentiality. All participants agreed to provide their consent will be redirected to the next screen, on which they will complete the KAI

questionnaire online, which takes approximately 10 to 15 minutes to complete. Second, they completed a survey designed to collect non-identifiable demographic information. Finally, they completed a survey about their decriminalization attitudes regarding various activities. After the data collection procedures, the participants were thanked for their participation and debriefed by restating the purpose of the study and reminding them how their responses will be used and stored. The participants were asked to agree to submit their responses so that they can have one last chance to withdraw from the study if they change their minds for whatever reason.

### **Instrumentation and Operationalization of Constructs**

The KAI questionnaire (Kirton, 1994) is a 32-item questionnaire that was used as the primary tool to determine which participants are innovators and which participants are adaptors. The KAI questionnaire is scored on a scale from 32 to 160 points, and the population mean is estimated at 96 points. According to Hipple et al. (2001), adaptors usually score between 60 and 90 points, whereas innovators usually score between 110 and 140 points, but the instrument has been used only in the fields of business and engineering. The KAI questionnaire is not valid unless scored by certified KAI score. A KAI certified instructor and Professor from Virginia Tech has agreed to assist with the scoring. Without previous applications in the field of forensic psychology, it is important to remain open-minded about the possible outcomes of this study.

Another two surveys were developed that collected the demographic information (Appendix A) and decriminalization attitudes (Appendix B) with responses on a scale from 1 to 10. For example, a participant can completely oppose (1) or completely support

(10) the decriminalization of a certain activity. Some of the listed activities include prostitution, drug use, polygamy, abortion, and various others. The participants will also be allowed to state and rate any other activity they can think of to contribute to the list. The participants will also rate their level of agreement (1 = completely agree; 10 = completely disagree) with various statements on the topic of decriminalization outcomes for prostitution and drug use. The statements were developed based on the findings identified in the current literature, but they were expressed in a negative way to avoid priming the participants. For example, if research showed that decriminalizing prostitution does not increase the demand for sex workers (Rissel et al., 2016), one statement the participants will evaluate will be: “Decriminalizing prostitution increases the number of people paying for sex.”

### **Data Analysis Plan**

The purpose of this quantitative research was to determine if there is a relationship between adaptive or innovative thinking styles and decriminalization attitudes expressed by the participants. The power analysis was conducted in R 3.3.1 using the “pwr” package for basic power calculations based on the effect sizes and notations from Cohen (1988). The sample size was calculated for each of the following tests: two-sample t test, one-way analysis of variance (ANOVA), and Pearson’s correlation. The values of Cohen’s  $d$ , Cohen’s  $f$ , and Pearson’s  $r$  were set to reflect a large effect size. Cohen (1988) warns researchers that effect size is relative to the field of study and even the variables investigated within one field of study, so the predetermined effect size coefficients should be used only when the researcher is investigating a topic

that has not been researched before. Without data from published studies that would be used to determine the expected effect size, the predefined effect sizes were used based on Cohen's (1988) recommendations. The significance level and power for each test were set at 0.05 and 0.90 respectively. The number of groups in ANOVA was set at six groups to compare the categorical variables measured in this study, such as race or geographic location, which is defined as a categorical variable of six levels. The calculated sample size was rounded to the nearest integer, and the results of the power analysis can be seen in Table 2. The sample size of 120 will be required to ensure that an ANOVA of categorical variables has sufficient power to produce a large effect.

Table 2.

*Sample Size Required to Achieve 0.90 Power*

	Two-sample <i>t</i> test	One-way ANOVA	Pearson's correlation
Groups	2	6	1
Effect size	$d = 0.8$	$f = 0.4$	$r = 0.5$
Significance level	0.05	0.05	0.05
Power	0.90	0.90	0.90
Sample size ( <i>n</i> )			
Per group	34	20	37
Total	68	120	37

**Threats to Validity**

The main internal validity threats to this study are confounding extraneous variables. The confounding threat will be controlled to a certain extent with a



demographic survey, which will measure the participants' demographic factors so that they can be included in the analysis. However, a lot of variables could moderate the relationships between thinking styles and decriminalization attitudes, including recent political events, influences of family members, and various other short-term and long-term influences.

The external validity was expected to be high because the Walden University participant pool was used to obtain a diverse sample in terms of age and geographic location. However, the participant pool consisted of individuals who are either attending or had attended Walden University, and the majority of the participants had higher education degree from the same higher education institution. That means it was not possible to generalize the findings to several populations, including individuals who never enrolled in higher education and those who went to different higher education institutions. Participation numbers from the pool were not enough for the sample size required.

External validity was reduced by increasing the number of participants and generalized findings to several populations through social media participation using Facebook and online bulletin boards. Submitting flyers on social media platforms met this intent. All participants were from within the United States and met the requirements of the study.

### **Ethical Procedures**

It is important that the rights of the participants are both respected and upheld through the research study. The survey will be administered online, so the informed

consent statement was provided on the first screen before the data collection began. The informed consent form included all relevant information the participants needed to understand how their data is stored and how their privacy and confidentiality are protected. The researcher did not have access to personally identifiable information because the participants will not be asked to provide such information, and the data collection procedures carry no risk to the physical or mental well-being of the participants. The data is being stored in a secure, locked location for a minimal duration of 5 years. The Institutional Review Board approval number for research is 02-13-17-0383277.

### **Summary**

The purpose of this quantitative research determined if there is a relationship between adaptive or innovative thinking styles and decriminalization attitudes expressed by the participants. The population for this study consisted of current and former Walden University students and staff, who was recruited using the online bulletin board of the Walden University Participant Pool and social media participants, such as Facebook, using posted flyers on bulleting boards. All participants were asked to complete the KAI questionnaire, demographic survey (Appendix A), and the decriminalization attitude survey (Appendix B) designed to achieve .90 sample size requirements.

## Chapter 4: Results

### **Introduction**

The purpose of this chapter is to discuss the data analysis and results of this study, which investigated the relationship between adaptive and innovative thinking styles and decriminalization attitudes. The four research questions formulated for this study were as follows:

Research Question 1: Are innovators more likely to have positive attitudes about decriminalization compared to adaptors?

Research Question 2: Do thinking styles moderate the relationship between demographic variables and decriminalization attitudes?

Research Question 3: Do thinking styles affect the beliefs associated with the outcomes of prostitution decriminalization?

Research Question 4: Do thinking styles affect the beliefs associated with the outcomes of recreational drug use decriminalization?

Hypotheses associated with each of the research questions were tested by means of statistical analysis, and results of that analysis are laid out in this chapter to respond to the set questions and find out the differences in decriminalization attitudes between adaptors and innovators, as well as the moderating effect of respondents' sociodemographic characteristics.

### **Data Collection**

The KAI questionnaire and the surveys were administered online, with the first screen presenting the consent form including information about the purpose of the study,

procedures, the voluntary nature of the participation, the ability to withdraw at any time, protection of their privacy, and confidentiality. Participants who agreed to participate were redirected to the next screen where they completed the KAI questionnaire online, taking approximately 10 to 15 minutes to complete. Second, they completed a survey designed to collect non-identifiable demographic information. Finally, they completed a survey about their decriminalization attitudes regarding various activities. After the data collection procedures, the participants were thanked for their participation and debriefed by restating the purpose of the study and reminding them how their responses would be used and stored. The participants were asked to agree to submit their responses so that they could review them or withdraw from the study by not submitting them for any reason. The resulting sample of respondents who completed all stages and submitted the completed survey constituted 123 persons.

### **Demographics**

This section outlines the descriptive statistical profile of the sample's demographics. The data on respondents' distribution of thinking styles, their socio-demographic data, and decriminalization attitudes are reviewed in detail to give a snapshot of the sample's features. The socio-demographic characteristics of this study's sample are provided in Table 3 below:

Table 3

*Sociodemographic Features of the Sample*

Criterion	Variants of responses	No. of responses
Group	Adaptor	34 (27.6%)
	Innovator	34 (27.6%)
Gender	Male	65 (52.8%)
	Female	58 (47.2%)
Age	18-24 years old	11 (8.9%)
	25-34 years old	28 (22.8%)
	35-44 years old	25 (20.3%)
	45-54 years old	34 (27.6%)
	55-64 years old	14 (11.4%)
	65-74 years old	8 (6.5%)
	75+ years old	3 (2.4%)
Education	High school diploma (GED)	25 (20.3%)
	Some college, but no degree	9 (7.3%)
	2-year college degree	14 (11.4%)
	4-year college degree	49 (39.8%)
	Graduate-level degree	26 (21.1%)
Race	White/Caucasian	85 (69.1%)
	Asian/ Pacific Islander	7 (5.7%)
	Black or African American	18 (14.6%)
	Hispanic	12 (9.8%)

	Other	1 (0.8%)
Religion	Christian/ Protestant/ Methodist/ Lutheran/ Baptist	64 (52%)
	Catholic	0 (0%)
	Mormon	23 (18.7%)
	Jewish	2 (1.6%)
	Muslim	16 (13%)
	Buddhist	2 (1.6%)
	Hindu	2 (1.6%)
	Atheist or agnostic	1 (0.8%)
	Other	4 (3.3%)
		9 (7.3%)
Geographic location (United States)	Northeast	24 (19.5%)
	South	41 (33.3%)
	Midwest	25 (20.3%)
	West	33 (26.8%)

As Table 3 suggests, only 68 individuals from the sample provided enough data to classify them either as adaptors or as innovators, so the sample accounted equally for 34 adaptors (27.6%) and 34 innovators (27.6%). In terms of gender, the larger part of the sample was male ( $n = 65$ , 52.8%), while females constituted 47.2% of the sample ( $n = 58$ ). However, the difference is quite small to consider it decisive, and it is possible to say that the sample was almost evenly divided between male and female respondents. As for education, the dominant part of the sample ( $n = 49$ , 39.8%) reported having a 4-year college degree. Those who had only a high school diploma included twenty-five

respondents (20.3%), nine more persons (7.3%) reported completing some college but without a degree, and fourteen more respondents completed a two-year college (11.4%). The portion of those having a graduate-level degree constituted twenty-six individuals (21.1% of the sample). Racial distribution of the sample leaned heavily towards Caucasian individuals; they accounted for 69.1% of the sample (85 respondents). The second most represented racial group was Black or African American (n = 18, 14.6%) and the third group was Hispanic (12 persons, 9.8%). The rest of the sample included seven Asian and Pacific Islander respondents (5.7%) and other races (n = 1, 0.8%).

The next socio-demographic variable considered in this study was the respondents' ethnicity. In the sample, 64 persons (52% of the sample) reported belonging to the Christian, Protestant, Methodist, Lutheran, and Baptist faiths, while twenty-three more respondents (18.7% of the sample) reported being Catholic. There were sixteen Jewish respondents in the sample (13%) and two respondents of Mormon faith (1.6%), two Muslims (1.6%), two Buddhists (1.6%), and one Hindu (0.8%). The remaining four respondents (3.3%) stated they are atheists, and nine persons (7.3%) self-identified as belonging to some other type of religion. The last variable was the respondents' geographical location; they belonged either to Northeast (n = 24, 19.5%), or to South (n = 41, 33.3%), Midwest (n = 25, 20.3%), and West (n = 33, 26.8%).

After the socio-demographic data requested from the respondents, the survey included a part examining their support for a range of reforms including decriminalization of prostitution, drug possession, and drug use. The level of respondents' support for the issue may be seen in Tables 4-6 below.

Table 4

*Descriptive Statistics for Prostitution Decriminalization Support*

Groups	1	2	3	5	9	10
Adaptor	15	1	1	1	11	5
Innovator	8	0	3	2	9	12

The results of support ranking show that adaptors are much more skeptical about the possibility of decriminalizing prostitution. Out of the entire sample of 34 persons, 15 respondents ranked decriminalization as “1”, which stands for “completely oppose.” This means that roughly a half of the sample of adaptors is completely against the possibility of prostitution decriminalization, which is a much higher figure as compared to that of innovators – only eight persons (1/4 of the sample) stated that they oppose decriminalization of prostitution overall. On the other side of the continuum (scores “9” and “10” standing for “completely support”), there are 16 adaptors and 21 innovators, which also suggests a greater positive attitude towards decriminalization among innovators. Given this distribution of responses, one may conclude that adaptors are generally much less supportive of the initiative to decriminalize prostitution than innovators are.



Table 5

*Descriptive Statistics for Drug Possession Decriminalization Support*

Groups	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>10</b>
Adaptor	18	2	3	3	1	6	1
Innovator	8	2	5	0	10	5	4

Innovators also ranked the issue of drug possession decriminalization much more positively. In terms of completely opposing the reform initiative, eighteen adaptors ranked the statement with the score of “1” and only eight innovators did the same. As for support for the initiative, seven adaptors selected the scores of “9” and “10,” which stand for complete support of the reform, and nine innovators did so. The prevalence of innovators’ support for the reform may be already seen at the score of “5”, which is moderate support – only one adaptor selected this variant, while ten innovators awarded the initiative that score. Thus, overall, there is a much higher number of innovators voicing moderate to strong support for the decriminalization of drug possession, and a much lower number of them oppose the initiative.

Table 6

*Descriptive Statistics for Recreational Drug Use Support*

Group	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>10</b>
Adaptor	11	2	4	1	5	7	4
Innovator	3	1	3	0	3	14	10

A much more evident division between adaptors and innovators may be seen in the ranking of the point about decriminalization of recreational drug use. Here, the score

of “1” meaning “completely oppose” was selected by eleven adaptors and only three innovators, which means that a much greater number of adaptors opposes recreational drug use and hold conservative, negative attitudes to the issue. On the other side of the continuum, the number of adaptors who ranked the initiative as “9” and “10”, which stands for “completely support”, was eleven, as compared to twenty-four persons from the innovator group. Based on this distribution of findings, one may conclude that innovators are strikingly more supportive for the initiative of recreational drug legalization, while adaptors are more negative about the issue.

Overall, as it comes from Tables 4-6, innovators are definitely much more supportive on all three aspects. In terms of prostitution decriminalization, fifteen adaptors completely opposed the idea as compared to only eight innovators, while only five adaptors completely supported decriminalization as compared to twelve innovators. In terms of drug possession, 18 adaptors completely opposed the idea as compared to eight innovators, while four innovators and only one adaptor voiced support. Finally, eleven adaptors and only three innovators voiced opposition to recreational drug use’s decriminalization, while support (points 9 and 10) was heavily dominated by innovators ( $n = 24$ ) as compared to adaptors ( $n = 11$ ).

The final portion of descriptive data was provided in terms of agreement with certain statements about the consequences of decriminalization. Descriptive statistics on these statements is provided in Table 7 below.

Table 7

*Descriptive Statistics for Decriminalization Statements*

Decriminalization Statements	Groups	1 (A)	2	3	4	5	9	10 (D)
Decriminalizing prostitution increases the number of people paying for sex.	Adaptor	18	2	8	1	1	4	0
	Innovator	15	2	10	0	2	4	1
Decriminalizing prostitution increases the prevalence of venereal disease	Adaptor	13	3	6	1	6	5	0
	Innovator	6	1	8	2	11	4	2
Decriminalizing prostitution increases the prevalence of sex trafficking	Adaptor	13	1	6	3	2	8	1
	Innovator	5	1	2	1	13	9	3
Decriminalizing prostitution has a negative effect on social values	Adaptor	13	3	4	1	3	6	4
	Innovator	7	2	1	0	6	13	5
Decriminalizing prostitution has a negative effect on the moral development of future generations	Adaptor	11	3	4	1	3	7	5
	Innovator	6	1	3	0	5	11	8
Decriminalizing drug use increases the prevalence of users and risk of addiction	Adaptor	21	1	4	3	1	1	3
	Innovator	14	3	5	0	2	7	3
Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Adaptor	11	0	9	4	3	4	3
	Innovator	6	1	3	0	10	8	6
Decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.).	Adaptor	13	2	7	2	3	5	2
	Innovator	5	2	4	1	10	7	5
Decriminalizing drug use has a negative effect on social values	Adaptor	13	1	5	3	3	3	6
	Innovator	5	2	2	0	5	9	11

Decriminalizing drug use has a negative effect on the moral development of future generations	Adaptor	15	0	3	2	5	3	6
	Innovator	5	2	1	1	6	8	11

A thorough review of Table 7 shows that innovators scored higher on all statements relating to decriminalization of prostitution. For instance, the statement “Decriminalizing prostitution increases the number of people paying for sex” was ranked 1 (which stands for agreement) by fifteen innovators and eighteen adaptors – that means that the number of adaptors seeing the possibility of this consequence is higher. A much larger number of innovators were less sure about the likelihood of this change’s occurrence – the rank of “3” was awarded by ten innovators, suggesting that they doubt whether the decriminalization of prostitution may indeed lead to that consequence. As for the disagreement with the statement, none of adaptors disagreed, while one innovator ranked the statement as “10”, “complete disagreement.” This means that though few innovators rejected the possibility of the increasing number of people paying for sex following the decriminalization of prostitution, such individuals are still present among innovators, not adaptors.

The second statement related the decriminalization of prostitution to increasing incidence of venereal disease infections. In this regard, the number of adaptors supporting this statement was also higher; among those who ranked the statement “1” and “2” meaning complete agreement with it, there were sixteen adaptors and seven innovators. The same way, the opposite side of the continuum – ranks of “9” and “10” meaning complete disagreement with the statement, were indicated by five adaptors and six

innovators. Such a distribution of responses show with an insignificant difference, innovators are still more positive about decriminalization of prostitution and do not see a negative link between it and increase of sexually transmitted diseases' incidence.

Third, the respondents were asked to rank the statement "Decriminalizing prostitution increases the prevalence of sex trafficking;" fourteen adaptors agreed with it by ranking the statement "1" and "2", while only six innovators supported the statement. In terms of complete disagreement, nine adaptors and twelve innovators ranked the statement "9" and "10", which shows that innovators are much more optimistic about decriminalization and do not associate this reform's possibility with the sex trafficking crime.

The fourth statement inquired whether adaptors and innovators believe that decriminalization of prostitution may potentially cause erosion of social values. Here, sixteen adaptors and only nine innovators supported the statement by ranking it "1" and "2", while complete opposition to that statement was voiced by ten adaptors and eighteen innovators. This distribution of responses shows the considerable difference between perception of innovators and adaptor regarding the moral aspect of prostitution. While conservative, skeptical individuals may deem prostitution as a socially undermining activity, innovators treat it in a more unbiased and objective manner, not drawing a line between a particular society's social values and prostitution.

A similar distribution of responses was observed for the statement "Decriminalizing prostitution has a negative effect on the moral development of future generations". Here, fourteen adaptors and seven innovators agreed with the statement by

ranking it “1” and “2”, while twelve adaptors and nineteen innovators disagreed with the statement by ranking it “9” and “10. This again shows that adaptors are more apt to associate prostitution with morality, while innovators do not draw this association and treat the moral development of people and prostitution as unrelated issues.

The second part of the statements related to drug use decriminalization. Here, the same snapshot of response distribution can be made – adaptors scored much higher on the points “1” and “2”, while adaptors’ responses were more plentiful on the scores of “9” and “10.” For instance, the statement “Decriminalizing drug use increases the prevalence of users and risk of addiction” was supported by twenty-two adaptors and seventeen innovators, while four adaptors and ten innovators opposed it. The statement about the increase of drug-related crimes was also met with more support from adaptors ( $n = 11$ ) than from innovators ( $n = 7$ ), while seven adaptors opposed the statement as compared to fourteen innovators. The opinion that drug use decriminalization may boost the prevalence of drug-related issues like divorces, homelessness, and the like was supported by fifteen adaptors and only seven innovators, while opposition to the statement was voiced by seven adaptors and twelve innovators.

Next, the survey asked the respondents to indicate whether they agree with the statement, “Decriminalizing drug use has a negative effect on social values.” Here, again the greater support was evident from the side of innovators. There were fourteen adaptors and seven innovators among those who supported the statement, while those who opposed it accounted for nine adaptors and twenty innovators. Finally, the statement about the negative effect on the moral development of future generations that

decriminalization of recreational drugs may cause was supported by fifteen adaptors and seven innovators, and opposed by nine adaptors and nineteen innovators. These overall scores on drug use decriminalization suggest that innovators are largely more positive about this reform and do not associate the named risks and social consequences with decriminalization overall, opposite to adaptors who believe that decriminalization may indeed bring about these changes and affect the community negatively.

In general, as one can see from Table 7, adaptors scored higher on all lower points (1-2) standing for complete agreement with the statement, while innovators scored higher on the top points (9-10) standing for complete disagreement with the statements. This means that adaptors support a more conservative view of decriminalization leading to negative individual and social consequences, while innovators are ready to challenge those conventions and do not associate decriminalization with such negative consequences.

After considering the descriptive statistics for the sample, the researcher proceeded to the statistical calculations of t-test, ANOVA, and correlation to test hypotheses formulated for four research questions. The results of these tests and their implications for this study's hypothesis validation are presented in the following section.

## **Results**

This section contains the outcomes of statistical testing conducted for testing each of the formulated hypotheses for the sake of answering four research questions.

### **Impact of Thinking Style on Decriminalization Attitudes**

The first research question targeted the exploration of association between the respondents' thinking style and their attitudes towards decriminalization of prostitution and drug use. It was hypothesized that due to some specific psychological features and peculiarities, innovators tend to be much more supportive of such debatable initiatives as decriminalization. The formulated hypotheses sounded as follows:

$H_01$ : Innovators are not more likely to have positive attitudes about decriminalization compared to adaptors.

$H_{a1}$ : Innovators are more likely to have positive attitudes about decriminalization compared to adaptors.

To test them, the *t test* and ANOVA were conducted to determine whether there is a statistically significant difference between innovators and adaptors in terms of support for decriminalization. *T test* results can be seen in Table 8 below.





		Levene's Test for		t-test for Equality of Means						
		Equality of								
		Variances								
		F	Sig.	t	df	Sig.	Mean	Std. Error	95% Confidence	
						(2-	Difference	Difference	Interval of the	
						tailed)			Difference	
									Lower	Upper
Prostitution	Equal variances assumed	3.396	0.070	-1.867	66	0.066	-1.14706	0.61424	-2.37343	0.07932
	Equal variances not assumed			-1.867	65.653	0.066	-1.14706	0.61424	-2.37355	0.07944
Drug Possession	Equal variances assumed	0.073	0.789	-2.509	66	<b>*0.015</b>	-1.29412	0.51572	-2.32378	-0.26446
	Equal variances not assumed			-2.509	65.991	<b>*0.015</b>	-1.29412	0.51572	-2.32378	-0.26445
Recreational Drug Use	Equal variances assumed	6.916	<b>0.011</b>	-3.269	66	<b>**0.002</b>	-1.67647	0.51284	-2.70038	-0.65256
	Equal variances not assumed			-3.269	63.461	<b>**0.002</b>	-1.67647	0.51284	-2.70115	-0.65179

Notes: \* p < .05., \*\* p < .01, \*\*\* p < .001

The *t test* results presented in Table 8 revealed that there was a statistically significant difference between the attitudes of adaptors and innovators to drug possession,  $t(66) = -2.509, p < .015$  and recreational drug use,  $t(66) = -3.269, p < .05$ . However, there was not a significant difference between adaptors and innovators as it relates to attitudes toward prostitution  $t(66) = 1.41, p > .05$ .

Examining the means for innovators and adaptors, Table 9 shows that there is a definite prevalence of innovators' support for the decriminalization of drug possession with adaptors scoring, on average, 2.67 (SD = 2.11) and innovators scoring, on average, 3.97 (SD = 2.13). Similarly, for recreational drug use, the average score was 3.7 (SD = 2.31) for adaptors and 5.38 (SD = 1.89) for innovators, with innovators expressing greater favor for the decriminalization of recreational drug use. Although, the difference was not statistically significant, innovators (M=4.85, SD=2.43) expressed greater support for decriminalization of prostitution as compared to adaptors (M=3.7, SD=2.62).

In sum, these figures suggest that innovators are more open and more positive about the possibility of decriminalizing prostitution, drug use and possession, confirming the hypothesis. Therefore, the first hypothesis is validated, and the null hypothesis is rejected – there is a statistically significant difference between adaptors and innovators on the issue of decriminalization, though the *t test* showed a statistically significant difference on two aspects out of three only.

Table 9

*Group Descriptive Statistics for the t test on Research Question 1*

	Group	N	Mean	Std. Deviation	Std. Error Mean
Prostitution	Adaptor	34	3.7059	2.62308	0.44986
	Innovator	34	4.8529	2.43873	0.41824
Drug Possession	Adaptor	34	2.6765	2.11374	0.36250
	Innovator	34	3.9706	2.13889	0.36682
Recreational Drug Use	Adaptor	34	3.7059	2.31634	0.39725
	Innovator	34	5.3824	1.89120	0.32434

Table 9 shows that there is a definite prevalence of innovators' greater support for decriminalization of both drug use and prostitution. While adaptors scored 3.7 for prostitution, innovators' mean score is 4.85, which more than one point higher. This difference suggests that a greater number of innovators ranked the decriminalization of prostitution as a possible, desirable reform than the adaptors did. The same trend is observed for drug possession (adaptors' mean score was 2.67 and innovators' score was 3.97) and for recreational drug use (the mean of 3.7 for adaptors and 5.38 for innovators). These figures suggest that innovators are more open and more positive about the possibility of decriminalizing prostitution and drug use or possession. Therefore, the first hypothesis is validated, and the null hypothesis is rejected – there is a statistically significant difference between adaptors and innovators on the issue of decriminalization, though the *t test* showed a statistically significant difference on two aspects out of three only.

### **Moderating Effect of Thinking Styles on the Relationship between Thinking Styles and Decriminalization Support**

The second research question related to determining the moderating impact of six socio-demographic factors (age, gender, race, geographic location, religion, and education) on the adaptors' and innovators' attitudes to decriminalization. Thus, correspondingly, six pairs of hypotheses were tested in this section. The minimum sample requirement of 120 individuals was met for the ANOVA, with the sample including 123 individuals. The first one related to eliciting the moderating effect of gender on adaptors' and innovators' decriminalization attitudes:

*H<sub>02</sub>*: Adaptive or innovative thinking styles do not significantly moderate the relationship between gender and decriminalization attitudes.

*H<sub>2</sub>*: Adaptive or innovative thinking styles significantly moderate the relationship between gender and decriminalization attitudes.

To test the hypothesis, an ANOVA was conducted to find out whether adaptors and innovators of different genders treat decriminalization differently. The outcomes of ANOVA may be viewed in Table 10 below.

Table 10

*ANOVA Results for the Moderating Effect of Gender (N=123)*

		Sum of Squares	df	Mean Square	F	Sig.
Prostitution	Between Groups	101.455	1	101.455	19.952	<b>***0.000</b>
	Within Groups	615.293	121	5.085		
Drug Possession	Between Groups	8.327	1	8.327	1.802	0.182
	Within Groups	559.137	121	4.621		
Recreational Drug Use	Between Groups	26.918	1	26.918	5.724	<b>*0.018</b>
	Within Groups	569.050	121	4.703		
Decriminalizing prostitution increases the number of people paying for sex.	Between Groups	0.003	1	0.003	0.001	0.978
	Within Groups	430.729	121	3.560		
Decriminalizing prostitution increases the prevalence of venereal disease.	Between Groups	15.908	1	15.908	4.391	<b>*0.038</b>
	Within Groups	438.352	121	3.623		
Decriminalizing prostitution increases the prevalence of sex trafficking.	Between Groups	41.353	1	41.353	10.401	<b>***0.002</b>
	Within Groups	481.054	121	3.976		
Decriminalizing	Between Groups	46.449	1	46.449	9.680	<b>***0.002</b>

prostitution has a negative effect on social values.	Within Groups	580.624	121	4.799		
Decriminalizing prostitution has a negative effect on the moral development of future generations.	Between Groups	63.304	1	63.304	13.616	***0.000
	Within Groups	562.550	121	4.649		
Decriminalizing drug use increases the prevalence of users and risk of addiction.	Between Groups	1.674	1	1.674	0.412	0.522
	Within Groups	491.367	121	4.061		
Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Between Groups	0.548	1	0.548	0.128	0.721
	Within Groups	516.867	121	4.272		
Decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.).	Between Groups	1.897	1	1.897	0.459	0.499
	Within Groups	500.168	121	4.134		
Decriminalizing drug use has a negative effect on social values.	Between Groups	23.741	1	23.741	4.547	*0.035
	Within Groups	631.722	121	5.221		

Decriminalizing drug use	Between Groups	17.937	1	17.937	3.289	0.072
has a negative effect on	Within Groups	659.933	121	5.454		
the moral development						
of future generations.						

Notes: \*  $p < .05$ .,  $\square\square$   $p < .01$ ,  $\square\square\square$   $p < .001$

As it is shown in Table 10, the ANOVA results revealed adaptors and innovators scored differently on attitudes to prostitution [ $F(1, 121) = 19.95, p < .05$ ] and recreational drug use [ $F(1, 121) = 5.72, p < .05$ ], which suggests that there is a statistically significant level of difference between the possessors of these two thinking styles in terms of support for decriminalization. However, as for agreement with a set of statements on the consequences of decriminalization, innovators and adaptors perceived not all statements differently.

The two groups responded differently to “Decriminalizing prostitution increases the prevalence of venereal disease” [ $F(1, 121) = 4.39, p < .05$ ], “Decriminalizing prostitution increases the prevalence of sex trafficking” [ $F(1, 121) = 10.40, p < .05$ ], “Decriminalizing prostitution has a negative effect on social values” [ $F(1, 121) = 9.68, p < .05$ ], “Decriminalizing prostitution has a negative effect on the moral development of future generations” [ $F(1, 121) = 13.62, p < .05$ ], and “Decriminalizing drug use has a negative effect on social values” [ $F(1, 121) = 4.55, p < .05$ ].

Here, ANOVA results show that the opinions of adaptors and innovators are completely different regarding the consequences of prostitution legalization, while the issue of drug legalization met more consensus – only one out of five statements was answered statistically different by these two groups. Based on these findings, one may



conclude that gender indeed has a moderating effect on the adaptors' and innovators' attitudes to decriminalization, but this concerns prostitution to a greater degree, and to a much lesser extent relates to drug use.

The second pair of hypotheses targeted the moderating impact of religion on the adaptors' and innovators' attitudes to decriminalization:

*H<sub>0</sub>2.1*: Adaptive or innovative thinking styles do not significantly moderate the relationship between religion and decriminalization attitudes.

*H<sub>1</sub>2.1*: Adaptive or innovative thinking styles significantly moderate the relationship between religion and decriminalization attitudes.

The ANOVA results for this socio-demographic factor may be seen in Table 11 below.

Table 11

*ANOVA Results for the Moderating Effect of Religion (N=123)*

	Groups	Sum of Squares	Df	Mean Square	F	Sig.
Prostitution	Between Groups	85.346	8	10.668	1.926	0.063
	Within Groups	631.402	114	5.539		
Drug Possession	Between Groups	85.510	8	10.689	2.528	<b>*0.014</b>
	Within Groups	481.954	114	4.228		
Recreational Drug Use	Between Groups	59.630	8	7.454	1.584	0.137
	Within Groups	536.338	114	4.705		
Decriminalizing prostitution increases the number of people paying for sex.	Between Groups	60.815	8	7.602	2.343	<b>*0.023</b>
	Within Groups	369.916	114	3.245		
Decriminalizing prostitution increases the prevalence of venereal disease.	Between Groups	39.606	8	4.951	1.361	0.221
	Within Groups	414.654	114	3.637		
Decriminalizing prostitution increases the prevalence of sex trafficking.	Between Groups	41.110	8	5.139	1.217	0.295
	Within Groups	481.296	114	4.222		
Decriminalizing prostitution has a negative effect on social values.	Between Groups	64.810	8	8.101	1.643	0.120
	Within Groups	562.264	114	4.932		
Decriminalizing	Between Groups	46.710	8	5.839	1.149	0.336

prostitution has a negative effect on the moral development of future generations.	Within Groups	579.144	114	5.080		
Decriminalizing drug use increases the prevalence of users and risk of addiction.	Between Groups	50.690	8	6.336	1.633	0.123
	Within Groups	442.351	114	3.880		
Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Between Groups	47.725	8	5.966	1.448	0.184
	Within Groups	469.690	114	4.120		
Decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.).	Between Groups	58.258	8	7.282	1.871	0.071
	Within Groups	443.807	114	3.893		
Decriminalizing drug use has a negative effect on social values.	Between Groups	52.674	8	6.584	1.245	0.279
	Within Groups	602.789	114	5.288		
Decriminalizing drug use has a negative effect on the moral development of future generations.	Between Groups	50.659	8	6.332	1.151	0.335
	Within Groups	627.211	114	5.502		

Notes: \*  $p < .05$ .,  $\square\square$   $p < .01$ ,  $\square\square\square$   $p < .001$

As seen from Table 11, there is much less difference between the groups if the moderating effect of religion is included into the formula. The ANOVA results revealed a statistically significant difference only in terms of support for the decriminalization of drug possession [ $F(8, 114) = 2.52, p < .05$ ] and a different level of agreement with the statement, “Decriminalizing prostitution increases the number of people paying for sex,” [ $F(8, 114) = 2.34, p < .05$ ]. There was no significant difference utilizing the effect of religion to determine the attitudes to decriminalization of prostitution [ $F(8, 114) = 1.93, p > .05$ ] and drug use [ $F(8, 114) = 1.58, p > .05$ ] its moderating effect is insignificant.

The third set of hypotheses dealt with the moderating effect of race on decriminalization attitudes of adaptors and innovators. Here, two tested hypotheses were

*H<sub>0</sub>2.2*: Adaptive or innovative thinking styles do not significantly moderate the relationship between race and decriminalization attitudes.

*H<sub>a</sub>2.2*: Adaptive or innovative thinking styles significantly moderate the relationship between race and decriminalization attitudes.

To test the validity of these hypotheses, ANOVA testing was also held. Its results are displayed in Table 12 below.

Table 12

*ANOVA Results for the Moderating Effect of Race (N=123)*

		Sum of Squares	Df	Mean Square	F	Sig.
Prostitution	Between Groups	27.983	4	6.996	1.199	0.315
	Within Groups	688.765	118	5.837		
Drug Possession	Between Groups	24.285	4	6.071	1.319	0.267
	Within Groups	543.178	118	4.603		
Recreational Drug Use	Between Groups	39.862	4	9.966	2.115	0.083
	Within Groups	556.105	118	4.713		
Decriminalizing prostitution increases the number of people paying for sex.	Between Groups	13.830	4	3.457	0.979	0.422
	Within Groups	416.902	118	3.533		
Decriminalizing prostitution increases the prevalence of venereal disease.	Between Groups	9.062	4	2.265	0.600	0.663
	Within Groups	445.199	118	3.773		
Decriminalizing prostitution increases the prevalence of sex trafficking.	Between Groups	18.082	4	4.520	1.058	0.381
	Within Groups	504.325	118	4.274		
Decriminalizing	Between Groups	11.519	4	2.880	0.552	0.698

prostitution has a negative effect on social values.	Within Groups	615.554	118	5.217		
	Decriminalizing	14.791	4	3.698	0.714	0.584
prostitution has a negative effect on the moral development of future generations.	Within Groups	611.062	118	5.178		
	Decriminalizing	11.607	4	2.902	0.711	0.586
drug use increases the prevalence of users and risk of addiction.	Within Groups	481.433	118	4.080		
	Decriminalizing	19.740	4	4.935	1.170	0.328
drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Within Groups	497.675	118	4.218		
	Decriminalizing	23.487	4	5.872	1.448	0.223

drug use increases	Within Groups	478.578	118	4.056		
the prevalence of						
all drug-related						
issues in society						
(e.g., divorce						
rates,						
homelessness,						
etc.).						
Decriminalizing	Between Groups	34.285	4	8.571	1.628	0.172
drug use has a	Within Groups	621.179	118	5.264		
negative effect on						
social values.						
Decriminalizing	Between Groups	38.087	4	9.522	1.756	0.142
drug use has a	Within Groups	639.783	118	5.422		
negative effect on						
the moral						
development of						
future generations.						

Notes: \*  $p < .05.$ ,  $\square\square p < .01,$   $\square\square\square p < .001$

Data provided in Table 12 above shows that there is no statistically significant difference on any of the scales examined in this study as soon as the moderating variable of race is included. Thus, one may conclude that race does not have any statistically significant effect on adaptors' and innovators' attitudes to prostitution and drug possession and use.

The fourth pair of hypotheses tested in this study includes the examination of how the educational level determines adaptors' and innovators' attitudes to decriminalization of prostitution and drug possession and use. The hypotheses tested in this section are as follows:

*H<sub>0</sub>2.3*: Adaptive or innovative thinking styles do not significantly moderate the relationship between education level and decriminalization attitudes.

*H<sub>a</sub>2.3*: Adaptive or innovative thinking styles significantly moderate the relationship between education level and decriminalization attitudes.

To test the validity of these hypotheses, another ANOVA was conducted by the inclusion of age groups into the analysis. Its outcomes may be seen in Table 13 below.



Table 13

*ANOVA Results for the Moderating Effect of Educational Level (N=123)*

		Sum of Squares	Df	Mean Square	F	Sig.
Prostitution	Between Groups	46.431	4	11.608	2.043	0.093
	Within Groups	670.317	118	5.681		
Drug Possession	Between Groups	36.306	4	9.077	2.016	0.097
	Within Groups	531.157	118	4.501		
Recreational Drug Use	Between Groups	25.861	4	6.465	1.338	0.260
	Within Groups	570.106	118	4.831		
Decriminalizing prostitution increases the number of people paying for sex.	Between Groups	4.083	4	1.021	0.282	0.889
	Within Groups	426.649	118	3.616		
Decriminalizing prostitution increases the prevalence of venereal disease.	Between Groups	7.117	4	1.779	0.470	0.758
	Within Groups	447.143	118	3.789		
Decriminalizing prostitution increases the prevalence of sex trafficking.	Between Groups	28.728	4	7.182	1.717	0.151
	Within Groups	493.678	118	4.184		
Decriminalizing prostitution has a negative effect on social values.	Between Groups	31.494	4	7.873	1.560	0.190
	Within Groups	595.580	118	5.047		
Decriminalizing prostitution	Between Groups	16.010	4	4.002	0.774	0.544

has a negative effect on the moral development of future generations.	Within Groups	609.844	118	5.168		
Decriminalizing drug use increases the prevalence of users and risk of addiction.	Between Groups	25.060	4	6.265	1.580	0.184
	Within Groups	467.980	118	3.966		
Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Between Groups	22.437	4	5.609	1.337	0.260
	Within Groups	494.977	118	4.195		
Decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.).	Between Groups	29.329	4	7.332	1.830	0.128
	Within Groups	472.736	118	4.006		
Decriminalizing drug use has a negative effect on social values.	Between Groups	38.402	4	9.600	1.836	0.126
	Within Groups	617.062	118	5.229		
Decriminalizing drug use has a negative effect on the moral development of future generations.	Between Groups	46.118	4	11.529	2.153	0.078
	Within Groups	631.752	118	5.354		

Notes: \*  $p < .05$ ,  $\square\square$   $p < .01$ ,  $\square\square\square$   $p < .001$

Results in Table 13 suggest that there is no moderating effect of education on adaptors' and innovators' attitudes to decriminalization. The Sig. value for all statements exceeded the statistically significant level ( $p > .05$ ), which means that there is no

meaningful difference between the groups in terms of responses. This concludes that the socio-demographic variable of educational level does not produce any moderating effect on the studied relationship, and the null hypothesis is validated in this pair of hypotheses.

The fifth part of this section refers to the examination of the moderating impact that age may produce on the decriminalization attitudes. Hypotheses tested here are as follows:

*H<sub>0</sub>2.4*: Adaptive or innovative thinking styles do not significantly moderate the relationship between age and decriminalization attitudes.

*H<sub>a</sub>2.4*: Adaptive or innovative thinking styles significantly moderate the relationship between age and decriminalization attitudes.

The moderating effect of age was also tested with the help of ANOVA, its outcomes may be viewed in Table 14 below.

Table 14

*ANOVA Results for the moderating Effect of Age (N=123)*

	Groups	Sum of Squares	Df	Mean Square	F	Sig.
Prostitution	Between Groups	69.791	6	11.632	2.086	0.060
	Within Groups	646.957	116	5.577		
Drug Possession	Between Groups	82.081	6	13.680	3.269	<b>**0.005</b>
	Within Groups	485.383	116	4.184		
Recreational Drug Use	Between Groups	61.380	6	10.230	2.220	<b>*0.046</b>
	Within Groups	534.588	116	4.609		
Decriminalizing prostitution	Between Groups	9.722	6	1.620	0.446	0.846
	Within Groups	421.009	116	3.629		
increases the number of people paying for sex.						
Decriminalizing prostitution	Between Groups	37.518	6	6.253	1.741	0.118
	Within Groups	416.742	116	3.593		
increases the prevalence of venereal disease.						
Decriminalizing prostitution	Between Groups	58.138	6	9.690	2.421	<b>*0.031</b>
	Within Groups	464.268	116	4.002		
increases the prevalence of sex trafficking.						
Decriminalizing	Between Groups	57.834	6	9.639	1.964	0.076

prostitution has a negative effect on social values.	Within Groups	569.239	116	4.907		
	Between Groups	63.854	6	10.642	2.197	<b>*0.048</b>
Decriminalizing prostitution has a negative effect on the moral development of future generations.	Within Groups	562.000	116	4.845		
	Between Groups	36.160	6	6.027	1.530	0.174
Decriminalizing drug use increases the prevalence of users and risk of addiction.	Within Groups	456.880	116	3.939		
	Between Groups	39.913	6	6.652	1.616	0.149
Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Within Groups	477.502	116	4.116		
	Between Groups	39.979	6	6.663	1.673	0.134

drug use increases	Within Groups	462.086	116	3.983		
the prevalence of						
all drug-related						
issues in society						
(e.g., divorce						
rates,						
homelessness,						
etc.).						
Decriminalizing	Between Groups	73.999	6	12.333	2.460	<b>*0.028</b>
drug use has a	Within Groups	581.464	116	5.013		
negative effect on						
social values.						
Decriminalizing	Between Groups	73.272	6	12.212	2.343	<b>*0.036</b>
drug use has a	Within Groups	604.597	116	5.212		
negative effect on						
the moral						
development of						
future						
generations.						

Notes: \*  $p < .05$ ,  $\square\square p < .01$ ,  $\square\square\square p < .001$

As seen from Table 14, results of ANOVA testing for the respondents' age show adaptors and innovators of different age groups conclusively hold varying views on decriminalization. In terms of support, representatives of different age categories rated only drug possession [ $F(8, 114) = 3.27, p < .05$ ] and use differently [ $F(8, 114) = 2.22, p < .05$ ], while agreement on different statements related to the consequences of

decriminalization of prostitution and drug possession and use was rated differently on both aspects. Adaptors and innovators of different ages responded differently towards “Decriminalizing prostitution increases the prevalence of sex trafficking” [F (6, 116) = 2.42,  $p < .05$ ], “Decriminalizing prostitution has a negative effect on the moral development of future generations” [F (6, 116) = 2.34,  $p < .05$ ], “Decriminalizing drug use has a negative effect on social values” [F (6, 116) = 2.46,  $p < .05$ ], and “Decriminalizing drug use has a negative effect on the moral development of future generations” [F (6, 116) = 2.42,  $p < .05$ ]

These findings suggest that adaptors and innovators of different ages treat the social and moral implications of decriminalization differently. While representatives of younger generations are more open to new perspectives and changes, older generations are more sceptical about those issues and have more conservative views regarding the morality of decriminalization reforms. Thus, given the evidence provided above, one may state that the hypothesis about the moderating effect of age on decriminalization attitudes and support is validated – there is indeed an effect of age on the intensity of support and agreement with the decriminalization initiatives.

The final set of hypotheses tested in this section referred to the moderating effect of geographic location in which the respondents reside and their attitudes to decriminalization of prostitution and drug use and possession. The tested hypotheses were as follows:

*H<sub>0</sub>2.5*: Adaptive or innovative thinking styles do not significantly moderate the relationship between geographic locations and decriminalization attitudes.

*H<sub>a</sub>2.5*: Adaptive or innovative thinking styles significantly moderate the relationship between geographic locations and decriminalization attitudes.

Their validity was also checked with the help of ANOVA testing, and its outcomes may be seen in Table 15 below.



Table 15

*ANOVA Results for the Moderating Effect of Geographic Location (N=123)*

Groups		Sum of Squares	df	Mean Square	F	Sig.
Prostitution	Between Groups	37.786	3	12.595	2.208	0.091
	Within Groups	678.962	119	5.706		
Drug Possession	Between Groups	13.507	3	4.502	0.967	0.411
	Within Groups	553.957	119	4.655		
Recreational Drug Use	Between Groups	23.712	3	7.904	1.644	0.183
	Within Groups	572.255	119	4.809		
Decriminalizing prostitution increases the number of people paying for sex.	Between Groups	16.747	3	5.582	1.605	0.192
	Within Groups	413.985	119	3.479		
Decriminalizing prostitution increases the prevalence of venereal disease.	Between Groups	10.738	3	3.579	0.960	0.414
	Within Groups	443.523	119	3.727		
Decriminalizing prostitution increases the prevalence of sex trafficking.	Between Groups	22.221	3	7.407	1.762	0.158
	Within Groups	500.185	119	4.203		
Decriminalizing prostitution has a negative effect on social values.	Between Groups	42.566	3	14.189	2.889	<b>*0.038</b>
	Within Groups	584.507	119	4.912		
Decriminalizing prostitution has a negative effect on the moral development of future generations.	Between Groups	37.229	3	12.410	2.509	0.062
	Within Groups	588.625	119	4.946		
Decriminalizing drug use increases the prevalence of users and risk of addiction.	Between Groups	1.106	3	0.369	0.089	0.966
	Within Groups	491.935	119	4.134		
Decriminalizing drug use increases the	Between Groups	18.857	3	6.286	1.500	0.218
	Within Groups					

prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Within Groups	498.558	119	4.190		
Decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.).	Between Groups	26.921	3	8.974	2.247	0.086
	Within Groups	475.144	119	3.993		
Decriminalizing drug use has a negative effect on social values.	Between Groups	26.219	3	8.740	1.653	0.181
	Within Groups	629.244	119	5.288		
Decriminalizing drug use has a negative effect on the moral development of future generations.	Between Groups	18.251	3	6.084	1.098	0.353
	Within Groups	659.619	119	5.543		

Notes: \*  $p < .05$ ,  $\square\square$   $p < .01$ ,  $\square\square\square$   $p < .001$

Results from Table 15 suggest that there is no statistically significant difference between adaptors and innovators from different geographical locations and their support for the decriminalization of prostitution and drug possession and use. There was no difference on all three aspects of support (prostitution, drug possession, and recreational drug use), while only one statement was responded to significantly differently – “Decriminalizing prostitution has a negative effect on social values,” [F (3, 119) = 2.89,  $p < .05$ ], which means that adaptors and innovators from different geographic locations have varied views on whether decriminalization of prostitution may have eroding effects on the social values. In all other statements, no difference was observed, which makes it possible to validate the null hypothesis and to state that the geographic location has no moderating effect on the attitudes to decriminalization.

### **Impact of Thinking Styles on Beliefs Associated with Decriminalization of Prostitution**

The third research question targeted specifically the impact of thinking styles on the beliefs and attitudes associated with prostitution. Hypotheses formulated to answer this research question were as follows:

*H<sub>03</sub>*: Innovators are not more likely to have positive beliefs about the outcomes of prostitution decriminalization compared to adaptors.

*H<sub>a3</sub>*: Innovators are significantly more likely to have positive beliefs about the outcomes of prostitution decriminalization compared to adaptors.

Testing of these hypotheses was done with the help of correlation analysis (to determine whether decriminalization attitudes are overall correlated with the group to which a respondent belongs) and t-test to show whether higher support for decriminalization of prostitution is statistically significant. The findings of correlation may be viewed in Table 16 below. The minimum requirement of 37 individuals set in Chapter 3 was met for Pearson's correlation, with the tested sample in this research question including 68 individuals.

Table 16

*Correlation Test Outcomes for Decriminalization Support (N=68)*

		Decriminalizing prostitution increases the number of people paying for sex.	Decriminalizing prostitution increases the prevalence of venereal disease.	Decriminalizing prostitution increases the prevalence of sex trafficking.	Decriminalizing prostitution has a negative effect on social values.	Decriminalizing prostitution has a negative effect on the moral development of future generations.
Group	Pearson Correlation	0,090	.245*	.331**	.271*	.246**
	Sig. (2-tailed)	0,465	0,044	0,006	0,026	0,043
	N	68	68	68	68	68
1	Pearson Correlation		.544**	.375**	.347**	.348**
	Sig. (2-tailed)		0,000	0,000	0,000	0,000
	N		123	123	123	123
2	Pearson Correlation			.697**	.662**	.648**
	Sig. (2-tailed)			0,000	0,000	0,000
	N			123	123	123

3	Pearson	.793**	.808**
	Correlation		
	Sig. (2-tailed)	0,000	0,000
	N	123	123
4	Pearson		.927**
	Correlation		
	Sig. (2-tailed)		0.000
	N		123
*. Correlation is significant at the 0.05 level (2-tailed).			
**. Correlation is significant at the 0.01 level (2-tailed).			

The findings presented in Table 16 indicate a strong correlation of the individuals' belonging to a certain thinking style with support for decriminalization of prostitution. Correlation between the group of respondents and a statement, "Decriminalizing prostitution increases the number of people paying for sex," was the only non-significant one, which suggests that both adaptors and innovators share a common opinion on this subject. However, the correlations were statistically significant on all remaining four statements: that decriminalizing prostitution increases the prevalence of venereal disease ( $r(66) = .245, p < .044$ ), increases the prevalence of sex trafficking (correlation: .331, Sig. value = .006), has a negative effect on social values (correlation: .271, Sig. value = .026), and has a negative effect on the moral development of future generations (correlation: .246, Sig. value = .043). The t-test Sig. values also suggest that adaptors and

innovators voiced differing levels of agreement on four out of five statements regarding the consequences of prostitution decriminalization. Considering the descriptive statistics provided in Table 16 above, one may conclude that innovators are indeed more supportive for decriminalization and do not associate the named negative consequences with decriminalization. Consequently, the third hypothesis is also validated – innovators are more supportive for decriminalization of prostitution.

### **Impact of Thinking Styles on Beliefs Associated with Decriminalization of Drug Use**

The final research question explored in this study was whether innovators are more likely to support decriminalization of drug possession and use. The hypotheses tested to answer this research question were as follows:

*H<sub>04</sub>*: Innovators are not more likely to have positive beliefs about the outcomes of drug decriminalization compared to adaptors.

*H<sub>a4</sub>*: Innovators are significantly more likely to have positive beliefs about the outcomes of drug decriminalization compared to adaptors.

To test these hypotheses, the correlation test was held (together with the t-test values for two groups – adaptors and innovators). The minimum requirement of 37 individuals set in Chapter 3 was met for Pearson's correlation, with the tested sample in this research question including 68 individuals. Its results may be seen in Table 17 below.

Table 17

*Correlation Test Outcomes for Decriminalization Support (N=68)*

		Decriminalizi ng drug use has a negative effect on the moral development of future generations.	Decriminalizi ng drug use increases the prevalence of users and risk of addiction.	Decriminalizin g drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	Decriminalizi ng drug use increases the prevalence of all drug- related issues in society (e.g., divorce rates, homelessness, etc.).	Decriminalizi ng drug use has a negative effect on social values.
Grou p	Pearson	.329**	0,196	.296*	.324**	.333**
	Correlatio n					
	Sig. (2- tailed)	0.006	0.110	0.014	0.007	0.005
	N	68	68	68	68	68
1	Pearson		.545**	.580**	.742**	.981**
	Correlatio n					
	Sig. (2- tailed)		0.000	0,000	0,000	0,000
	N		123	123	123	123

2	Pearson	.594**	.612**	.527**
	Correlatio			
	n			
	Sig. (2-	0.000	0,000	0,000
	tailed)			
	N	123	123	123
3	Pearson		.740**	.596**
	Correlatio			
	n			
	Sig. (2-		0.000	0.000
	tailed)			
	N		123	123
4	Pearson			.749**
	Correlatio			
	n			
	Sig. (2-			0.000
	tailed)			
	N			123

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The correlation for support of the decriminalization of drug use and possession revealed a very strong correlation between belonging to a certain group and the answers to statements about the consequences of decriminalization. In this regard, four out of five statements were ranked differently by the representatives of different groups – adaptors and innovators. This means that the representatives of these two groups have different



opinions about the following statements: decriminalizing drug use has a negative effect on the moral development of future generations ( $r(66) = .329, p < .05$ ), Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.) ( $r(66) = .296, p < .05$ ), decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.) ( $r(66) = .324, p = .05$ ), and decriminalizing drug use has a negative effect on social values ( $r(66) = .333, p < .05$ ). The only statement on which there was no statistically significant correlation found between adaptors and innovators was the one that “decriminalizing drug use increases the prevalence of users and risk of addiction,” which means that adaptors and innovators generally agree on this point and rank the likelihood of this consequence similarly.

### **Summary**

Based on the results of survey analysis presented in this chapter, the researcher validated hypotheses one, three, and four, while in the third hypothesis, only age, gender, and religion proved to have a statistically significant moderating effect on the decriminalization attitudes of adaptors and innovators. The results of this study suggest that innovators are generally much more open to risky innovations and reforms like decriminalization of prostitution and drug use, while there is still greater support for decriminalization of prostitution than for drugs. The results also showed that the level of decriminalization support is strongly correlated with the thinking style, and that adaptors are much more skeptical and fearful of the possibility of negative social consequences that decriminalization may cause. Implications of these findings and their relation to prior research are discussed in more detail in Chapter 5.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

This chapter is dedicated to the discussion of findings presented in the previous chapter. It describes the principles, patterns, and relationships among the variables and discusses the gaps and inconsistencies in research. I also explain how the generated results relate to expectations and the reviewed literature and analyze how they contradict or fit into the previously published knowledge. I will begin with discussing how adaptors and innovators differ in terms of their attitudes to decriminalization in general and then describes how they differ in their perceptions of drug and prostitution decriminalization specifically. Finally, the moderating effects of sociodemographic factors are analyzed and compared with the existing literature.

### **Interpretation of the Findings**

The first research question aimed to explore whether adaptors and innovators perceive decriminalization of drug use and prostitution differently. Results validated the first hypothesis that innovators are more likely to have positive attitudes about decriminalization compared to adaptors, while the null hypothesis was rejected. Analysis of results showed a statistically significant difference between adaptors and innovators on the issue of decriminalization. However, the *t* test demonstrated a statistically significant difference on two aspects (drug possession and drug use) only and no difference for prostitution. In other words, innovators were found to be generally more supportive of decriminalization and more willing to go against the established social

rules compared to adaptors. The latter, in turn, were found to be more conservative and less willing to seek innovative solutions to address the identified issues.

As for the related third and fourth questions, the difference between innovators and adaptors was still present. The third research question sought to find out whether innovators are more supportive of decriminalization of prostitution. Results showed that there is a statistically significant difference between groups in terms of the level of support or agreement. There is a correlation between the groups and support for prostitution decriminalization. However, the difference was not found for the following point: “Decriminalizing prostitution increases the number of people paying for sex.” One may suggest that while adaptors and innovators agree with this idea, the latter are simply more positive about the situation and do not believe it may become a serious social concern.

The fourth research question asked whether innovators are generally more supportive of decriminalizing the drug use. Again, a statistically significant difference between groups in terms of the level of support was found. There is a correlation between the group and support for drug use decriminalization. No difference was identified for the statement that decriminalizing drug use increases the prevalence of users and risk of addiction.

These findings are consistent with the previously published literature and Kirton’s theory in the first place. As previously noted, the theory postulates that individual thinking styles determine the way people form perceptions and attitudes towards different things and phenomena (Kirton, 1984). Results generated in this study

support this theory and show that the so-called innovators and adaptors indeed significantly differ when it comes to assessing specific social issues. As maintained by Kirton (1984), adaptors are more compliant with rules, laws, and commonly accepted standards and practices. It explains why adaptors were found to have negative attitudes to decriminalization of drugs and prostitution. One may suggest that for people with this thinking style, changing the established norms regarding these issues is not welcomed, as they prefer stability and are accustomed to perceiving drug use and prostitution as something illegal and undesirable.

Innovators, in turn, are more likely to look at things from a broader perspective, argued Kirton (1984). They are ready to change the established norms and seek creative solutions to different social and personal problems. This research supports these statements, as it demonstrates that innovators perceive decriminalization of drug use and prostitution as one of the possible solutions to the current social and legal problems. One needs to mention, however, that innovators may sometimes fail to consider all advantages and disadvantages of their ideas and attitudes, so one cannot claim that their position is the only right in the present case (Kirton, 1984).

Given that innovators and adaptors are the extremes on both sides, it would be fair to say that any decision-making regarding decriminalization should balance creativity of innovators with stability and thoughtfulness of adaptors. Research analyzed in the literature review supports this idea. On the one hand, studies show that although adaptive solutions for prostitution and drug abuse have worked well in some contexts (Dempsey, 2015), innovative insight should also be incorporated, as it currently seems

the best way to address stigmatization, abuse, and crime (Barnert et al., 2016). Moral concerns and traditions supported by adaptors are undoubtedly important, but decriminalization proposed by innovators has proven to decrease violence and crime levels, allocate police resources more effectively, and promote better public health (Cunningham & Shah, 2014; Hubbard & Prior, 2013; Werb et al., 2011). At the same time, decriminalization may work in some countries and situations but be completely ineffective or even harmful in others; so one may suggest that both adaptors and innovators can make their unique contribution to addressing this issue (Cao & Zhao, 2012; Hughes, 2015; Librett, 2012; Russoniello, 2013).

Presented findings are generally consistent with the empirical research. Although no recent credible studies on this topic were conducted in the sphere of forensic psychology, available research still aligns with Kirton's theory and this study's findings (Jakobsson & Kotsadam, 2009; Hipple et al., 2001; Kirton, 1984; Leong et al., 2014; Wang et al., 2016). It is evident that the adaption-innovation theory is applicable across various contexts, so it proves to be a good theory base for in-depth research in the field of forensic psychology as well. However, it is important to highlight that no real connection between the thinking style and decriminalization attitudes can be established without considering socio-demographic factors that are described below.

### **Moderating Effects of Socio-Demographic Factors**

The second research question aimed at determining the moderating effect of six socio-demographic factors (age, gender, race, geographic location, religion, and

education) on the adaptors' and innovators' attitudes to decriminalization of prostitution and drug use. Below is the discussion of findings in the context of the current research.

### **Age**

Assessment of the first variable of age showed statistically a significant difference between adaptors and innovators in their perceptions of drug use. However, no difference between these groups was found in relation to attitudes to prostitution, suggesting the two are either unrelated in a cross-generational study, or that one is seen as inherently illegal by one generation, while the other is not seen as illegal by other generation. This is somewhat understandable as one regards drug paraphernalia and the other a woman's body, but is skewed based on the fact both have been labeled illegal at both federal and state levels, begging the question why marijuana consumption continues to upset older generations. Moreover, there was difference in responses based on generation and age to the following statements: (a) decriminalizing prostitution increases the prevalence of sex trafficking; (b) decriminalizing prostitution has a negative effect on the moral development of future generations; (c) decriminalizing drug use has a negative effect on social values, and (d) decriminalizing drug use has a negative effect on the moral development of future generations. These findings allow suggesting that age considerably influences the way people perceive the moral, legal, and social implications of drug use and prostitution.

The study by Savas (2001) confirmed generational factors may impact a person's perceptions of drug decriminalization, showing Baby Boomers—the generation born in the 1960s—have a relatively liberal view of drug use compared to older individuals. It is

also generally believed that younger people, known today as Millennials and Generation Xers have more positive views of drug use decriminalization, possibly because they consume marijuana more often than other generations (Miech et al., 2015).

Unfortunately, to the author's best knowledge, very few recent, large-scale empirical studies have been conducted to confirm or dispute this study's findings, so further research in this area is highly recommended.

### **Gender**

As for the gender variable, a statistically significant difference was found between males and females in their acceptance of prostitution decriminalization. Specifically, the present study found difference in the following statements: (a) decriminalizing prostitution has a negative effect on the moral development of future generations; (b) decriminalizing prostitution has a negative effect on social values; (c) decriminalizing prostitution increases the prevalence of sex trafficking, and (d) decriminalizing prostitution increases the prevalence of venereal disease. These findings align with the existing empirical research suggesting females struggle with the idea of legalizing prostitution while males are more accepting of the idea. For example, one of the studies showed that males are more likely to accept decriminalization of prostitution, whereas females tend to have a negative opinion on this issue (Jakobsson & Kotsadam, 2009). Scholars suggested that this difference possibly exists because women often associate sex workers with a negative representation of the female gender, inequality, and abuse (Jakobsson & Kotsadam, 2011). Another possible explanation is that females view prostitution as something caused by male irresponsibility but not an economic

necessity and therefore do not believe that decriminalization will help address the problem.

No statistically significant difference between male and female attitudes toward drug possession was found. However, gender is a mediating factor when it comes to attitudes to recreational drug use, and a significant difference was found in the statement, “Decriminalizing drug use has a negative effect on social values.” Crowley, Collins, Delargy, Laird, and Van Hout (2017) supported these findings, as the researchers revealed a significantly higher proportion of male compared to female participants strongly agreed with decriminalization policies. In contrast to this study, which showed male doctors were more likely to agree that cannabis should be legalized for medical use compared with their female colleagues, another study by Kondrad and Reid (2013) found no effects of gender on decriminalization attitudes. This inconsistency shows that more research on this issue should be conducted.

### **Geographical Location**

This study showed that geographical location is not a significant mediating factor in adaptors’ and innovators’ perceptions of prostitution and drug use decriminalization. The only statement that was responded differently by adaptors and innovators sounds was as follows, “Decriminalizing prostitution has a negative effect on social values.” This finding shows that people of different cultures may hold different views as to how prostitution and drugs can affect the morals and societal values. For example, Caucasians have always experienced more privilege regarding marijuana possession, even when it was a federal offense in all states. They may be in favor of it being



legalized because to this group there have been few major risks to their freedom or lifestyle. Minority groups, specifically the African American community, may be even more in favor of legalization as they are penalized and imprisoned at a rate of almost eighty percent higher than their Caucasian cohorts, and legalization may spare them this racial bias. Similarly, racial, ethnic, and religious background can impact how one views the legalization of prostitution. An atheist, with no religious doctrine dictating what women can and cannot do with their bodies may realize the autonomy of the female body, as well as the economic aspect of prostitution and be in favor of legalization while a Free Will Baptist would be against it, asserting women are to be wives and mothers only. Prior research conducted by Adamczyk (2013) proved that the cultural, or geographic, variable indeed matters. For example, people from the United States tend to have negative attitudes towards soft drug use and their decriminalization, which may be explained by the influence of religion (Cao & Zhao, 2012). Therefore, studies show that geographical and cultural context in which people live is an important predictor of decriminalization attitudes.

In general, prior research indicates that location (country) may significantly affect people's perceptions of decriminalization policies even when demographic differences are considered. In another study, Jakobsson and Kotsadam (2011) revealed that Norwegians had more positive perceptions of decriminalizing sex work compared to the Swedes. Although both countries are usually perceived as quite liberal towards drugs use and prostitution, there are still some differences between them, which means that the geographical context is closely related to more subtle effects of religion, traditions,

policies, cultures, and other characteristics defining people's views and perceptions in each particular country (Jakobsson & Kotsadam, 2011).

### **Race**

Results revealed no statistically significant difference on any of the scales examined as soon as the moderating variable of race is considered. Essentially, race was found to have no statistically significant effect on adaptors' and innovators' attitudes to decriminalizing prostitution and drug possession or drug use. However, prior research shows that race and ethnicity play a significant role in shaping people's perceptions. For instance, in a Canadian study, Morton et al. (2012) showed that Caucasians were more likely to support decriminalization of prostitution compared to East Asians. The latter were found to be more conservative or adaptive to the idea, indicating race and ethnicity are linked to people's attitudes towards the controversial social issues. Dillon (2014), in turn, maintained that race is interrelated with other variables including religion, societal values, and socioeconomic background, making it challenging to determine how exactly this variable affects attitudes to prostitution and drugs. It was also unclear as to whether the East Asian population residing in Canada was of first, second, or third generation, which would hold significant bearing on the study. It can be assumed first generation immigrants may have more conservative ideals regarding these issues than third or fourth generation immigrants.

### **Religion**

Results revealed a statistically significant difference between adaptors and innovators only in terms of support for decriminalization of drug possession. The

difference was also found in the reaction to the statement, “Decriminalizing prostitution increases the number of people paying for sex.” The results suggest that the effect of religion is limited in terms of determining the attitudes to decriminalization of prostitution and drug use. As such, adaptors and innovators agreed on matters regarding prostitution; the issue was clearly defined for each group. Decriminalizing prostitution was thought to only increase the number of people paying for sex, and no other issues were taken into account. The hot button issue for these groups was decriminalizing marijuana. However, literature shows that the moderating effect of religion can be significant. Chambers (2011) argued that strong Christian beliefs and little or no access to cross-cultural viewpoints often contribute to an adaptive thinking style, which is based on the existing legislation and is highly antagonistic towards any liberal changes.

In another reputable study, Schulze, Canto, Mason, and Skalin (2014) argued that all laws in Europe that decriminalize prostitution and drugs use originate from people’s religious and moral attitudes, which are difficult to change, and unwilling to see the things from a different perspective and seek innovative solutions to the pressing social issues. In general, the difference between the study’s findings and previous research may be explained by different sample sizes and demographic characteristics of respondents. In any case, further research on this variable would be extremely valuable.

### **Education**

The analysis of the last variable of education showed no difference between adaptors and innovators. It appears that educational level does not affect the way both groups perceive decriminalization of drugs use and prostitution. To the author’s best

knowledge, no recent empirical studies were conducted that explore the relationship between educational level and attitudes to drugs and prostitution, so no evidence is available to either confirm or refute the presented findings. It could be postulated, however, that higher education would allow individuals from either group to supply a more informative argument to supplement their side of the issue.

### **Summary**

To summarize, it has been found that out of six variables analyzed in the study, only three (age, gender, and religion) were found to moderate the relationships between adaptors' and innovators' attitudes to decriminalization, but not on all parameters (prostitution, drug use, and drug possession). Race, education, and geographical location were found to be insignificant factors.

### **Limitations of the Study**

Although the research has achieved its aims, some unavoidable limitations should be mentioned. To begin with, the cross-sectional nature of the collected data does not allow inferring causal relationships and generate more detailed and insightful findings. Thus, for example, although it was found that age affects adaptors and innovators perceptions, it is not known how exactly representatives of different generations perceive decriminalization of drug use and prostitution. Moreover, the sample population consisting of 123 individuals (all from the United States) might not represent the attitudes of the general public since it was conducted among the people with college or university education. These concerns are to be addressed in future research exploring differences in perceptions between adaptors and innovators.

### **Recommendations**

The primary recommendation that can be generated from this study's findings is to conduct further research in the area. Results confirm that Kirton's theory may indeed help explain the diversity of views regarding decriminalization of prostitution and drugs. It may serve as a valuable theoretical framework to study the set of variables that affect people's perceptions, such as age, gender, religion, etc., as well as their moderating effect on adaptors and innovators. Since this study did not aim at finding the causal relationships, future research could focus on analyzing how exactly the studied variables may affect the thinking styles and decriminalization attitudes. Moreover, it would be useful to collect the data from a larger sample size including participants with different demographic characteristics and educational levels. Conducting further research is critically important for the sphere of forensic psychology given the absence of standardized instruments assessing decriminalization attitudes and the lack of clearly defined models explaining the relationships between psychological factors and perceptions of decriminalization. Finally, future research based on this study's findings can greatly inform the development of decriminalization policies.

### **Implications**

The main aim of this research was to find out whether innovators and adaptors as defined in Kirton's theory have different attitudes to decriminalization. The study thus addressed the almost total lack of research evidence on how thinking styles may affect people's perceptions of the legal status of certain activities. The research contributed to the current knowledge by applying the adaptation-innovation theory to the sphere of

forensic psychology to learn more about adaptors and innovators differences in attitudes and factors that may moderate these differences. Accordingly, the primary practical contribution of the present research is that it offers necessary empirical data, which provides insight into people's subjective evaluations of some legal issues. These findings contribute to positive social change by providing insight into differences in gender, race, religion, geographical location and how these and other variables impacted views on decriminalization of the issue. This information is important given the lack of empirical data on complex psychological factors influencing public perceptions.

### **Conclusion**

To conclude, this study found that out of six variables analyzed, three (age, gender, and religion) were found to significantly moderate the relationships between adaptors' and innovators' attitudes to decriminalization of prostitution, drug use, and drug possession. Race, education, and geographical location, in turn, were found to be insignificant factors. At the same time, although the moderating effect of some variables has not been established, the research revealed that adaptors and innovators have different perceptions of decriminalization policies, and this finding could be used for developing legal policies and bringing more depth to forensic psychology research. More importantly, it highlights that peoples' perceptions regarding ambiguous social issues are extremely complex and form under the influence of numerous factors. Research and practice should reflect this complexity and try to consider and respect the existing differences, especially in the presence of social change agendas.

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## Appendix A: Demographic Information Survey

For each question, check one answer that applies to you or provide an exact number to answer the question.

## 1. Gender

\_\_\_\_\_ Male                      \_\_\_\_\_ Female

## 2. Age (exact number in years)

\_\_\_\_\_ Years

## 3. Education Level

\_\_\_\_\_ High-School                      \_\_\_\_\_ GED  
\_\_\_\_\_ Bachelor's                      \_\_\_\_\_ Master's

## 4. Race

\_\_\_\_\_ White                      \_\_\_\_\_ Black                      \_\_\_\_\_ Asian  
\_\_\_\_\_ Hispanic                      \_\_\_\_\_ Other

If Other, please specify: \_\_\_\_\_

## 5. Religion

\_\_\_\_\_ Christianity                      \_\_\_\_\_ Islam                      \_\_\_\_\_ Judaism  
\_\_\_\_\_ Hinduism                      \_\_\_\_\_ Buddhism                      \_\_\_\_\_ Non-Religious  
\_\_\_\_\_ Other

If Other, please specify: \_\_\_\_\_

## 6. Place you live

Country \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_

## Appendix B: Decriminalization Attitudes Survey

**Definition:** Decriminalization is the process of amending or repealing certain statutes that make activities criminal, which means that a decriminalized activity is no longer processed by the criminal justice system, even though legal fines and regulations for those activities may still be enforced.

To answer the questions in this section, please circle only one number on the 1-10 scale provided next to each statement.

1. To what extent do you oppose or support the decriminalization of the following activities? (1 = oppose completely; 10 = support completely)

	<b>Oppose</b>					<b>Support</b>				
Prostitution	1	2	3	4	5	6	7	8	9	10
Drug Possession	1	2	3	4	5	6	7	8	9	10
Recreational Drug Use	1	2	3	4	5	6	7	8	9	10
Abortion	1	2	3	4	5	6	7	8	9	10
Euthanasia (physician-assisted suicide)	1	2	3	4	5	6	7	8	9	10
Gambling	1	2	3	4	5	6	7	8	9	10
Polygamy	1	2	3	4	5	6	7	8	9	10
Other (optional, state which):										
_____	1	2	3	4	5	6	7	8	9	10
_____	1	2	3	4	5	6	7	8	9	10
_____	1	2	3	4	5	6	7	8	9	10

\_\_\_\_\_ 1 2 3 4 5 6 7 8 9 10

2. To what extent do you agree or disagree with the following statements about the decriminalization of prostitution? (1 = completely agree; 10 = completely disagree)

	<b>Agree</b>					<b>Disagree</b>				
Decriminalizing prostitution increases the number of people paying for sex.	1	2	3	4	5	6	7	8	9	10
Decriminalizing prostitution increases the prevalence of venereal disease.	1	2	3	4	5	6	7	8	9	10
Decriminalizing prostitution increases the prevalence of sex trafficking.	1	2	3	4	5	6	7	8	9	10
Decriminalizing prostitution has a negative effect on social values.	1	2	3	4	5	6	7	8	9	10
Decriminalizing prostitution has a negative effect on the moral development of future generations.	1	2	3	4	5	6	7	8	9	10

3. To what extent do you agree or disagree with the following statements about the decriminalization of recreational drug use? (1 = completely agree; 10 = completely disagree)

	<b>Agree</b>					<b>Disagree</b>				
Decriminalizing drug use increases the prevalence of users and risk of addiction.	1	2	3	4	5	6	7	8	9	10
Decriminalizing drug use increases the prevalence of drug-related crimes (e.g., drug dealing, theft, etc.).	1	2	3	4	5	6	7	8	9	10
Decriminalizing drug use increases the prevalence of all drug-related issues in society (e.g., divorce rates, homelessness, etc.).	1	2	3	4	5	6	7	8	9	10
Decriminalizing drug use has a negative effect on social values.	1	2	3	4	5	6	7	8	9	10

Decriminalizing drug use has a negative  
effect on the moral development of future  
generations. 1 2 3 4 5 6 7 8 9 10