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Integrating Psychological Theory into the Legal Doctrine of Deterrence

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Integrating Psychological Theory into the Legal Doctrine of Deterrence

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An Honors College Project Presented to

the Faculty of the Undergraduate

College of Health and Behavioral Studies

James Madison University

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Abstract

The deterrence principle within the field of criminology is essential in preventing deviant behavior before its commission and defines the relationship individuals have with an institution's system of punishment. Deterrence was originally studied solely among criminal populations, but modern deterrence theory broadens the definition of crime to actions relevant to the general population through any act societal values would proscribe. The addition of psychological principles to deviance research and the usage of university student populations has highlighted academic dishonesty as a prolific deviant behavior outcome variable. Criminological researchers have identified factors that complement or mirror psychological and educational theory, yet these fields are slow to unify principles into an integrated framework. The present study aims to identify compatible factors across fields that consistently predict student cheating behavior and integrate them into a behavioral model of students' commission of cheating. Students from James Madison University will complete a survey including scales for each of the target factors and data will be analyzed to identify the proposed model's fit alongside correlational relationships among the surveyed factors. Expected results will be informative on the issue of academic dishonesty in universities and provide support for integration of theoretical approaches. Implications may be relevant beyond the academic context to inform other approaches to deviance research. Due to the extant circumstances surrounding the COVID-19 epidemic, data was not able to be collected. In lieu of data analysis, a variety of potential outcome scenarios are presented and discussed.

Integrating Psychological Theory into the Legal Doctrine of Deterrence

Effective crime prevention policies are by nature marked by a long-term stably decreasing incarceration rate. However, the U.S. incarceration rate has rapidly increased over the past four decades. Criminologist Kelli Tomlinson (2016) wrote that the prison and jail population in the US rose from 501,866 people in 1980 to 2,284,913 in 2009, and when people on probation and parole are included in the figures, the population raised from 1,840,400 people in 1980 to 7,225,800 in 2009. This increase indicates the need for the U.S. criminal justice system to adopt more informed crime prevention perspective.

The criminal justice system is an essential duty of government which considers philosophical, criminological, and psychological aspects in order to identify and practice effective policy to prevent crime (Tomlinson, 2016). Criminologist Daniel S. Nagin (2013) defines the three core mechanisms of crime prevention as incapacitation, general deterrence, and specific deterrence. Incapacitation prevents crime by physically containing offenders during their punishment. General deterrence makes criminal behavior less likely by the effects of threats of punishment. Specific deterrence occurs when general deterrence fails and prevents criminal behavior through direct experience with punishment. Nagin states that each mechanism has distinct means toward the similar end of preventing crime. Criminal justice systems act through one or a combination of these distinct mechanisms in its attempts to address crime. Nagin (2013) identifies incapacitation-based policy as the core issue because it solely functions through incapacitation, which necessarily increases the rate of imprisonment. Deterrence-based policy does not focus on imprisonment, so its implementation may reduce both imprisonment

and crime. Although, Tomlinson (2016) states that deterrence-based policy must be well-informed to be effective, and concluded that many punitive, ineffective deterrence-based policies are jointly responsible with incapacitation-based policies for the increasing imprisonment rates. For example, the implementation of three strikes laws, which enforce a sharp increase in judicial discretion after the third commission of a related felony, have greatly increased incarceration rates. Some studies have even shown that the three strikes law decreases deterrence (Nagin, 2013; Tomlinson, 2016). This may be due to the failure of the deterrence doctrine to consider irrational factors in crime, instead only focusing on a rational analysis of sanction severity and crime commission rate.

Effective deterrence is important because it lowers the commission of crime, and in finding effective methods besides increasing severity of sanctions, avoids unnecessary punishment of individuals. The sole focus on criminology as a framework to improve deterrence theory and research alone is insufficient to achieve these goals. In 1968, economist Gary Becker published an influential work which aimed to improve the deterrence doctrine by incorporating behavioral economic principles, creating a formal rational-choice model of behavior, however a number of theoretical and empirical gaps still remained. In Akers' (1990) review, he states that deterrence theorists have consistently identified issues within their work in addressing psychological concepts such as factors in individual perception, cognitive choice models, and social psychology. However, deterrence theorists have neglected the opportunity to directly incorporate psychological principles, nor allow existing psychological findings to inform their work. This is debilitating toward the development of effective deterrence theory because psychology is closely related to deterrence principles, fills gaps in deterrence theory and empirical methodology, and may even subsume the current theory of deterrence.

Recent criminologists have addressed issues with purely rational choice-based theories of deviance by integrating sociological and psychological factors into their research. The two leading criminological theories of deviance reflect this addition; Akers acted upon prior criticism by establishing his psychology-based Social Learning Theory of Crime (Akers, 1985), while Gottfredson & Hirschi's General Theory of Crime incorporates sociological principles of bonds and social control (Gottfredson & Hirschi, 1990). Both theories suggest that social influence significantly differs an individual's cost/benefit analysis in deciding to commit deviance. These social factors help to account for a greater amount of variation in deviant decision-making, further informing research aimed to identify factors in deviance and effectiveness of deterrence efforts.

Criminological researchers frequently use undergraduate samples in behavioral studies. Some studies have measured actual criminal behavior among student samples has found statistically significant results. These studies demonstrate that the theoretical implications of criminology are generalizable to the student population, although they consistently identify a limitation of low variance as student responses often pool around the lower extreme of crimes reported (Payne & Chappell, 2008). A wealth of research instead utilizes theories of deviance to study students' academic dishonesty, or cheating, as a form of crime natural to undergraduate populations. Within criminological theory, cheating can be viewed as a form of offending and is classified as a rule violation in the same sense that "actual" crimes are (Tibbetts & Myers, 1999). Accordingly, the two leading theories of criminology do not define crimes as a strictly illegal act. Gottfredson and Hirschi's General Theory of Crime defines crime as any act of force or fraud in order to receive some benefit (Grasmick, Tittle, Bursik, & Arneklev, 1993), while Akers' social learning theory posits that crimes are acts that violate the rules set by normative institutions

(Akers & Jennings, 2016). Both Gottfredson and Hirschi's general theory of crime and Akers'

social learning theory have been utilized in studies on academic dishonesty. Research on

academic dishonesty can inform general theories of deviant behavior in all situations.

Academic dishonesty is a pressing issue in higher education that can be informed by

deviance and deterrence-based theory as well. Its implications are greatest among institutions of

higher education, which are often a terminal degree for students and occurs during the

developmental transition to adulthood (Pittman & Richmond, 2007). Academic dishonesty takes

on multiple definitions through varying institutional policy and is further reinterpreted by the

institutions' individuals (Happel & Jennings, 2008). Most researchers operationalize academic

dishonesty through the term "cheating" although this narrow definition leaves out dishonest

student behaviors like falsifying a need for an excused absence (Miller, Shoptaugh, &

Woolridge, 2011). Recent integrations of psychological and criminological theory define the

reasoning for this exclusion; The interchangeable terms of academic dishonesty and cheating in

literature are used to indicate a behavior that carries an explicit academic benefit or reward in its

successful completion, which applies mainly to unauthorized advantages attained on graded

academic work. Despite variance in measures, definitions, and cultural norms throughout

research on academic dishonesty, all studies show that cheating is present to some degree in

every institution (Whitley, 1998). James Madison University (JMU) is no exception to this

trend. In the fall of 2018, JMU conducted an annual continuing student survey with a sample

representative of the undergraduate population. In response to an item on cheating behavior,

36% of respondents indicated they had knowingly engaged in academic misconduct (James

Madison University Office of Strategic Planning and Engagement [JMU OSPE], 2019).

Academic dishonesty-based policy is similar to criminal policy in their deterrence goals and structure; both aim to increase traditional deterrence principles of certainty, severity, and celerity of punishment without fully addressing or understanding the irrational factors behind offending. Further highlighting the need for research on cheating, its prevalence is shockingly high. Researchers McCabe, Butterfield, & Treviño (2012) have studied cheating among undergraduate populations for decades and concluded that based upon the sum of their research, "more than two-thirds of college students are reporting that they have cheated" (p. 71). Considering these surprising rates of deviance among undergraduate students, there is a great need to further understand cheating behavior and policy that may curb its frequency. In addition, theoretical advancement might generalize to and inform further research on "actual" criminal behavior among general populations.

Literature Review

Criminological Basis

The goal of this section is to comprehensively address deterrence so a psychologist can understand the criminological origin of the deterrence, and how psychology might inform the criminological-based theory. Four sections will be presented in a conceptually sequential order: The history of deterrence theory, limitations of current theory, integration of psychological theory related to deterrence, and methods for integration of psychological theory with deterrence.

History of Deterrence Theory

To introduce the reader to the concept of deterrence, Kelli Tomlinson (2016) provides a succinct history of classical and modern deterrence theory. Tomlinson describes the origin of deterrence theory from writings by Italian economist and philosopher Cesare Beccaria in 1764, and English philosopher and social reformer Jeremy Bentham in 1781. In their formulation of

classical deterrence theory, they argued that criminals make decisions based on behavioral

principles in which people choose what will bring pleasure and avoid pain, and that if undeterred

people will continue committing crimes. Classical deterrence theory was limited because it

focused only on specific deterrence and lacked a consideration of general deterrence or

punishment factors that might increase criminal behavior such as the experience of punishment

or the criminal social experience of incapacitation.

Tomlinson states that modern deterrence theory was catalyzed in 1968 by Becker's works

on incorporating behavioral economic principles into the deterrence doctrine. The main

additions to the theory were the updated conception of general deterrence and the principle of

rational choice, which assumes some level of rationality of the actor in considering the value and

cost of criminal behavior before commission. Tomlinson identifies three assumptions made by

modern deterrence theory: That a message is relayed to a target group, that the target group

receives the message as a threat to their potential criminal action, and that the group makes

rational choices based on the information received. In its initial state, modern deterrence theory

struggled to explain the evidence of differential sensitivity to general deterrence and struggled to

understand what effect varying levels of rationality across individuals and situations had on

deterrence.

Theorists have attempted to address these issues by creating formal models of criminal

behavior, which postulate a criminal behavior formula that accounts for multiple differential

influences. Tomlinson presents Stafford and Warr's reconceptualization model in 1993 as a basis

used in the construction of recent proposed models of deterrence. The model assumes four types

of effects that impact rational choice of the criminal: Personal encounter with sanction threats,

personal encounter with punishment avoidance, indirect experience with punishment, and

indirect experience with punishment avoidance. Tomlinson states that the model has a number

of advantages over the prior conceptions of deterrence, because the model allows for specific and

general deterrence to have a combined effect on an individual and considers possible positive

reinforcers of behavior when deterrence fails such as punishment avoidance.

Limitations of Current Theory

Research across disciplines commonly has the issue of weakened external validity, a

claim to the research conducted being applicable in the real world, when researchers try to

generalize results from a sample population of students, and criminology is no exception.

Tomlinson (2016) notes that conducting deterrence research on college students may threaten

external validity because students may not represent the target population of criminals. College

students could differ from criminals in some systematic way in areas such as self-control or risk

sensitivity. Similarly, Scheuerman (2016) identifies that research on perceptual factors of

criminal behavior using students as a sample population is limited because student volunteers do

not likely share similar experiences or mentality with those who might engage in criminal

behavior. Nagin (2013) notes that many perceptual deterrence studies have been faulted because

they commonly have a sample population comprised of students, who do not typically conduct

the researchers' targeted aggressive or felonious criminal behavior.

Nagin (2013) notes an area that criminology struggles to address through their

discussions of Pogarsky's taxonomy of responsiveness to legal threat. Nagin (2013) describes

the taxonomy by identifying three separate groups which share similar experiential

characteristics that lead to their similar responses: Acute conformists, deterrables, and

incorrigibles. Acute conformists have a substantial amount to lose through informal sanctions of

crime factored into the commission cost even if they succeed without apprehension, so they are

deterred from criminal behavior from these informal sanctions alone and do not need to have

knowledge of formal sanction risks. Unlike acute conformists, deterrables have a net positive

value for their reward minus crime commission cost and are receptive to sanction threats, so they

consider whether the net benefit of crime commission outweighs the potential cost of failure.

The incorrigible group also has a net positive value for their reward minus commission cost but

are not receptive to sanction threats. Nagin suggests for these groups to be further studied in the

areas of sanction risk perception, and the sensitivity of each group to changes in sanction regime.

Nagin (2013) concludes his review of deterrence by identifying major theoretical and related

empirical gaps in deterrence theory. The first gap is that deterrence theory has not been

generalized to understand the differential deterrent effects of sanction options, nor the individual

sensitivity to these options in changing behavior probability. He explains that through a

criminological perspective it is currently impossible to study this variation as criminal justice

data infrastructure is insufficient or poorly composed. The second gap Nagin identifies is that

current deterrence theory conceives of sanction regimes as a singular structure, while in reality it

exists in two dimensions. Policy dictates the authority for sanctions, but in practice authority

agents may administer punishments differentially within various sanctions. These dimensions

likely have separate but dually significant deterrent effects. As a result, Nagin states that the

current theory fails to establish a basis to properly consider the differential deterrent effects of

sanction options. This gap is also evident in research, as the empirical aggregate data needed test

this differentiation through criminological theory are not easily obtained or not available. The

third gap involves research on the link between risk perception and sanction regimes. There is a

lack of understanding on how perceptions are affected by changes in sanction regimes, which is

essential in determining effective policy. Nagin states that extending research on the sources of

sanction risk perceptions will likely yield important results for deterrence theory. The final gap

is the lack of testing for Nagin's empirically supported suggestion that authority such as the

police has a dual role in deterrence. Police have a guardian role, in which authority lowers

perception of successful completion of a crime, and a role as an apprehension agent, in which

authority raises perception of the risk of apprehension for a crime. Nagin suggests that an

authority figure's role as a guardian is much more influential than as an apprehension agent, and

that this distinction could lead to greater knowledge of deterrence and increased effectiveness of

policy. Yet, current research is sparse on the differential effects of the police role.

In summary, understanding of deterrence behavior could be improved with integration of

psychological theory. Criminologists have recognized and are calling for additional research and

analysis of deterrence behavior.

Rationale for Integration of Psychological Theory

Recognizing the potential for deterrence theory to benefit from the integration of other

fields, Akers (1990) provides a compelling argument for the integration of psychological-based

theory into the deterrence doctrine. He states that both share the same utilitarian premise of

human behavior, that individual action is determined by rational decision, with his principle

thesis being that the main components of deterrence are simply special cases of social learning

principles and are subsumable under general principles of psychology such as social learning and

differential reinforcement theory.

Akers first argues that deterrence is subsumable under social learning theory, which posits that

behavior is learned through observation, imitation, and modeling. He states that the empirical

basis for the effectiveness of deterrence on criminal behavior is consistent with principles of

social learning. However, empirical research of deterrence does not fully encompass social

learning because it fails to consider reinforcers which would offset the potential punishments of

deterrence in a proper reinforcement contingency. Akers conjectures that ignorance of social

learning by most deterrence researchers lead them to miss important contributions and normative

definitions social learning theory could provide.

Strengthening the argument for the subsumption of deterrence into social learning, Akers

displays that deterrence principles can be incorporated and further added to in the general

concept of differential reinforcement. He finds that the threat of legal punishment is equivalent

to an aversive stimulus. He also considers deterrence as the equivalent psychological term of

perception of likelihood of punishment. Therefore, tests of formal deterrence, such as perceived

probability of getting caught by the police, and informal deterrence, such as perceived

probability of being caught by parents, have been extensively studied in social learning theory.

Utilizing this connection, Akers posits that the reason criminologists struggle to increase the

effects of deterrence is that deterrence variables only consider the variation in perceived

likelihood of aversive consequences, which has small overall effects in isolation. Akers believes

that differential reinforcement, the social learning principle that encompasses a range of

behavioral inhibitors and facilitators to identify the overall balance of reinforcement for a

behavior, is critical to overcoming these limitations in deterrence theory. Differential

reinforcement subsumes these variables and adds the factor of perceived likelihood of rewarding

consequences, as well as the balance between aversive and rewarding consequences. When the

full contingency is utilized, studies of social learning have found strong effects through

manipulation.

Further supporting social learning theory as the stronger integrative approach, Akers

argues for the subsumption of rational choice under social learning theory as well. The main

addition of rational choice theory to the deterrence doctrine as the utility proposition of behavior.

While Akers concedes that this does expand on the doctrine of deterrence, it fails to address

irrational aspects that might affect criminal behavior, such as conditioned influence on criminal

cost and reward, and the influence of morality. Social learning theory, on the other hand,

explicitly accounts for these irrational factors. Accordingly, Akers states that social learning

subsumes rational choice theory.

Methods for Integration of Psychological Theory

In light of the visible issues in deterrence theory, Tomlinson (2016) acknowledges the

importance of theory integration in order to address complex human behavior. To encourage and

facilitate this process, she describes two models of theory integration, conceptual and

propositional integration. Conceptual integration involves comparing or overlapping theory in

order to identify areas for assistance or complete incorporations of the theories. However,

conceptual integration does not necessarily imply propositional integration. Propositional

integration recognizes when multiple theories make similar predictions despite the theories

possibly having separate conceptual bases. It also involves combining features from different

theories into a causal pattern or sequence.

The University Context

The university level of schooling holds a number of important influences on its students.

Beyond academic outcomes, universities are an important developmental context for maturing

students (Pittman & Richmond, 2007), a guide in developing advanced moral reasoning

(Murdock & Anderman, 2006), and a place of community and belonging that can influence

students' psychological outcomes (Finn & Frone, 2004). These dimensions are interactional

with the factors that surround the causes and effects of academic dishonesty; Cheating is itself

harmful to the student and the institution, but its prevalence also points to issues in other areas of

the campus climate.

Significance of Academic Dishonesty

Academic dishonesty has damning implications for the core goals of higher education.

Most visibly, it is a direct harm to the legitimacy of academic assessment. Through successful

cheating, a student's lack of learning outcomes can go undetected or even be rewarded, which

may hinder overall student learning goals (Ogilvie & Stewart, 2010). Further, non-cheating

students are harmed by the resulting inequitable comparison to advantaged cheating peers. The

interaction of prevalence and low risk of cheating may lead a previously upright student who is

motivated by external outcomes to cheat. Even students with the deepest convictions for honesty

may feel compelled to cheat due to their perceptions of the risks and benefits present on campus

that put honest students at a strong disadvantage (Tibbetts & Myers, 1999; Anderman & Koenka,

2017).

Cheating norms have negative consequences for the institution through direct damage to

its reputation (Ogilvie & Stewart, 2010). As a result, a university must dedicate a number of

resources to combat cheating and instructors are often expected to act as apprehension agents,

which is especially burdensome for instructors. To report a violation of university policy, faculty

are compelled to collect evidence to establish a strong claim, and subsequently enter into a

lengthy process of hearings and reports. As a result, faculty are hesitant to enforce policy to its

fullest extent (Happel & Jennings, 2008). For example, Nadelson (2007) surveyed nearly 300

educators at a single university on their experiences in reporting conduct violations. 72 faculty

reported over 460 academic policy violation incidents with undergraduate students, ranging from

behaviors seen as minor like accidental plagiarism to serious behaviors like test cheating. Faculty

members reported acting on only 176 of the 460 incidents (36%). Of the 176 incidents, faculty

members chose to deal with most of them informally. The majority of faculty members did so

purposefully; they reported that they wanted to deal with the behavior informally inside the

classroom. However, many faculty members shared other motivations to handle incidents

informally, such as discomfort with the university's formal process, a perceived lack of sufficient

evidence, or concern over the resulting reflection on their professional performance. Ultimately,

the potential for punishment is miniscule due to unlikely detection rates and equally unlikely

sanction rates in incident of detection; Happel & Jennings (2008) reported that only 1.5% of

students they surveyed who engaged in academic misconduct received formal sanction.

Academic dishonesty within higher education has long term consequences for students in

their professional careers. For cheaters, their professional abilities may be underdeveloped due

to their sidestepping of learning standards, and their unethical behavior may continue into the

workplace (Ogilvie & Stewart, 2010; Smith, Davy, Rosenberg & Haight, 2002). However, the

developmental context of university can have positive effects as well; In their longitudinal

review of alumni from honor code and non-honor code schools, McCabe, Treviño, & Butterfield

(1996) found that participation in a university honor code environment, along with continuing

ethical workplace policy, led to the lowest rates of dishonest behavior in the workplace for

individuals surveyed.

Criminological Basis in Academic Cheating

Criminological theory functions in the academic setting through the assertion that

criminal behavior operates on the same principles as cheating behavior. Cheating can be viewed

as a form of offending and is classified as a rule violation in the same way crimes are (Tibbetts &

Myers, 1999). The two leading theories of criminology do not define crimes as a strictly

"illegal" act; Gottfredson and Hirschi's general theory of crime defines crime as any act of force

or fraud in order to receive some benefit (Grasmick, Tittle, Bursik, & Arneklev, 1993). Akers'

social learning theory posits that crimes are acts that violate the rules set by normative

institutions (Akers & Jennings, 2016). Both Gottfredson and Hirschi's general theory of crime

(e.g. Tibbetts & Myers, 1999; Ogilvie & Stewart, 2010) and Akers' social learning theory (e.g.

Haines, Diekhoff, & LaBeff, 1986; Carrel, Malmstrom, & West, 2008) have been utilized in

studies on academic dishonesty.

Criminology contributes to cheating research in many ways, such as the cognitive factor

of self-control and the individual-institution relationship proposed under social bond theory. In

the present work, the most influential contribution is the updated criminal behavior model

pioneered by Ronald L. Akers, which incorporates the criminological elements of rational choice

theory and perceptual deterrence theory with psychological elements from social learning theory.

Influenced by Becker's (1969) reconceptualization of deterrence, modern criminal

behavior models operate from behavioral-economic thesis that an offending decision involves

some level of rationality of the actor in considering the cost and benefit of an action before

choosing to commit a crime. While external influences of cost consideration are objective in

nature, perceptual deterrence theory dictates that the individual actor interprets the objective

factors to form a subjective perception of costs and benefits. A potential offender's perception

may not be equivalent to the objective cost due to a continually updated range of factors such as

individual personality traits and past experiences with punishment and reward. Adding to the

factors of perception formation, Akers (1990) argued that the whole of criminological behavior

theory may be subsumed under psychological theory. In support of his argument Akers created

social learning theory, perhaps the strongest theory of deviance in the criminological field to date.

The addition of psychological theory is essential to account for many of the subjective influences upon the criminal behavior model but the prior addition of economic modelling by Becker should not be overlooked. Through this general model of a rational, nonpathological approach to deviant behavior, researchers have a framework to create integrated models that incorporate multiple influences on decision making with the key thesis that potential offenders will respond to each decision through their subjective utility valuation; A summation of objective costs and benefits perceived through the filter of stable traits and associations alongside momentary contextual factors.

Deviance Research in Academic Settings

Research on academic dishonesty is robust, incorporating multiple study designs, age ranges, and theoretical models. Research extends beyond the educational field; cheating has been viewed from a number of perspectives including sociology, philosophy, and economics (Anderman & Murdock, 2007). The main limitation of current research approaches on cheating is that the academic field struggles to integrate individual, contextual, and institutional factors into a single empirical structure (Ogilvie & Stewart, 2010). Some researchers have used an integrated theory of criminology and psychology with success. This integrated perspective provides the most viable approach for a general model of academic dishonesty, and in synthesis facilitates powerful implications for future practice in education.

Criminal Behavioral-Economic Theory

In addition to a strong general model of deviance from which to view academic cheating, researchers have found that criminal behavioral-economic theories account for a portion of

variance in academic cheating studies. Both rational choice and perceptual deterrence theories alone yield significant effects on likelihood of cheating, but researchers have found the highest explanations of variation when they have employed integrated models of the theories.

Overview. Perceptual deterrence theory posits that academic cheating has a negative relationship with individuals' perceptions of potential costs from its commission. Past experiences with commission and punishments of cheating, both direct and indirect, in combination with situational perceptions of the present cheating opportunity dictate the overall strength of perceptual deterrence. These perceptions mainly center on the potential sanction's certainty, severity, and celerity as a deterrent to cheating, counteracting the expected utility of the act in order to inform a potential offenders' decision (Tomlinson, 2016). Students' perceptions are shaped through direct experiences like the success or failure of prior cheating, and indirect experiences like witnessing cheating or hearing about its commission on campus.

Rational choice theory aims to update the deterrence paradigm by including the consideration of variations in perceived benefits alongside perceived costs (Michaels & Miethe, 1989). In the rational choice framework, students are to some degree rational decision makers who hold preconceived perceptions and also interpret situational costs and benefits of a cheating opportunity to inform their behavior. As an example in the academic context, research findings consistently show that students' prior academic standing through their GPA predicts individual variation in perceived benefit of cheating.

Findings. In accordance with the strength of a general behavior model, researchers who explicitly consider rational choice and deterrence theories often integrate them into a single framework. Michaels & Miethe (1989) surveyed an undergraduate population on cheating behavior along with a number of theory-driven measures including deterrence and rational

choice and found that both measures significantly correlated with prior cheating behavior and

likelihood of cheating in the present. Tibbetts & Myers (1999) employed a scenario method in

which the researchers presented a written depiction of a cheating opportunity to undergraduate

students. They found that respondents' perceptions of expected costs and benefits of the

scenario significantly affected the likelihood they would cheat, particularly through perceived

informal costs like shame and moral beliefs. Surprising to Tibbetts & Myers were the

insignificant effects of external sanctions, which they suggested may reflect a perceived low risk

of detection by professors among the respondents. Similarly, Ogilvie & Stewart (2010)

presented a plagiarism scenario to a sample of Australian university students and found that the

variables of shame and prior behavior were most strongly associated with intention to engage in

plagiarism. The researchers highlighted their finding that the variables of perceived sanction and

shame were highly correlated but not identical in effect (r = .58), leading them to suggest that

formal and informal sanctions may overlap but are two separate forces in a cheating situation.

Criminal behavior-economic variables are strong in their accounting for general sources

of variation, both within the individual and through situational factors. However, Akers (1992)

notes that criminological theories absent psychological integration are limited in their ability to

explain the social and psychological factors which mediate an individual's perception formation.

Additionally, the use of scenario-based measures likely fails to reflect a students' cognitive

valuation equivalent to actual cheating opportunities (Ogilvie & Stewart, 2010), potentially

accounting for the insignificant effects that between-subjects manipulations of certainty, severity,

and celerity in punishment in scenarios shows. Therefore, the criminal behavior-economic

findings are helpful in explaining the link between general perceptions of costs/benefits and prior

cheating behavior but fail to account for situational factors or explain the cognitive factors that

form varying perceptions. In a study that isolated perception variables, McCabe et al. (2006)

found that the results explained only 12% of variance in self-reported cheating. The lack of

understanding for formal sanctions is especially troubling for educational researchers because it

provides limited potential for schoolwide policy guidance.

Morality-based Theory

Many studies that utilize a criminal behavioral-economic framework investigate morality

variables as a cognitive factor in cheating that might act as a perceived cost in deviant behavior

(e.g. Cochran, Chamlin, Wood, & Sellers, 1999; Tibbetts & Myers, 1999). Subsequent

psychological research has addressed cognitive factors from a stronger theoretical basis and

researchers have unanimously found that moral reasoning and cheating behavior are not directly

related. Miller, Murdock, Anderman, & Poindexter (2007) point out that these rational choice

studies themselves are contradictory on their investigation of a moral reasoning effect: The

majority of students consistently indicate that cheating is wrong, however a significant

proportion of those students also report cheating behaviors. As a result, several studies have not

found a significant relationship between moral reasoning and cheating, and in those that do the

relation is fully moderated by temptation to cheat or risk of detection (Miller et al., 2011).

Upon closer examination of the conceptual validity of a moral reasoning effect, it makes

little sense to predict that a student's level of moral reasoning would explain variation in

cheating likelihood. In any situation, the act of cheating is likely wrong under any level of moral

reasoning. Further, it is unlikely that students of a narrow range of age and experience would

vary greatly in their Kohlbergian level of reasoning. In qualitative studies of university cheating

(e.g. Newstead et al., 1996), avoidance of punishment is often given as a reason not to cheat,

especially among students who report prior cheating. It is improbable that the majority of

cheating university students reason at the preconventional level of morality that a punishment-based inhibition would indicate (Miller et al. 2011). Researchers instead point to the activation of moral reasoning as an account for variance in perceptions of cheating costs. As Murdock et al. (2007) suggests, cheating may be controlled by the perception of the behavioral opportunity as either a moral judgement or a matter of social convention; while the former invokes abstract principles that inhibit deviant action, the latter frames the cheating opportunity as a simple cost-benefit analysis.

Rational choice findings demonstrate that costs and benefits are determined by the filtering of objective factors through a subjective decision maker. The addition of psychological theory into a general model of academic deviance is essential to account for the subjective level of value formation. This revelation points to the primacy of cognitive and social factors that lead students to differentially interpret the nature of the cheating situation. The activation of moral reasoning in academic cheating is shown to be most strongly modified by the interaction of a student's external factors of social learning theory and internal factors of motivational theory.

Akers' Social Learning Theory

Overview. Akers first developed his social learning theory (SLT) in 1966 by linking together Sutherland's criminological differential association theory of deviance with psychological operant conditioning theory to establish a construct to address informal social reinforcement that might propagate deviant behavior (Michaels & Miethe, 1989). Akers' key postulate in his theoretical formation was that "The principal part of the learning of deviant behavior occurs in those groups which comprise or control the individual's major source of reinforcements" (Brownfield & Thompson, 1991, p. 49).

According to a review by Akers & Jennings (2016), SLT contains four internal constructs; differential association, definitions, imitation, and differential reinforcement. Differential association considers the behavioral patterns present in an individual's primary social groups. One can be influenced by both normative and deviant groups, however groups that an individual most identifies with and spends the most time interacting with will have stronger influence on their likelihood to engage in deviance. Definitions are an individual's "attitudes, values, and orientations" toward deviant and normative behavior that define actions as "right or wrong, good or bad, desirable or undesirable" (p. 233). Definitions vary in scope, from general definitions that define a category of behaviors to specific definitions of a single behavior. In addition, definitions vary in valence from "positive definitions ('It is fun to steal beer from the store I work at'), or neutralizing definitions ('I am not stealing beer from the store; I work there and am underpaid; thus, I am just taking what is owed to me')" (p. 233). Differential reinforcement is demonstrated by an individual's perception of potential reinforcement or punishment from social groups in response to a behavior. Differential reinforcement gains influence over time through actual experience with behaviors and subsequent social responses, leading to extinguish a behavior through experienced punishment or encourage a behavior through experienced reward. Imitation refers to the social influence an individual might internalize by observing the behavior of those in their social groups, which is likely most significant in influencing an individual to first engage in deviant behavior (Akers & Jennings, 2016). Akers posits that differential association, definitions, and imitation in an individual's primary environment influences them to first engage in deviant behavior, while the valence of their social groups' differential reinforcement in response to the behavior influences them to refrain from or recommit deviance (Pratt, Cullen, & Sellers, 2010).

Akers' definitions component merits additional discussion as it is for the most part directly reflective of the psychological construct referred to as neutralizing attitude, or moral disengagement. While SLT's definitions component includes positive definitions as well as neutralizing definitions (or attitudes), neutralizing definitions are far more significant in deviance research and are for the most part solely measured, apart from positive definitions. Researchers using an SLT framework use theory, support, and scales for each construct interchangeably with one another. Originally coined by Sykes & Matza (1957), neutralizing attitude is the tendency of an individual to justify acts they acknowledge as delinquent before commission as a means to remove their inhibitions on or "rationalize" a delinquent act. Sykes & Matza identify five types of neutralization: denial of responsibility, denial of the victim, denial of injury, condemnation of the condemners, and appeal to higher loyalties. These five types are the basis for instrumentation intended to measure SLT's definition construct and measures of the neutralizing attitude construct.

Support. SLT has been utilized in studies for decades and has received continuous validation on its significant accounting for deviant behavior among samples. A number of metanalyses have confirmed the strength of the theory, and results from general and criminal populations further support the generalizability of its implications (Akers & Jennings, 2016). Metanalyses reveal that each component of SLT is independently correlated with deviant behavior. In particular, peer delinquent behavior (or differential association) and definitions favorable toward deviance are strongly and positively related with self-reported delinquent behavior. However, the components of imitation and differential reinforcement are statistically weaker (Brownfield & Thompson, 1991; Pratt, Cullen, & Sellers, 2010). These two components are both reliant on other preceding factors beyond group deviance to occur, and they are difficult

to operationalize because their effects are somewhat implicit to the individual. As a result, the

majority of studies that reference SLT utilize only one or both of the theoretically stronger

components, differential association and definitions.

Pratt, Cullen, & Sellers (2010) meta-analysis on SLT provides a particularly thorough

review on the theory's recent application. In a review of prior literature, the researchers report

that past narrative reviews have been mostly supportive, however multiple works state that the

extent SLT research is limited mainly to minor forms of deviance. Pratt & Cullen's (2000) own

meta-analyses found significant effect sizes for differential association (.232) and definitions

favoring deviance (.175), comparing favorably with other theories of deviance. Alongside other

meta-analyses on theories of deviance, Pratt & Cullen (2000) found SLT factors to be the

strongest predictors of deviant behavior. The present meta-analysis updates theoretical support

for SLT by reviewing research published in the period between 1974 and 2003. Pratt, Cullen, &

Sellers found that differential association across 385 studies (overall mean effect size estimate

(Mz)= .225, p < .001), most notably its subcategory peers' behaviors across 166 studies

(Mz=.270, p < .001), and definitions across 143 studies (Mz=.218, p < .001) were especially

robust predictors of deviant behavior. As expected, effect sizes for differential reinforcement

across 132 studies (Mz=.097, $p < .01$) and imitation across 30 studies (Mz=.103, p < .103) were

statistically significant but rather weak predictors of deviant behavior. Further results reported

that only 10 of 55 moderator analyses of SLT predictors were significant, leading the researchers

to support, albeit with slight caution, the theory's stability across methodological variation.

Findings. Research among student populations have long established peer group

influence as significantly correlated to cheating behavior. The majority of research on these

topics do not explicitly utilize a SLT theoretical framework, but compatible research methods

allow for these studies to support SLT. Whitley's (1998) meta-analysis of 107 studies on

cheating among college students provides general support for both differential association and

neutralizing attitudes. Whitley reported that factors significantly correlated with cheating

included those related to differential association like fraternity/sorority membership (d = .319 p <

.001, r = .16) alongside other campus activities, and those related to definitions like cheating

norms (d = .929 p < .001, r = .42) and attitude toward cheating (d = .811 p < .001, r = .38). A

wealth of studies on these components in an academic setting further strengthen and expand

upon SLT's relevance in academic dishonesty.

   Research on Differential Association. Academic dishonesty researchers McCabe &

Treviño (1993) established a strong basis for SLT's differential association component within

their survey research on more than 6,000 undergraduate students across 31 academic institutions.

Among a number of factors studied, the researchers found peer cheating behavior to be the most

significantly correlated with individual's cheating reports. Researchers investigating deterrence

factors in undergraduate cheating similarly reported results that deferred to SLT; Diekhoff et al.

(1996) found that the strongest deterrents to cheating among their undergraduate sample were

informal, social punishments like shame and loss of peer approval. Interestingly, alongside

indirect exposure to peer norms and behaviors, differential association occurs during the direct

experience of seeing peers cheat as well. Jordan (2001) investigated undergraduate students'

experience with cheating in the prior semester and found that 70.8% of respondents that

indicated cheating behavior had also seen someone else cheat, while only 40.5% of respondents

that did not cheat had seen someone else cheat. Jordan also found that among those who

witnessed cheating, the respondents reported a mean 4.70 cheating incidents over the prior

semester, while the respondents that did not witness cheating reported a mean 1.38 cheating

incidents. Carrell, Malmstrom, & West (2008) found that peer behavior was significantly

associated with cheating among U.S. armed forces academy students as well. Further, the

researchers utilized items on academy cheating and prior high school cheating to calculate

exogenous and endogenous peer effect models which allowed them to estimate a "social

multiplier" of academic cheating, concluding that the "models predict that one new college

cheater is 'created' for every two to three additional high school cheaters admitted to a service

academy" (p. 195).

   Research on Definitions. Anderman, Griesenger, & Westerfield (1998) established a

common theme in investigations on definitions in cheating, stating "[m]ore than half of the

sample indicated that they had not cheated. However, of the students who indicated that

cheating was unacceptable, 21.3% reported having cheated anyway" (p. 90). Sykes and Matza's

(1957) five types of neutralization are used to create items in neutralization scales within

criminological and academic research. Haines, Diekhoff, & LaBeff (1986) created a novel scale

as a part of an investigation on academic cheating and deterrence. The researchers found that

cheaters exhibited significantly higher levels of neutralization on all 11 items of the scale, and

that neutralization score was correlated with the effectiveness of varying types of deterrence.

Formal deterrence, such as punishments from the academic institution, were most effective

among respondents high in neutralization, while informal deterrence was more effective amongst

those low in neutralization. Haines, Diekhoff, & LaBeff concluded neutralizing attitudes counter

the effect of informal social punishments like guilt and peer disapproval. Diekhoff et al. (1996),

Pulvers & Diekhoff (1999), and Jordan (2001) further validated the correlation between

neutralizing attitude and cheating behavior among an undergraduate population, and also

concluded that cheaters were significantly more likely to identify situational ethics or context as

a neutralizing justification for deviance. Smith, Davy, Rosenberg, & Haight (2002) investigated

neutralizing attitude's role as a mediator upon cheating and found confirming results; using

survey data from a university population to construct path analyses, the researchers found

academic performance, in-class deterrents, and prior cheating to be a significant antecedent of

neutralization while neutralization had a significant positive effect on likelihood to cheat. With a

nationwide undergraduate sample Bolin (2004) found that attitudes, or definitions, toward

cheating fully mediated the path between the individual cognitive factor of self-control and

cheating behavior. Miller, Shoptaugh, & Woolrich (2011) utilized a qualitative approach in their

undergraduate cheating study by asking respondents reasons why they would not cheat and

creating categories based upon common themes. They also collected survey data on the concept

they called Academic-integrity Responsibility (AIR), which closely resembles definitions. The

researchers found that students who gave reasons not to cheat related to punishment or avoiding

consequences were more likely to cheat and exhibited lower AIR scores versus students who

gave reasons relating to morality, educational goals, or simply thought cheating was wrong.

Research relating both components. A number of studies measure both differential

association and definitions as well. Among a large multicampus sample, McCabe & Trevino

(1997) stated that definitions and perceptions of peer cheating behavior were the two most

significant predictors of cheating among their study. Haines, Diekhoff, & LaBeff (1986)

measured differential association through an item asking whether respondents had directly seen

cheating occur and found that a small but significant number of cheaters indicated seeing more

cheating than noncheaters. The researchers suggested that this result may occur because cheaters

perceive more cheating around them as a result of a more neutralizing attitude. Overall analyses

showed that neutralizing attitude was the only test statistic that was reliably and consistently

related to cheating, leading the researchers to suggest that cheating might occur more frequently

in certain groups, but primarily because these groups encourage neutralizing behavior. Furhter

establishing the link between perceptions peer cheating and personal cheating behavior, Jordan

(2001) asked respondents to indicate their estimate of their peers' cheating behavior in addition

to their own. Jordan found that cheaters' mean estimates were significantly higher than

noncheaters' estimates such that respondents' cheating behavior correlated with their estimates

of their peers' cheating behavior. Included in these correlational trends were neutralizing

attitude and estimates of cheating on campus as a whole.

Motivational Theory

        Overview. In academics and criminal behavior alike, an individual's motivation for

action predicts the means they take to reach that end. Newstead, Franklyn-Stokes, & Armstead

(1996) found that college students who engaged in academic dishonesty mainly cited the desire

to score high grades as the reason for their action. In addition, they found that cheating rates

were around 40% higher among students who were academically motivated by external rewards

like money earned and prestige after college versus students who were motivated by the pursuit

of personal development. Among the JMU population, around 50% of first-year students and

44% of continuing students report a vocational philosophy of education, considering preparation

and prestige for an occupation essential (JMU OSPE, 2018; JMU OSPE, 2019). Despite

academic institutions' emphasis on the intrinsic value of learning, students are disproportionately

driven toward external achievement measures that can influence them to take dishonest efforts

toward their goals.

        In educational settings, motivation is defined as the cognitive processes that drive goal

directed behavior, or a student's reasons for doing a constructive task beyond school

requirements (Cleary, 2009). Motivation is studied under a number of approaches like self-efficacy and engagement, but goal orientation theory is most applicable to the present study's focus on perceptual factors in academic cheating.

Goal Orientation Theory. Goal orientation theory states that the nature of motivations in the classroom play a major part in student behavior and cognitive educational outcomes. Theorists two main categories of goal orientations (mastery or performance orientation) that a student possesses or perceives among three separate ecological levels (personal, classroom, and schoolwide goals).

Mastery goals lead students to learn for the sake of learning, favoring internal reward and a growth mindset (Urdan & Schoenfelder, 2006). Mastery-oriented students value the learning process and are motivated by the acquisition of course lessons rather than external achievement indicators. These students use themselves as a point of comparison rather than looking to their peers (Anderman, 2007). Performance goals lead students to pursue rewards that are extrinsic, relying on either social approval or a grade for efficacy and encouragement. Performance-oriented students engage in undesirable academic behaviors like avoidance and cheating, have lower academic and social functioning in schools (Gilman & Anderman, 2006) and may exhibit problem behaviors outside of school like substance use and deviance (Diseth & Samdal, 2015).

A student's goal structure is the product of interactive forces of the student's past educational history and disposition alongside the contextual external goal structure they perceive within their classroom and school. Students perceive a classroom goal structure through a teacher's pedagogy and in-class behavior (Anderman, 2007). Classrooms that place emphasis upon assessment and create public competition among peers encourage perceptions of a performance-oriented classroom, damaging the efficacy of at-risk students and instilling negative

motivations in all students (Hughes, Wu, & West, 2011). Classrooms that emphasize improvement, provide competency indicators beyond publicized achievement measures and facilitate collaboration and group work encourage perceptions of a mastery-focused classroom, leading to positive outcomes for students in all engagement domains (Urdan & Schoenfelder, 2006).

Research that measures both personal and classroom goal structures identify their correlated occurrence and outcome. Students that perceive a mastery goal structure possess healthy cognitive dispositions towards academic and have higher academic success compared to their peers who perceive a performance goal structure who display undesirable academic behaviors and dispositions, and these associations remain significant when controlling for prior academic achievement (Anderman, 2007).

Findings. Prior research indicates that each level of goal orientation holds an independent effect upon academic cheating. Anderman et al. (1998) measured middle school students' personal goal orientation in addition to their perception of the classroom and school and found that cheating behavior correlated with type of goal at each of the three levels. Not only did cheaters tend to endorse performance goals more frequently, they also differentially perceived the external goal structure of their school compared to noncheaters.

Goal structures are consistently correlated with cheating behavior across studies (Anderman, 2007), including undergraduate populations (Miller, Murdock, Anderman, & Poindexter, 2007). In a qualitative measure Genereux & McLeod (1995) found that performance goals were two of the top five reasons to cheat among an undergraduate population, and that students who endorsed these measures were significantly more likely to cheat. Researchers posit that the connection between undergraduate students' goal orientation and cheating behavior is at

face a valid conclusion; mastery-oriented students have little to gain towards their goals by cheating while performance-oriented perceive a direct benefit to their goals by cheating (Miller, Shoptaugh, & Woolridge, 2011; Newstead et al., 1996).

External influence in the classroom environment can influence a student's personal orientation over time and across context. Students' goal orientations often vary by class, leading to varying rates of cheating behavior (Anderman, 2007). In addition, students transitioning from an environment that emphasizes mastery goals to one that emphasizes performance goals exhibit significant changes in their goal orientation and cheating behavior, and vice-versa (Anderman & Midgley, 2004). The overall school culture also demonstrates an effect on cheating behavior independent from classroom structures. Similarly, students perceive the practices and attitudes dominant among a school to indicate a mastery or performance goal. In the university context, transitioning from high school to college offers a significant opportunity to change maladaptive goal orientation and reinforce beneficial motivation. Each classroom as well offers a separate context for motivation formation.

Purpose & Hypotheses

The primary purpose of this study is to compile significant approaches to deviance across criminology, psychology, and educational research into a multi-order economic model of deviant behavior (figure 1) in order to update theory in each field through their synthesis. The model reflects the assumption that no one theory discussed is general to deviance outcomes. Instead, each have direct or interactional effects in the overall offending decision and can coexist within an empirical framework to provide the most effective account on why individuals vary in their cheating behavior.

- Hypothesis 1: The proposed model will display significant interactions and prediction of cheating behavior.

An additional purpose of this study is to support the proposition that illegal acts and other deviant behavior that is not legally barred are of the same nature and may share theoretical frameworks. Support for this proposition might lead to an enhanced understanding of deviant acts in varying contexts and respond to an identified issue in criminological research by justifying the use of student samples with measures of criminal behavior.

- Hypothesis 2: All deviance measures will account for variation in student behavior similar to their previous administrations with criminal populations.

The final purpose of this study is to review the practical implications of the data as it applies to the institution of JMU and its students. Results will be considered under the theoretical frameworks measured in this study, and significant findings related to academic dishonesty and the measures utilized will be presented.   A set of practical suggestions will be generated from the work.

Proposed Path Model

   The proposed path model indicated in *Figure 1* places the factors being measured along a

longitudinal scale by process point to map effects upon cheating behavior.

Figure 1

Proposed Deviant Behavior Path Model; Longitudinal Framework of Deviant Decision-Making
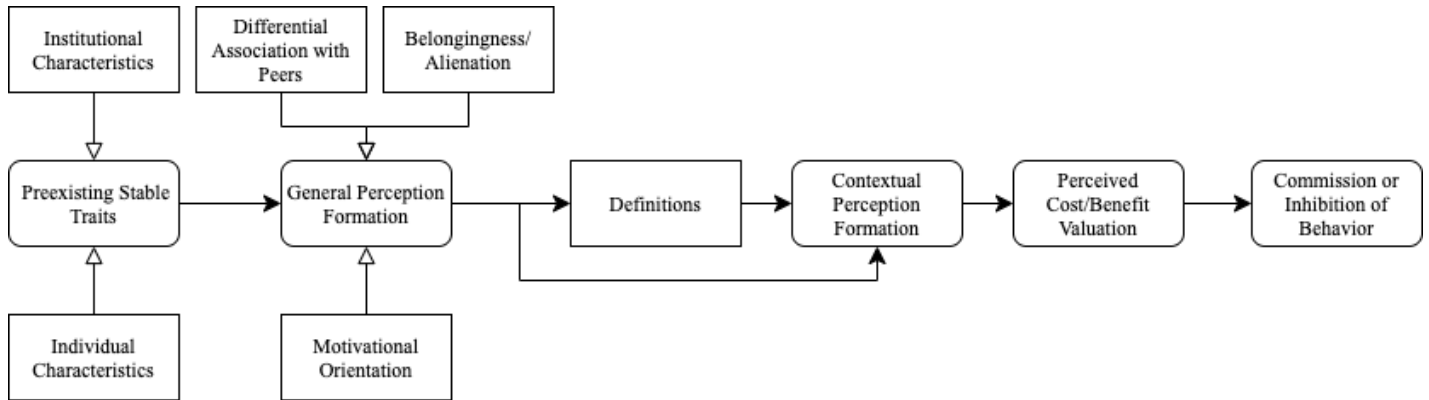
Note. Specific factors are contained within flat-edged boxes, and processes are contained within

rounded-edge boxes. Paths between processes indicate progression in longitudinal order. Lines

capped by filled black arrows indicate the origin item's moderating effect upon the terminal

item, and lines capped by unfilled white arrows indicate the origin item's interaction within the

terminal process.

Method

Participants

100 JMU undergraduate participants will be recruited through the JMU Psychology Subject Pool, which is populated by students enrolled in the courses Psychology 101 or 160. Students who self-select into this study on the Subject Pool platform online will be presented with an informed consent form and subsequently will be asked to complete an online survey.

Measures

The survey will consist of initial demographic questions and a randomly ordered series of six scales comprising 83 items measuring the constructs of self-control, neutralizing attitude, goal orientation, university belonging, and cheating behavior. All measures will use a six-point Likert scale in order to utilize forced-choice responses and obtain sufficient variation.

Self-Control

Self-control will be assessed by a 12-item portion of Grasmick, Tittle, Bursik, & Arneklev's (1993) 24-item attitudinal self-control scale (Appendix A). The self-control construct is comprised of six dimensions; temperament, impulsivity, risk-taking, self-centeredness, simple task preference, and physical activity. Low self-control scores indicate an individual's tendency toward delinquent acts. Measures of self-control have been frequently utilized in research among undergraduate populations, including research on academic cheating (e.g. Higgins, Fell, & Wilson, 2007). This survey will use Rocque, Posick, & Zimmerman's (2013) shortened 12-item version of the original Grasmick et al. (1993) scale. Rocque, Posick, & Zimmerman presented items in their revised scale that cover the original scale's four main dimensions of temperament, impulsivity, risk-taking, and self-centeredness because these

dimensions exhibited favorable internal consistency and validity. The outstanding simple task

preference and physical activity scales were removed because they were significantly weaker and

often ignored in prior research. The measure will use a six-point Likert scale response, 1=

completely disagree through 6= completely agree. Responses will be averaged together to create

a unitary self-control score. Rocque, Posick, & Zimmerman's (2013) analyses of the shortened

scale indicated acceptable item fit and reliability, and strong person and item reliability scores

(.82, 1.00, respectively). The researchers compared these results with their analyses of the

competing measure in self-control research, Hirschi's (2004) behavioral self-control scale.

Analyses indicated that the two scales are equal in most aspects but the Grasmick 12-item scale

was slightly more favorable, justifying the use of the attitudinal measure of self-control and of

its' 12-item adaptation.

Neutralizing Attitude

Neutralizing attitude will be assessed by an 11-item scale created by Haines, Diekhoff, &

LaBeff (1986) for use with an undergraduate population (Appendix B). Participants are given

the prompt, "Peyton is a JMU student. Peyton should not be blamed for cheating if", followed

by 11 hypothetical scenarios. Originally coined by Sykes & Matza (1957), neutralizing attitude

is the tendency of an individual to justify acts they acknowledge as delinquent before

commission as a means to remove their inhibitions on or "rationalize" a delinquent act. Sykes &

Matza identify five types of neutralization, which are reflected in the items of the scale: denial of

responsibility, denial of the victim, denial of injury, condemnation of the condemners, and

appeal to higher loyalties. The measure will use a six-point Likert scale response, 1= completely

disagree through 6= completely agree. Responses will be averaged together to create a unitary

neutralizing attitude score. Haines, Diekhoff, & LaBeff's (1986) analyses of the scale found

high internal consistency (α = .93), and recent analysis of the scale like Curasi's (2013) finding

of high internal reliability among an undergraduate population (α = .91) continue to reflect the

scale's strength.

Goal Orientation

The construct of goal orientation defines the active influence an individual places upon

their environment during the General Perceptual Formation phase. It is important to note that

while the concept of goal orientation applies generally to deviant behavior, specific outcomes

vary by context and as a result motivational scales will not be generally applicable. In study of

"actual" criminal behavior, motivation might be best viewed through civic engagement and

community improvement as an outcome, but in academic settings motivation can be viewed

through learning goals as an outcome. In application to the academic context, goal orientation

will be assessed by Elliot & Church's (1997) 18-item Achievement Goal Orientation Inventory

(Appendix C). Achievement goal orientation indicates what motivates a student in academic

work. The two main categories of achievement goals are mastery goals and performance goals.

A mastery-oriented student is driven intrinsically motivated by the pursuit to master academic

material. A performance-oriented student is extrinsically motivated by achievement indicators or

social influence. Some research suggests that the performance orientation category may be split

into two subcategories, performance-approach and performance-avoid orientations.

Performance-approach oriented students desire to display superior ability relative to their peers,

and performance-avoid oriented students desire to avoid appearing incompetent or lesser than

their peers. The Achievement Goal Orientation Inventory uses this split approach, resulting in

three separate item factors, each primarily corresponding to six questions: Mastery,

Performance-approach, and Performance Avoid. The measure will use a six-point Likert scale

response, 1= completely disagree through 6= completely agree. Participants will be averaged

within each of the three factor groupings to calculate a score representing the significance of

each factor in an individual's academic motivation. Elliot & Church (1997) found that all items

loaded higher than .40 on their primary factor, all three factors showed strong internal

consistency (α = .91, .89, .77, respectively), and that a three-factor model was stronger than a

performance-combined two-factor model.

University Belonging

University belonging will be assessed by Pittman & Richmond's (2007) adapted version

of Goodenow's (1993) Psychological Sense of School Membership Scale (PSSM) (Appendix D).

Goodenow originally created the PSSM for an elementary and secondary school-age population

in order to address the social factor of school belonging on student engagement and success. The

18-item scale asks participants to indicate their level of agreement with statements related to

university belonging, including a portion of reverse-coded items. Individuals' responses across

the scale are averaged in order to create a unidimensional school belonging score. Goodenow's

analyses found acceptable internal reliability (α = .884), and high validity through longitudinal

predictions and educational correlates. Pittman & Richmond (2007) adapted the PSSM to apply

to undergraduate students by changing K-12-focused words like "teacher" and "school", for

example, to words that applied to undergraduate students like "professor" and "university". The

measure will use a six-point Likert scale response, 1= completely disagree through 6=

completely agree. Responses will be averaged together in order to create a unitary university

belonging score. The researchers' analyses found high internal reliability (α = .88), and

university belonging was significantly correlated with all of the measures they studied, including

academic, emotional, and social dimensions.

Cheating Behavior

Cheating behavior will be measured by a 12-item Likert scale comprised of the components of the JMU Honor Code that define academically dishonest acts (Appendix E). Participants will respond to each item detailing a cheating act by indicating the frequency they engaged in the activity in the prior semester. The measure will use a six-point Likert scale response, 1= never through 6= 15+ times. In a separate occurrence of this scale, participants will indicate their general perception of how often their peers who are JMU undergraduate students engage in each activity (Appendix F). Responses will be averaged together to create a unitary cheating behavior score, and significant individual items will be considered as well.

Planned Analyses

To test the application of the proposed model, data will be analyzed using through relevant path model techniques to establish a best-fit model that is statistically significant over alternative model constructions. Further, factor analysis will be used to identify the theoretical separation of factors in the same process rather than measures of the same underlying trait. To test the hypothesis that each factor measured predicts cheating behavior, an ordered logistic regression model will be constructed and analyzed using cheating behavior as the independent variable and the remaining factors as predictor variables. If results warrant further analyses on differentiation by demographic variables, independent T-tests will be performed with each measure to determine whether a statistically significant difference between demographic groups exists.

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Potential Outcomes

</div>

Due to the extant circumstances surrounding the COVID-19 epidemic, data will not be able to be collected to test these hypotheses. However, potential outcomes and their implications

can be explored. Due to the hypothesis being based around a path model rather than a binary

question, possible outcomes are not necessarily direct. Therefore, in this section three scenarios

will be discussed: The first representing a scenario where the outcome is as expected and

hypotheses are confirmed, the second a potential outcome where many relationships are

significant but an alternative theory emerges, and the third representing a significant failure to

identify relationships and support hypotheses.

Scenario 1: Expected Outcome

In this scenario, a general model that combines criminological and psychological theory

on causes of delinquency to predict cheating behavior will be confirmed. For reference, Figure 1

is reproduced.

Figure 1; Repeated from p. 33

Proposed Deviant Behavior Path Model; Longitudinal Framework of Deviant Decision-Making
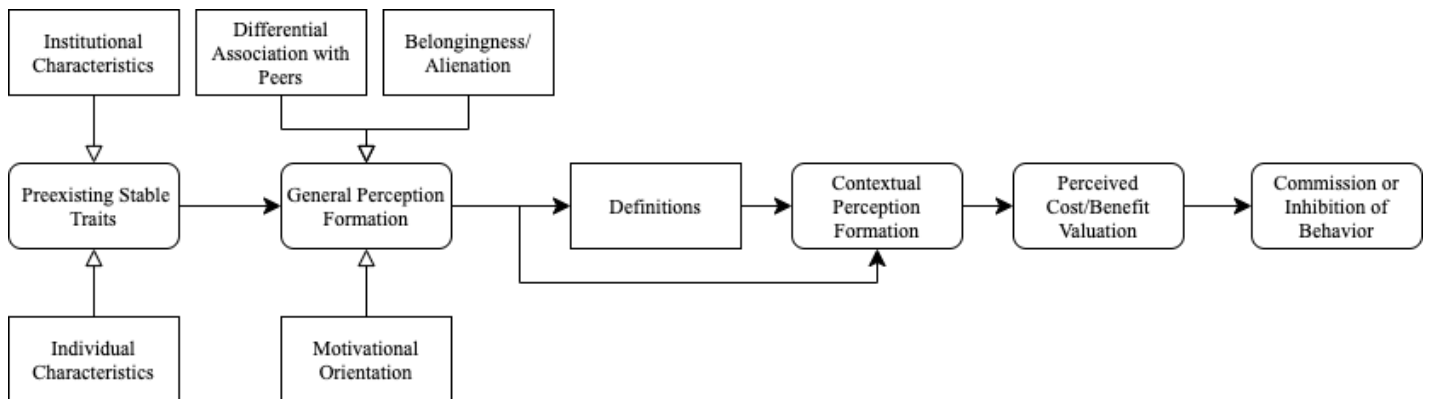
Preexisting Stable Traits

The stable, enduring traits of both the individual and the institution will influence

cheating behavior and interact with lower ordered factors. Individuals who are low in

Gottfredson & Hirschi's theory of self-control will be significantly more likely to engage in

delinquent behavior, and their tendencies will lead them to be more likely to associate with

deviant peer groups that mirror and intensify their deviant behavior. Given this support for a

significant factor in the Preexisting Stable Traits process, a narrative view will consider the

characteristics of JMU that may facilitate or inhibit the student body's propensity to cheat.

Focusing on the works of researchers McCabe, Treviño, & Butterfield, certain factors that are

significant in cheating occurrence will be considered. Most notably, students will have little

knowledge or connection with JMU's Honor Code policy a decree to not cheat. Considering the

institution's Honor Code practice, JMU will match McCabe, Treviño, & Butterfield's (2010)

description of the common university rollout of Honor Code as "window dressing". JMU

possesses the positive characteristic of a well-worded Honor Code but it's potential inhibition of

academic dishonesty is limited. JMU presents the Honor Code during Freshman Orientation but

does not follow up in the remainder of a student's enrollment to maintain salience of the Code.

Further, due to the school's size students are essentially disconnected from the positive practice

of a student-led Honor Council. As a result, students will not internalize the guiding Code and a

dishonest culture may be allowed to take hold in its absence.

JMU's probe into student culture (JMU OSPE, 2019) is worth discussion. One notable

measure, Probable Reaction to a Student Cheating (p. 4, Table 16), found that 62% of students

would not consistently report witnessed cheating behavior to an authority, supporting the

hypothesis of a school culture not oriented toward the Honor Code. In contrast, the measure

Perceptions of the Honor Code, Honor System and Academic Misconduct (p. 4, Table 17) found

that students overwhelmingly felt that they understood actions that would be academic

misconduct (88%) and that the Honor Code was well explained to them (89%). However, the

measure incorrectly assesses its target by asking students' perception of their knowledge of the

Honor Code rather than their actual knowledge. For example, JMU presents guidelines for

ethical reasoning, 8 Key Questions (8KQ), alongside education on the Honor Code. JMU's

Ethical Reasoning in Action program administered scales designed to measure student's actual

recall and ability to explain the 8KQ (Au, Jacovidis, Ames & Holzman, 2018). First-year

students were able to recall 6 of 8 Questions and explain 3, while second-year students only

recalled and explained 1 Question. Absent data on the actual internalization of the Honor Code,

it may be that its tenets are similarly extinguished in students' minds over time.

Both institutional characteristics and individual characteristics will moderate other

processes that predict academic dishonesty in addition to directly modifying cheating behavior.

These preexisting traits affect subsequent processes by influencing the individual students'

academic disposition and selection of social engagement, alongside the larger school culture

towards academics and deviance.

General Perception Formation

Once the student enters the university environment, they will engage in a process of

forming perceptions of their surroundings that will persist throughout their academic experience.

Viewed through Akers' Social Learning Theory, differential association with peers will lead to

internalized perceptions of deviant and normative behavior. Further, it is likely that the

significance of each valence of association limits the occurrence of the other. A student's time is

a finite resource; time spent in a deviant peer group offers social norms that directly oppose

normative values as well as lessening time spent around normative peer groups. School

belongingness also directly indicates social bonds and time spent in social groups that could hold

the institution's values. In addition, differential association and school belongingness may

interact to intensify each other once individuals approach extremes of each measure. In the

present circumstances, normative peer groups are likely to be composed of students who feel

belongingness and further increase feelings of belongingness. Deviant peer groups' values are

by definition in opposition to the institution's values, so students who seek out and participate in

these groups will likely feel alienated, and their social experience removed from the institution

will further increase alienation.

Respondents' Achievement Goal Orientation Inventory values formed by interaction

between individual tendencies and the experienced academic climate will also significantly

predict dishonest behavior. Achievement goals are significant in the General Perception

Formation Process as well as the Contextual Perception Formation process within individual

classes, however the utilized scale focuses only on general perception of the JMU academic

experience as a whole. Students who endorse a mastery-goal orientation will be motivated to

become experts in their studies and cheating will be deleterious to their goals. Students who

endorse a performance-goal orientation will perceive a clear benefit of cheating toward their

goals, possibly modified by their exposure to cheating behavior as a utilized option by their

peers. Beyond motivation theory, achievement goals partly quantify perceptual deterrence in

rational choice models.   A student's relative value toward an external or internal reward will

significantly affect the reward value of cheating behavior.

By shaping students' available social experience and outlook on academics, the process

of General Perception Formation will influence subsequent processes' effect on cheating by

defining a student's classroom experience. Students that associate with deviant peers will learn

fundamentally different definitions of academics at JMU than students who associate with

normative peers, and additional social punishments will accompany cheating for students who

feel connected to the school and normative peer groups. In motivational orientation, mastery-

oriented students also establish a fundamentally different classroom perception than

performance-oriented students, leading to different possibilities in definitions and varying

cost/benefit valuations.

Definitions

Respondents' definitions in academic scenarios, indicating to what degree one endorses a

neutralizing attitude, will be an exceptionally significant predictor of cheating behavior.

Definitions are essential in all deviant behavior choices as a fully neutralizing attitude allows an

individual to release all inhibition from values or moral principles, decimating perceived costs in

commission of deviant behavior. Definitions are even more significant in the academic

dishonesty paradigm because college students as a whole are well-educated, upstanding

individuals who know cheating is wrong yet frequently do so anyway. A neutralizing attitude is

emblematic of deviant social influence overtaking normative influence across many factors.

Under the confirmed model, definitions are influenced by all prior factors, but given the

prevalence of deviant behavior among a population that generally endorses normative societal

values social influences during General Perception Formation must be more informative than

Preexisting Stable Traits. Definitions are placed in between General Perception formation and

Contextual Perception Formation because they define a perceptual frame before a specific

contextual experience and further inform an individual's decision within that context. For

example, definitions influence an individual's perception of academics generally, defining an

approach to a day, semester, or year before a student enters it. Then, definitions update

alongside context; a student's neutralizing attitude could not lead to cheating generally but will

neutralize the moral and value-based costs of cheating when a teacher gives an exam online

("everybody cheats in online exams, so I can too").

Definitions are the longitudinally final factor measured in the present study before the outcome variable, cheating behavior, however it is hypothesized that definitions have a direct effect on cheating behavior as well as an indirect effect by influencing framing in Contextual Perception Formation, and modulating social and internal costs in Perceived Cost/Benefit Valuation.

Commission or Inhibition of Behavior

Cheating behavior will be a sensitive topic for respondents and there is will be some bias toward lower frequencies of cheating, but the prevalence found will be closer to the true prevalence of cheating at JMU than prior surveys that examined the topic. Past research with the JMU undergraduate population that asked about cheating has collected responses that are somewhat spread across the Likert scale. JMU's most recent Continuing Student Survey (JMU OSPE, 2019) asked participants to indicate the number of times that "they knowingly engaged in academic misconduct". While the majority of participants responded "never", 36% of participants indicated at least some cheating. It is fair to assume that the actual percentage of students who have engaged in cheating is significantly higher. Researchers McCabe, Butterfield, & Treviño (2012) have studied cheating among undergraduate populations for decades and concluded that based upon the sum of their research, "more than two-thirds of college students are reporting that they have cheated" (p. 71). In a meta-analysis of university cheating, Whitley (1998) demonstrated that the reporting of cheating can be highly variable through the finding that across 46 studies, cheating prevalence ranged from 5-95%. Researchers attribute this large range to variance across studies in definitions of cheating and measurement methods (Miller, Murdock, Anderman & Poindexter, 2007), and deception may skew results as well.

This administration of a cheating frequency questionnaire will yield more accurate results than the Continuing Student Survey for two reasons. First, this scale provides a standardized, holistic definition of cheating that also neatly generalizes to the JMU population as it is derived from actual JMU code. Second, the survey will be presented online through the Psychology Subject Pool as opposed to the Continuing Student Survey's administration during JMU's Assessment Day. As a result, the present survey will be perceived to be more anonymous and separated from Honor Code enforcement agents. Therefore, this scale will provide analyzable results that can provide new insight on the JMU population and allow for statistically sound analysis of the measured factors.

Scenario 2: Alternative Explanations Revealed

Individual Characteristics Insignificant

Individual characteristics, operationalized by low self-control, is conceptually the weakest of the factors studied. Low self-control has consistently been found to be a weak yet statistically significant factor in past studies, but most measure the factor alone or among few other factors. Low self-control might not account for a portion of unique variance and may be better subsumed under another factor. Low self-control is also not a conceptually complete measure for the construct of individual characteristics. The measure may not capture enough of the construct to result as expected. Finally, the self-control measure was developed and mainly used among criminal populations, and some studies using the measure with a student population have struggled to attain variance in response.

In light of these limitations, a finding that the factor is statistically insignificant would not necessarily suggest the removal of the construct. Instead, the utilization of multiple alternate

measures would be suggested to better capture the individual characteristics construct. Figure 2

displays an updated behavior model reflecting this change in path model approach.

Figure 2

Updated Model Representing Scenario "Individual Characteristics Insignificant"
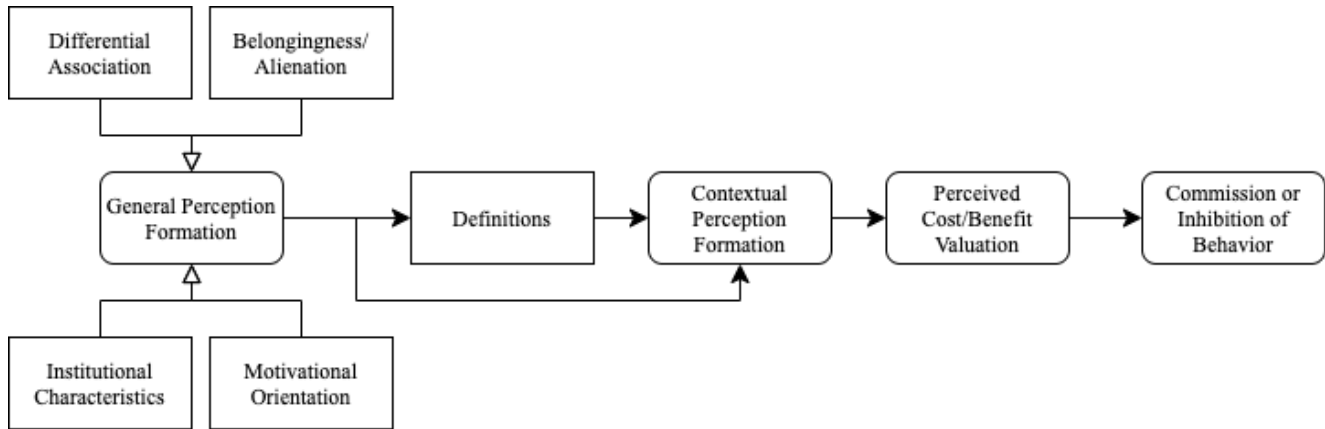
Note. Figure 2 varies from original model (Figure 1) through removal of individual

characteristics factor and stable preexisting traits process, transfer of institutional characteristics

factor to general perception formation.

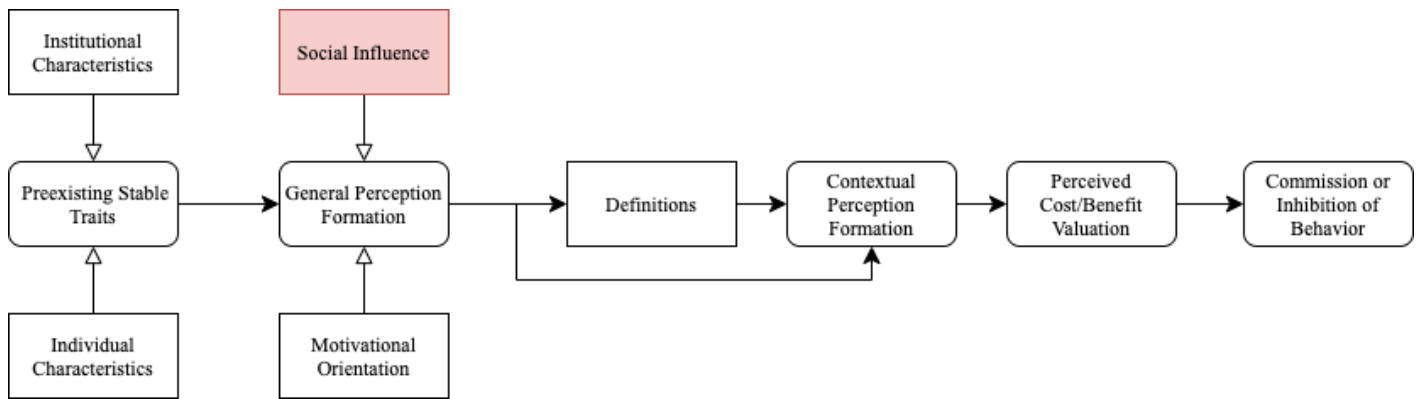### *Differential Association and Belongingness a Unitary Construct*

As previously discussed, differential association with peers and belongingness/alienation

are especially interrelated among a student population that is closely linked to an accessible

institution. This interrelation is accounted for in hypothesis through the expectation that a score

in the extreme of either measure will be predictive of an extreme of the same valence in the

other, yet in approaching the mean the measures will vary independently from one another. In

other words, a respondent that only associates with normative peers will very likely feel

belonging as the peer group will probably be linked with the institution it receives normative

values from. Conversely, a respondent that only associates with deviant peers will be very likely

to feel alienated as the group would struggle to form direct links with the institution and might

experience punishment from the institution. However, many students participate in multiple peer

groups so there is ample room to move away from the extremes and possibly identify two

separate constructs.

The two factors may fail to be established as separate constructs in two possible

scenarios. First, respondents may be unexpectedly clustered around the extremes making the

two factors unitary by hypothesis. This scenario does not inform whether the two truly are

separate constructs. Second, the two factors may be consistently correlated across the spectrum

of respondents' variance. If this occurs, it would suggest that the two are, at minimum in the

student population, measuring the same construct. It may be that the two are independent in

populations where respondents are further separated from the normative institution, such as a

criminal population where the institution is defined by general societal values. Figure 3 displays

an updated behavior model reflecting this change in path model approach.

Figure 3

Updated Model Representing Scenario "Differential Association and Belongingness a Unitary

Construct"

Note. Figure 3 varies from original model through combination of the factors differential

association with peers and belongingness/alienation into a unitary social influence factor.
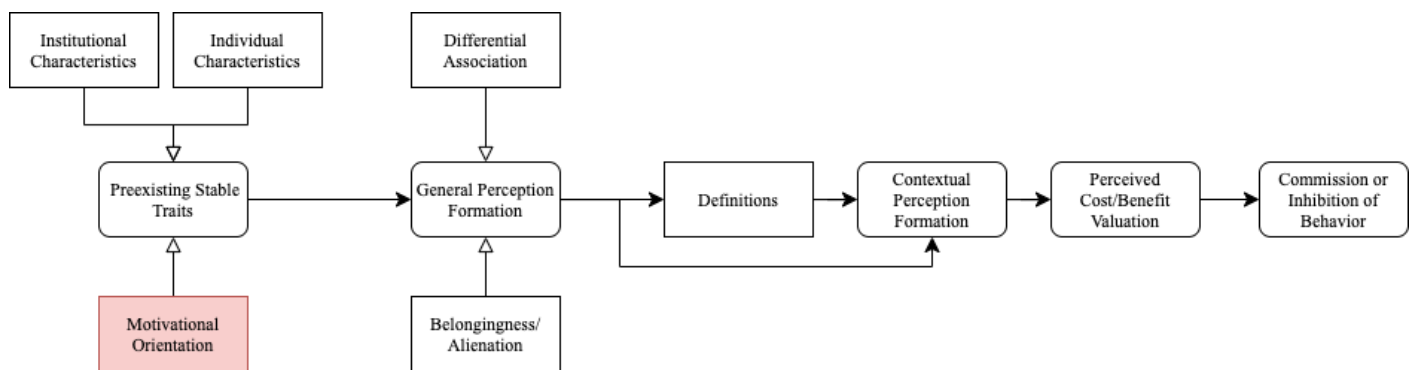
Change highlighted in red.

Motivational Orientation a Better Fit in Preexisting Stable Traits Process

The construct of motivational orientation is hypothesized to reside in the General

Perception Formation level because previous studies demonstrate that entering the university

environment offers students an opportunity to shift the dispositions toward academics they

possessed in high school. However, a salient guide toward a variant motivation orientation

might be required for this change to occur. If a certain influence is required to shift motivation,

and the influence is not sufficiently present at JMU, then placing the motivational orientation

construct on the Preexisting Stable Traits process would increase the model's fit to the data

received. This alternative explanation would suggest that interventions designed to alter

motivation are either completely inconsequential or currently ineffective and focusing

interventions on social factors would be a more practical choice. Figure 4 displays an updated

behavior model reflecting this change in path model approach.

Figure 4

Updated Model Representing "Motivational Orientation a Better Fit in Preexisting Stable Traits

Process"

Note. Figure 4 varies from original model through transfer of motivational orientation factor to

preexisting stable traits process level. Change highlighted in red.

Scenario 3: Failure to Find Significant Insight

Insufficient Amount of Cheating Behavior Reported

Notably low levels of reported cheating prevalence would lead to the study's general

failure because it would be impossible to analyze the significance of any factor on cheating or

test any hypotheses. The Continuing Student Survey's identification of a 26% cheating

prevalence rate among the JMU population helps to nullify these concerns, but as previously

noted variance in student cheating behavior measures vary virtually across the spectrum. If this

outcome occurred, then theoretical matters would still be discussed but statistical analysis and

discussion on cheating behavior would be void. A careful analysis of the other factors may reveal a previously undiscussed finding of note.

Measured Factors Account for Small Percentage of Variance in Behavior

The present model was constructed to account for as much unique variance of cheating behavior as possible; a number of theoretical approaches are represented in the measures and literature review was focused on identifying the most significant construct in the context of university student cheating within each approach. It is unlikely that the measured factors as a whole fail to account for a significant portion of variance in cheating behavior, but it might occur that only one or two factors emerge as significant while others are ineffective predictors of cheating behavior. In this scenario, the best course of action might be to abandon the model approach entirely and pursue a purely correlational analysis of factors in cheating behavior.

Factors a Poor Fit to Path Model

The path model is largely a combination of previously validated models of student cheating; the factor ordering is largely replicated, with the main unique addition being the combination of factors in one study administration. It is unlikely that a path model would be inappropriate to frame the data in any way, but a variant ordering may be a stronger fit. In the scenario that an adjusted model is statistically a better choice, that model will be pursued for analysis. In the scenario that a path model appears inappropriate in general, the analytical method will be abandoned for purely correlational analysis.

Discussion & Conclusion

Effective deterrence is essential because it is shown to more effectively mitigate deviant behavior than post-commission responses while also avoiding unnecessary punishment. Efforts to further understand deviance in criminological research has led to deterrence's natural

integration into larger psychological and educational frameworks. In synthesis, these approaches are compatible and may influence a significant theoretical update in each field.

Most essential to this integration is the modern definition of crime as an act of force or fraud to attain a reward. Theorists establish this definition to normatively define a crime across contexts and clarify that the types of crimes that are relevant to deterrence are those that violate a norm known to an individual and the institution's members as a whole. In other words, a crime is an action that is generally considered morally wrong. This definition might invalidate minor legal infractions that aren't morally implicated because societal norms do not proscribe it; for example, driving at 31 MPH under a 30 MPH speed limit isn't necessarily morally implicated and is not relevant to the context of crime under deterrence theory. Academic dishonesty, a clear violation of institutional norms, is a crime under this definition and is of the same nature of much more severe crimes like violent legal offenses. This assertion is supported empirically through the successful implementation of discussed deterrence factors in both criminological and academic research. The theoretical factors discussed originated amongst criminal populations and proceeded to consistently provide significant insight in academic dishonesty research. This demonstration of shared theoretical basis and influences provides validation for the present definition of crime. As a result, criminological theory can expand beyond the confines of the comparatively extreme behaviors that define a criminal or prison population, increasing potential areas for further research and broadening the impact of advances.

In literature review, the parallels between principles of deviance in each field are clear. A number of researchers have identified and discussed the potentials for integration, and some studies do include integrated theory, but theorists in each field are slow to respond to the call for complete integration. Akers emerges as a pioneer in this pursuit through his calls for theoretical

integration and his own work tying criminology into psychology to create the predominant

criminological theory of behavior, Social Learning Theory. However, subsequent research

demonstrates that he too promotes his theory over Hirschi's social bond theory while the two are

shown to be strongest and most predictive of deviant behavior in tandem. Researchers focusing

on a rational choice behavioral model have found greatest success in integrating theory by

considering factors not as competing interpretations of deviance but as separate influencers in a

larger framework.

The extent research demonstrates the prevalence of deterrence and deviance factors on

the commission of academic dishonesty. Most notable is Akers component of definitions, which

theoretically mirrors Bandura's moral disengagement. Academic researchers demonstrate that

the prevalence of cheating behavior is high, and especially surprising when one defines cheating

as deviant behavior akin to other "crimes". Some significant percentage of students engage in

behavior they know is morally wrong, and academic institutions' deterrence efforts are largely

insufficient. Prolific academic dishonesty researchers McCabe, Trevino, & Butterfield

demonstrate the shortcomings of the field of academic research as they are able to identify a

number of causes of academic dishonesty, but their field lacks the theoretical background to

properly understand the causes and appropriately respond. Similar to issues in criminology,

psychological principles are able to address issues in academic research and update the field's

theory.

The present study focuses on academic dishonesty in the university context. The work

may have direct implications for academic institutions' interventions to combat cheating

behavior. Past research focusing on principles operationalizing social cognitive theory have

been significantly predictive of cheating behavior, highlighting the importance of moral salience

and positive social experience. These principles are explanatory for McCabe, Trevino, & Butterfield's findings on university honor codes and their effective installment. Further, social cognitive theory links engagement to the increase in contextual moral salience. As a university deeply focused upon the engagement construct, the integration of psychological theory into real-world academic issues might be hugely informative.

Finally, it must be noted that this work is limited by its lack of data collection. There is no resulting evidence supporting the proposed model, but the work may provide some value absent data. The principle thesis investigated was that separate fields studying similar constructs are strongest when integrated together. The model was created based upon significant relationships found in all directions through literature review- each factor is consistently predictive of cheating behavior, and there is strong justification for the placement of each factor within the path model. The building of the model itself might provide avenues for further research in empirically exploring these claims under the fully integrated behavioral model framework. Another area for further research that was expected to emerge is the influence of democratic participation within an institution to increase moral salience and in turn lessen deviant behavior. A number of academic studies demonstrate that campuses that allow students to be deeply involved with the governance of the institution display significantly lower cheating prevalence. Further research might explore this effect upon a separate population such as a community and its' local governance.

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Appendix A

Self-Control Scale

Please indicate your level of agreement with the following statements about yourself:

1= Completely disagree, 2= Mostly disagree, 3= Slightly disagree, 4= Slightly Agree, 5= Mostly

agree, 6= Completely agree

1. I act on the spur of the moment without stopping to think

2. I do whatever brings me pleasure here and now, even at the cost of some distant goal

3. I'm more concerned with what happens to me in the short run than in the long run

4. I like to test myself every now and then by doing something a little risky

5. Sometimes I will take a risk just for the fun of it

6. Excitement and adventure are more important to me than security

7. I try to look out for myself first, even if it means making things difficult for other people

8. If things I do upset people, it's their problem not mine

9. I will try to get the things I want even when I know it's causing problems for other people

10. I lose my temper pretty easily

11. When I'm really angry, other people better stay away from me

12. When I have a serious disagreement with someone, it's usually hard for me to talk calmly about it without getting upset

Appendix B

Revised Neutralizing Attitude Scale

Please indicate your level of agreement with the following hypothetical statements about a JMU

student:

1= Completely disagree, 2= Mostly disagree, 3= Slightly disagree, 4= Slightly Agree, 5= Mostly

agree, 6= Completely agree

Peyton is a JMU student. Peyton should not be blamed for cheating if....

1. The course material is too hard. No matter how much he studies, he cannot understand the

   material.

   Peyton is a JMU student. Peyton should not be blamed for cheating if....

2. He is in danger of losing his scholarship due to low grades.

   Peyton is a JMU student. Peyton should not be blamed for cheating if....

3. He doesn't have time to study because he is working to pay for school.

   Peyton is a JMU student. Peyton should not be blamed for cheating if....

4. The instructor doesn't seem to care if he learns the material.

   Peyton is a JMU student. Peyton should not be blamed for cheating if....

5. The instructor acts like his/her course is the only one he is taking. Too much material is

   assigned.

   Peyton is a JMU student. Peyton should not be blamed for cheating if....

6. His cheating isn't hurting anyone.

   Peyton is a JMU student. Peyton should not be blamed for cheating if....

7. Everyone else in the room seems to be cheating.

Peyton is a JMU student. Peyton should not be blamed for cheating if….

8. The people sitting around him made no attempt to cover their papers and he could see the answers.

    Peyton is a JMU student. Peyton should not be blamed for cheating if….

9. His friend asked him to help him/her and Jack couldn't say no.

    Peyton is a JMU student. Peyton should not be blamed for cheating if….

10. The instructor left the room to talk to someone during the test.

    Peyton is a JMU student. Peyton should not be blamed for cheating if….

11. The course is required for his degree, but the information seems useless. He is only interested in the grade

Appendix C

Achievement Goal Orientation Inventory

Please indicate your level of agreement with the following statements about yourself:

1= Completely disagree, 2= Mostly disagree, 3= Slightly disagree, 4= Slightly Agree, 5= Mostly

agree, 6= Completely agree

1. It is important to me to do better than the other students

2. My goal in this class is to get a better grade than most students

3. I am striving to demonstrate my ability relative to others in this class

4. I am motivated by the thought of outperforming my peers in this class

5. It is important to me to do well compared to others in this class

6. I want to do well in this class to show my ability to my family, friends, advisors, or others

7. I want to learn as much as possible from this class

8. It is important for me to understand the content of this course as thoroughly as possible

9. I hope to have gained a broader and deeper knowledge of psychology when I am done with

    this class

10. I desire to completely master the material presented in this class

11. In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to

    learn

12. In a class like this, I prefer course material that really challenges me so I can learn new things

13. I often think to myself, "what if I do badly in this class?"

14. I worry about the possibility of getting a bad grade in this class

15. My fear of performing poorly in this class is often what motivates me

16. I just want to avoid doing poorly in this class

17. I'm afraid that if I ask my TA or instructor a "dumb" question, they might not think I'm very

    smart

18. I wish this class was not graded

Appendix D

Adapted Psychological Sense of School Membership Scale

Please indicate your level of agreement with the following statements about yourself:

1= Completely disagree, 2= Mostly disagree, 3= Slightly disagree, 4= Slightly Agree, 5= Mostly

agree, 6= Completely agree

1. I feel like a real part of JMU.

2. People here notice when I'm good at something.

3. It is hard for people like me to be accepted here. *(reversed)*

4. Other students in this university take my opinions seriously.

5. Most professors at JMU are interested in me.

6. Sometimes I feel as if I don't belong here. *(reversed)*

7. There's at least one professor or other faculty in this university that I can talk to if I have a

   problem.

8. People at this university are friendly to me.

9. Professors here are not interested in people like me. *(reversed)*

10. I am included in lots of activities at JMU.

11. I am treated with as much respect as other students.

12. I feel very different from most other students here. *(reversed)*

13. I can really be myself at this university.

14. The professors here respect me.

15. People here know I can do good work.

16. I wish I were in a different university. *(reversed)*

17. I feel proud of belonging to JMU.

18. Other students here like me the way I am.

Appendix E

Individual Cheating Scale

Please indicate how frequently you engaged in each of the following behaviors during your last

academic semester at JMU:

1= Never, 2= 1-3 time(s), 3= 4-6 times, 4= 7-10 times, 5= 11-14 times, 6= 15+ times

1. Used unauthorized notes, electronic devices, or other materials during an exam

2. Received unauthorized assistance on a work submitted for academic credit

3. Obtained unauthorized information about an upcoming exam

4. Copied information from another student during an exam

5. Gave unauthorized assistance to another student during an exam by allowing them to see or copy a portion of your work

6. Gave unauthorized assistance to another student on a work submitted for academic credit by allowing them to see or copy a portion of your work

7. Gave another student unauthorized copies of any portion of an exam

8. Taken an exam in place of another student

9. Falsified scientific or other data submitted for academic credit

10. Collaborated in an unauthorized manner with other students on an exam

11. Collaborated in an unauthorized manner with other students on a work submitted for academic credit

12. Committed plagiarism on a work submitted for academic credit (copied or presented as your own information, ideas, or phrasing of another person without proper acknowledgement of the true source)

Appendix F

Peer Cheating Scale

Please indicate how frequently you believe the typical JMU student in your social group engaged

in each of the following behaviors during their last academic semester at JMU:

1= Never, 2= 1-3 time(s), 3= 4-6 times, 4= 7-10 times, 5= 11-14 times, 6= 15+ times

13. Used unauthorized notes, electronic devices, or other materials during an exam

14. Received unauthorized assistance on a work submitted for academic credit

15. Obtained unauthorized information about an upcoming exam

16. Copied information from another student during an exam

17. Gave unauthorized assistance to another student during an exam by allowing them to see or copy a portion of your work

18. Gave unauthorized assistance to another student on a work submitted for academic credit by allowing them to see or copy a portion of your work

19. Gave another student unauthorized copies of any portion of an exam

20. Taken an exam in place of another student

21. Falsified scientific or other data submitted for academic credit

22. Collaborated in an unauthorized manner with other students on an exam

23. Collaborated in an unauthorized manner with other students on a work submitted for academic credit

24. Committed plagiarism on a work submitted for academic credit (copied or presented as your own information, ideas, or phrasing of another person without proper acknowledgement of the true source)