EVIDENCE FOR THE INFLUENCE OF CONFUCIAN SOCIAL LEARNING THEORY ON NEGATIVE BEHAVIORAL OUTCOMES

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Abstract: This study is a test of Confucian social learning theory's ability to influence negative behavioral outcomes among young people. Material relating to learning from different social environments and the attendant behavioral outcomes was filtered out of an assortment of Confucian texts, forming a limited Confucian social learning theory. Gang activity variables, representing levels of learned immorality within a community, from the NLSY97, were tested by delinquency and substance use outcome variables. The data was attained from the initial wave of responses from the NLSY97, with a sample of 8,985 people from the United States between the ages of 12-16. Confucian theory was supported by this examination, even after controlling for several variables including gender, ethnicity, age, household income, parent education, etc. The more gang activity (or immorality) within an environment, the greater the probability that one will be delinquent and engage in substance use. The more gang activity (or immorality) among close relatives or friends (people who are imitated or in near proximity), the greater the probability that one will be delinquent and engage in substance use. The more days gunshots are heard in a neighborhood per week (or serious immorality within a neighborhood), the greater the probability that one will be delinquent. This study attempts to bridge the gap between Confucian theory and modern criminological data, adding support to Confucian social learning theory.

Keywords: Confucianism, social learning theory, crime, gangs, NLSY97

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INTRODUCTION

Confucius (551-479 BCE) was deeply involved in criminal justice issues, as both a philosopher and as an administrator. He held the prominent position of Minister of Crime in his birth state of Lu and was later a consultant to bureaucrats on matters of social regulation. His crime prevention theory, along with the policies he implemented, were purportedly so effective that it earned the attention of governors of neighboring states. James Legge describes Confucius' accomplishments as the magistrate of Chung-tu and as the Minister of Crime:

As magistrate of Chung-tu he produced a marvelous reformation of the manners of the people in short time...A thing dropped on the road was not picked up. There was no fraudulent carving of vessels.

The duke Ting, surprised at what he saw, asked whether his rules could be employed to govern a whole State, and Confucius told him that they might be applied to the whole kingdom...He was quickly made minister of Crime, and the appointment was enough to put an end to crime. There was no necessity to put the penal laws in execution. No offenders showed themselves. (as quoted in Confucius [1893] 1971; 72)

This is a test of the ability for Confucian social learning theory to influence delinquency and substance use among young people. The theory of Confucius, Mencius, and Xunzi, who were operating from the sixth to the third centuries BCE, is inspected. Their theoretical contributions are relevant to criminological issues, as they were advisors to the established order concerning the control and punishment of populations. Correspondingly, explanations for crime are thoroughly covered within their texts.

Studies have been conducted on how Confucian social learning theory corresponds to behavior acquisition, social control, restorative justice, etc. For example, Tan (2017) explored the moral implications of Confucian self-directed learning and self-cultivation within a social environment. He recommended a model of Confucian self-directed learning, explaining how it operates within a collective social environment to enhance moral cultivation. Lo (2020) studied how relationships within Confucian societies positively influence reconciliation and restoration between offender and victim within a community setting. Under these conditions, the offender learns from the victim and other virtuous members of the community within a Confucian relational framework. Lassi (2021) compared Confucian family centric childrearing to community centric childrearing styles as they relate to negative behavioral outcomes. He showed that learning moral lessons within a Confucian style family setting may produce improved behavioral outcomes compared to moral lessons learned in a wider community setting. Though, Confucian social learning theory has not been thoroughly and directly analyzed from a criminological standpoint, nor has it been tested by empirical data. This is a matter of significant purpose, given that childhood influences tend to alter behavior later in life (Fletcher & Schurer, 2017; Gottfredson & Hirschi, 1990; Hengartner et al., 2015; Lilly, Cullen, & Ball, 2007). Provided this, there is a need to trace factors that create healthy social environments for children.

Confucian Social Learning Theory

The Confucians thought that behaver is learned from others within localized social environments, and that morality is learned in these localized social environments when people are engaged in virtuous behavior. Correspondingly, deviancy is acquired in localized social settings lacking in virtue. Confucius (2003) illustrates, "Virtue is never solitary; it always has neighbors" (4.25, 37). Xunzi (1999) followed with an analogy on the importance of the environment in forming people's characters:

In the western regions, there is a tree called the "servant's crane" that has a trunk only four inches long and grows on the top of a high mountains, yet it looks down into chasms a hundred fathoms deep. It is not that this tree's trunk is able to grow to such length; rather, it is the result of its situation. (1.4, 7)

The Confucians believed that behaviors, either moral or immoral, are learned from companions, associates, and others within the immediate environment. The moral character of our companions and associates will influence our own moral character; Xunzi (2003) explains:

If he associates with good companions, he will be able to observe conduct that is loyal and respectful. Then, although he is not aware of it, he will day by day progress in the practice of benevolence and righteousness, for the environment he is subjected to will cause him to progress. But if a man associates with men who are not good, then he will hear only deceit and lies and will see only conduct that is marked by wantonness, evil, and greed. (174)

He continues, "Therefore a gentleman will take care in selecting the community he intends to live in and will choose men of breeding for his companions. In this way, he wards off evil and meanness, and draws close to fairness and right" (Xunzi, 1999, 17). Associating with immoral people increases the likelihood that we will take on a related mindset and behave similarly. Xunzi (2003) adds, "For the environment he is subjected to will cause him to be in danger. An old text says, 'If you do not know a man, look at his friends; if you do not know a ruler, look at his attendants,' Environment is the important thing! Environment is the important thing!" (s. 23, p. 174).

Mencius, in his theory and from the parables illustrating his mother's behavior, placed a strong emphasis on the role of the local/immediate environment in

determining future conduct. He describes the transformative power of environmental circumstances:

Mencius went to Ch'i from Fan. When he saw the son of the King of Ch'i from a distance, he sighed and said, 'A man's surroundings transform his air just as the food he eats changes his body. Great indeed are a man's surroundings. Otherwise, are we not all the son of some man or another.' (Mencius, 2004, VII. A. 36, p. 153)

Mencius (2004) also tells an instructive story of his mother's journey to find a suitable environment for them to live. His father died when he was three years old, and so he was raised solely by his mother. The story transpired thusly: he and his mother, Zhang, initially lived next to a cemetery. While there, Mencius took to imitating the behavior of the (often paid) mourners in the funeral parades, crying and wailing as they did. Unsettled by this behavior and wanting more for her son, Zhang began her search for a new location. They next moved near a bazaar where merchants sold products through acts of persuasion. Mencius again began to emulate those in his immediate vicinity, this time imitating the salespeople. He was also listening, transfixed, as the merchants told stories of their escapades on the road and of their business excursions. Zhang found this lifestyle unfitting for her son as well and resolved to move again. She then settled next to a school, which prompted Mencius to emulate the study habits of the other students and imitate the speaking styles of the intellectuals. It was in this scholastic environment that she took comfort and ultimately remained. It was here that Mencius cultivated himself.

At each stop in which the they settled, Zhang watched as a young Mencius ingratiated himself into his new social conditions. His method was to emulate the behavior of the local inhabitants. Zhang understood the impact that the environment has on development and future behavior. She recognized that people

are predisposed to want to fit into groups, and often do so by learning and emulating the behavior of the in-group members—regardless of the moral implications of the behavior.

Zhang's actions left a strong impression on Mencius, as learning within varied environments, and the resulting consequences, play a prominent role within his philosophical approach. The importance that other people and different environments have on future behavior remained with Mencius throughout his life.

Imitation Within the Community

The Confucians believed that virtuous members of a community are emulated by other members of the community. Time spent with virtuous community members, while engaged in learning and emulation, increases virtue. Similarly, being surrounded by immoral people increases the likelihood that one will become deviant—one imitates immoral people and behaves similarly. Confucius (1971) speaks to the impact that moral people have on a community, "Of superior virtue indeed is such a man! If there were not virtuous men in Lu, how could this man have acquired this character?" (173). Furthermore, when Confucius was preparing to travel to the far eastern regions of the East Asian mainland to spread his philosophy among the local tribes, someone asked if he would be able to live in such underdeveloped conditions, to which he replied, "If a gentleman were to dwell among them what uncouthness would there be?" (Confucius, 2003, 9.14, 91).[1]

Xunzi (1999) also illustrates the importance of role models in morality formation:

If a man who is intelligent lacks a teacher and the model, he will certainly become a robber. If he is brave, he will surely

become a murderer. If versatile, he will certainly produce disorder...An intelligent man who has both a teacher and the model will quickly become comprehensively skilled. If brave, he will quickly become awe-inspiring. If versatile, he will quickly complete his tasks...Having a teacher and the model is man's greatest treasure and lacking a teacher and the model his greatest calamity. (8.20, 199)

2.1 Rehabilitation within the community
Personal rehabilitation was also theorized to increase through the emulation of moral members of a community. Confucian scholar Zhu Xi, in his commentary on the *The Analects*, explains how emulation of the "awakened" benefits those lacking in virtue:

To learn means to 'emulate.' Human nature is good in everyone, but some are awakened to it before others. Those awakened to it later must emulate what those awakened earlier do. Only then can they understand goodness and return to their original state. (Gardner, 2007, 11)

Although people possess unequal amounts of self-control or an unequal understanding of morality, they can engage in rehabilitation through community channels. Personal rectification is possible—moral superiors, within local communities, may be emulated and studied by those in need of rehabilitation.

Rehabilitation is to occur in an environment that is safe, enriching, and moral. Confucius ([1893] 1971) describes how rehabilitation can breakdown in an immoral or threatening environment, "The cultivation of the person depends on rectifying the mind, *may be thus illustrated:* —if a man be under the influence of passion, he will be incorrect in his conduct. He will be the same if he is under the influence of terror...or under that of sorrow and distress" (368).
The final piece from Xunzi (1999) that speaks to how social conditions influence moral behavior is a short song inserted into

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[1] Confucian scholar and commentator Ma Rong (77-166 CE) interpreted this statement as, "Everywhere the gentleman [the superior man] dwells is transformed" (Confucius, 2003, 91).

his work in a section labeled "Working Songs" that goes as follows:

When doors and gates are barred,
going astray through delusion is magnified.
Rebellion and anarchy will be the dark night that has no end, no limit.
Right and wrong will be reversed and interchanged.
Partisan cliques will cheat their superior
and hate the correct and the upright. (25.37, 813)

Major Learning and Environmental Explanations for Deviant Behavior

Cohen's (1955) influential theory on delinquent subcultures engages the relationship between social circumstances and the development of gang activity. He theorized that boys low on the socioeconomic strata are forced to compete with middle-class boys for social status. The middle-class boys have social and material advantages over the lower-class boys in their quality of education and moral guidance. Moreover, the struggle between these two groups is regulated using middle-class standards of behavior, in a middle-class educational arena, using what Cohen termed the "middle-class measuring rod." Lower-class boys often grow up in families that deemphasize education, ignore middle-class goals, and eschew developmental guidance. This challenging environment reduces the educational attainment and social capacity of lower-class boys. Recognizing that they will never garner the necessary level of achievement within education to compete and succeed within society, the lower-class boys turn to delinquent subcultures, namely gangs, to achieve social status.

Park, Burgess, and McKenzie (1925) found that criminality tends to relent the further away one is from a city center and neighboring zones of transition (areas of high population turnover and socioeconomic instability). These vulnerable geographic locations become "areas of mobility," in that they experience high population fluidity and social disorganization. Park, Burgess, and McKenzie (1925) explain:

Where mobility is the greatest, and where in consequence primary controls break down completely, as in the zone of deterioration in the modern city, there develop areas of demoralization, of promiscuity, and of vice.

In our studies of the city it is found that areas of mobility are also the regions in which are found juvenile delinquency, *boys' gangs* [emphasis added], crime, poverty, wife desertion, divorce, abandoned infants, vice. (59)

If a community exudes immorality, because of its social composition, greater gang activity may be present.

Shaw and McKay's ecological research on social disorganization, ideas guided by the work of Park, Burgess, and McKenzie, helps explain the relationship between gang activity and the moral nature of a community. Shaw and McKay's *Juvenile Delinquency in Urban Areas* (1942) focuses on how socioenvironmental characteristics within certain geographic areas, such as transient and unstable areas bordering city centers, downtown areas, and industrial locations, produces greater crime and gang activity when compared to other areas. They found that many transient urban areas, with waves of different ethnic groups passing through them over several decades, were hotbeds for crime and gang activity. This indicates that it was not a specific ethnic group that was responsible for the criminality, as there were waves of different ethnic groups passing through at different time periods, rather, it was the disorganized social and environmental conditions in which these groups lived and passed through that generated this behavior. Thus, deviant behavior was learned within these disorganized communities through involvement with others.

Sutherland's (1947) theory of differential association, which was influenced by Shaw and McKay's social disorganization theory, involves learning

criminal behavior at an intimate level, generally within local communities or close environments. People, he asserted, learn the methods, motivations, and principles of criminality through interactions with intimate others. His notable study of professional thieves exemplifies this theory (1937). Major components of Sutherlands theory of differential association, composed in his landmark *Principles of Criminology* (1947), are as follows:

1. Criminal behavior is learned.
2. Criminal behavior is learned in interaction with other persons in a process of communication.
3. The principal part of the learning of criminal behavior occurs within intimate personal groups.
4. When criminal behavior is learned, the learning includes (a) techniques of committing the crime, which are sometimes very complicated, sometimes very simple; (b) the specific direction of motives, drives, rationalizations, and attitudes.
5. The specific direction of motives and drives is learned from definitions of the legal codes as favorable or unfavorable.
6. A person becomes delinquent because of an excess of definitions favorable to violation of law over definitions unfavorable to violation of law... (88-90)

Current Study

If Confucian social learning theory predicts behavioral outcomes, then the main question is the following: Does this theory predict delinquency and substance use among young people when tested by NLSY97 data?

To respond to the existing research gaps, the present study examined whether three NLSY97 variables: 1) any gang in respondents' neighborhood or school? 2) any brothers, sisters, cousins, or friends in a gang? and 3) number of days per week the respondent typically hears gunshots, influence levels of 1) delinquency and 2)

substance use, while controlling for ethnicity, gender, year of birth, gross household income in the past year, the age of the biological mother when she had the first born, the biological fathers highest grade completed, and the biological mothers highest grade completed. This study consists of three main tests:

In the first test, the NLSY97 variable was "any gang in respondents' neighborhood or school," and its influence on delinquency and substance use was tested. The gang activity variable represents immorality within a neighborhood. Confucian social learning theory emphasizes that the nature of the neighborhood/environment in which one lives influences behavioral outcomes. Immorality is spread within a neighborhood through learning processes, increasing the likelihood of its continued occurrence.

In the second test, the NLSY97 variable was "any brothers, sisters, cousins or friends in a gang?" and its influence on delinquency and substance use was tested. The family and friends involved in gang activity variable represents immoral influences within intimate social environments. Confucian social learning theory emphasizes that young people learn and emulate behavior within intimate environments, and that this influences behavioral outcomes.

In the third test, the NLSY97 surrogate variable was "number of days per week the respondent hears gunshots," and its influence on delinquency and substance use was tested. The number of days per week gunshots are heard variable represents the amount of hazard and immorality within a neighborhood. Confucian social learning theory emphasizes that the quality of the social environment influences behavioral outcomes. People learn destructive behaviors in hazardous and immoral environments.

Hypotheses of the study

Confucian social learning theory stresses that negative behaviors are learned and imitated within local environments.

4.1.1 Any gang in the neighborhood

Hypothesis 1: Any gang in the neighborhood scores in the NLSY97 are either 0 or 1; 1 indicates that there is a gang in the neighborhood, 0 indicates there is not. Confucian social learning theory asserts that a moral environment reduces deviancy. Thus, scores in the 0 range will produce the lowest probabilities for delinquency and substance use.

4.1.2 Any brothers, sisters, cousins or friends in a gang

Hypothesis 2: Any brothers, sisters, cousins, or friends in a gang scores in the NLSY97 are either 0 or 1; 1 indicates a brother, sister, cousin, or a friend is in a gang, 0 indicates this is not the case. Confucian social learning theory asserts that being in an environment with moral people reduces deviancy. Thus, scores in the 0 range will produce the lowest probabilities for delinquency and substance use.

4.1.3 Number of days per week typically hear gunshots

Hypothesis 3: Number of days per week hear gunshots scores in the NLSY97 range from 0 to 7; the higher the score, the more days per week that gunshots are heard. Confucian social learning theory asserts that a moral environment reduces deviancy. Thus, scores in the 0-1 range will produce the lowest probabilities for delinquency and substance use.

METHODOLOGY

The data used for the present study was culled from the first wave of National Longitudinal Survey of Youth 97 scores, gathered in 1997. The NLSY97 is an initiative of the U.S. Bureau of Labor Statistics that follows a sample of 8,985 people born between 1980-84. The participants, with a commencing age range of 12-16, are being interviewed longitudinally, beginning in 1997 to the current time.[2]

As recommended by Cramer and Bock (1966), a MANCOVA was applied to the means to help guard against expanding the type 1 error rate in the follow-up ANOVAs and post-hoc comparisons. The MANCOVA's in the current study:

A two-way MANCOVA was applied to examine the effects of two independent variables: 1) any gang in the neighborhood and 2) any brothers, sisters, cousins, or friends in a gang, on two dependent variables: 1) delinquency scores and 2) substance use.

A second MANCOVA was applied to examine the effects of one independent variable: 1) number of days per week typically hear gunshots, on two dependent variables: 1) delinquency scores and 2) substance use.

Both sets of MANCOVA's controlled for ethnicity, year of birth, gender, gross household income in the past year, the age of the biological mother when she had the first born, the biological fathers highest grade completed, and the biological mothers highest grade completed.

A test using Mahalanobis Distance with a critical value of .001 indicated that less than 1% of cases were outliers, which is a tolerable number. No outliers were excluded from the dataset as there was no reason to assert that any were incorrect. Also, the added variability of the outliers did not impact the results.

5.1 Independent variables

The NLSY97 variables representing morality/immorality within an environment:

The "any gang in the neighborhood" question was presented to the participants thusly: "Are there any gangs in your neighborhood or where you go to school?

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[2] Bureau of Labor Statistics, U.S. Department of Labor. National Longitudinal Survey of Youth 1997 cohort, 1997-2017 (rounds 1-18). Produced and distributed by the Center for Human Resource Research (CHRR), The Ohio State University. Columbus, OH: 2019.

By gangs, we mean a group that hangs out together, wears gang colors or clothes, has set clear boundaries of its territory or turf, protects its members and turf against other rival gangs through fighting or threats. 1 Yes; 0 No."

The "any brothers, sisters, cousins or friends in a gang" question was presented to the participants thusly: "Do any of your brothers, sisters, cousins or friends belong to a gang? 1 Yes; 0 No."

The "number of days per week respondent typically hears gunshots" question was presented to the participants thusly: "In a typical week, how many days from 0 to 7 do you hear gunshots in your neighborhood?"

5.2 Dependent variables
The NLSY97 variables that were used to measure behavioral outcomes:

The "delinquency" question was presented to the participants thusly: "Delinquency score index. Scores range from 0 to 10; higher scores indicate more incidents of delinquency."

The "substance use" question was presented to the participants thusly: "Substance use index. Scores range from 0 to 3; higher scores indicate more instances of substance use."

RESULTS

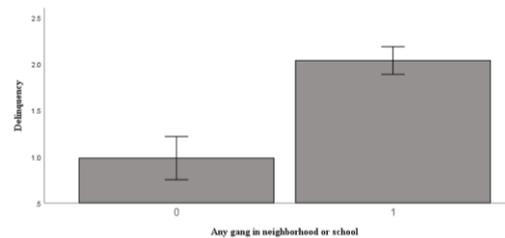**The influence of any gang in the neighborhood on delinquency and substance use**
A statistically significant multivariate test was obtained from any gang in the neighborhood, Pillai's Trace = .013, $F_{(2, 4209)}$ = 28.27, $p < .001$, η^2_p = .01.

6.1.1 Any gang in the neighborhood on delinquency
Univariate testing showed that there was a significant difference among the 2 levels of any gang activity (scores are either 0 or 1; 0 indicates no gang activity, 1 indicates gang activity) on delinquency (scores range from 0 to 10; higher scores specify greater incidents of delinquency), $F_{(1, 4210)}$ = 55.93, $p < .001$, η^2_p = .01. Post hoc

comparisons using Fisher's LSD test specified significant differences between the two groups of gang activity, wherein level 1 (M = 2.04) had significantly higher delinquency compared to level 0 (M = .98).

Figure 1. The effects of any gang in a neighborhood on delinquency.

Covariates in this model are evaluated at the following values: ethnicity = 3.01, gender = 1.50, date of birth = 1982.09, age of biological mother at first birth = 23.10, gross household income in past year = 50945.00, biological fathers highest grade completed = 12.83, biological mothers highest grade completed = 12.88.
*Delinquency scores range from 0 to 10; higher scores specify greater delinquency.
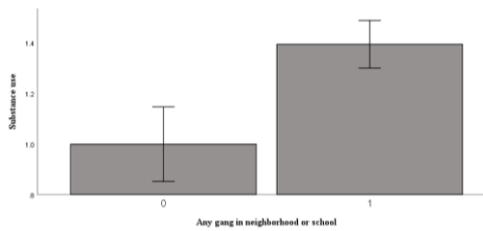**Any gang in the neighborhood scores are either 0 or 1; 0 indicates no gang activity, 1 indicates gang activity.

As shown in figure 1, the trend is that any gang in a neighborhood produces a higher probability for delinquency.

6.1.2 Any gang in the neighborhood on substance use
Univariate testing showed that there was a significant difference among the 2 levels of any gang activity (scores are either 0 or 1; 0 indicates no gang activity, 1 indicates gang activity) on substance use (scores range from 0 to 3; higher scores specify greater incidents of substance use), $F_{(1, 4210)}$ = 19.71, $p < .001$, η^2_p = .01. Post hoc comparisons using Fisher's LSD test specified significant differences between the two groups of gang activity, wherein level 1 (M = 1.39) had significantly higher substance use compared to level 0 (M = 1.00).

Figure 2. The effect of any gang in a neighborhood on substance use.

Covariates in this model are evaluated at the following values: ethnicity = 3.01, gender = 1.50, date of birth = 1982.09, age of biological mother at first birth = 23.10, gross household income in past year = 50945.00, biological fathers highest grade completed = 12.83, biological mothers highest grade completed = 12.88.
*Substance use scores range from 0 to 3; higher scores specify greater substance use.
**Any gang in the neighborhood scores are either 0 or 1; 0 indicates no gang activity, 1 indicates gang activity.

As shown in figure 2, the trend is that any gang in a neighborhood produces a higher probability for substance use.

The influence of any brothers, sisters, cousins, or friends in a gang on delinquency and substance use
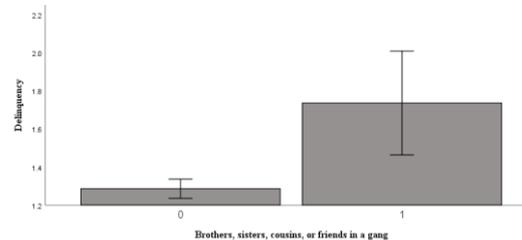A statistically significant multivariate test was obtained from any brothers, sisters, cousins, or friends in a gang, Pillai's Trace = .004, F (2, 4209) = 8.075, p < .001, η^2_p = .004.

6.2.1 Any brothers, sisters, cousins, or friends in a gang on delinquency
Univariate testing showed that there was a significant difference among the 2 levels of any brothers, sisters, cousins, or friends in a gang (scores are either 0 or 1; 0 indicates no gang involvement, 1 indicates gang involvement) on delinquency (scores range from 0 to 10; higher scores specify greater incidents of delinquency), F (1, 4210) = 10.10, p = .001, η^2_p = .002. Post hoc comparisons using Fisher's LSD test specified a significant difference between the two groups of gang involvement, wherein level 1 (M = 1.74) had significantly

higher delinquency compared to level 0 (M = 1.29).

Figure 3. The effect of any brothers, sisters, cousins, or friends in a gang on delinquency.

Covariates in this model are evaluated at the following values: ethnicity = 3.01, gender = 1.50, date of birth = 1982.09, age of biological mother at first birth = 23.10, gross household income in past year = 50945.00, biological fathers highest grade completed = 12.83, biological mothers highest grade completed = 12.88.
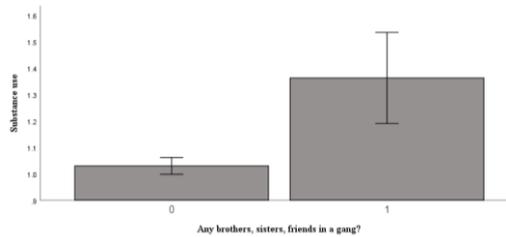*Delinquency scores range from 0 to 10; higher scores specify greater delinquency.
**Any brothers, sisters, cousins, or friends in a gang scores are either 0 or 1; 0 indicates no gang involvement, 1 indicates gang involvement.

As shown in figure 3, the trend is any brothers, sisters, cousins, or friends in a gang produces a higher probability for delinquency.

6.2.2 Any brothers, sisters, cousins, or friends in a gang on substance use
Univariate testing showed that there was a significant difference among the 2 levels of any brothers, sisters, cousins, or friends in a gang (scores are either 0 or 1; 0 indicates no gang involvement, 1 indicates gang involvement) on substance use (scores range from 0 to 3; higher scores specify greater incidents of substance use), F (1, 4210) = 13.86, p < .001, η^2_p = .003. Post hoc comparisons using Fisher's LSD test specified a significant difference between the two groups of gang involvement, wherein level 1 (M = 1.36) had significantly higher substance use compared to level 0 (M = 1.03).

Figure 4. The effects of any brothers, sisters, cousins, or friends in a gang on substance use.

Covariates in this model are evaluated at the following values: ethnicity = 3.01, gender = 1.50, date of birth = 1982.09, age of biological mother at first birth = 23.10, gross household income in past year = 50945.00, biological fathers highest grade completed = 12.83, biological mothers highest grade completed = 12.88
*Substance use scores range from 0 to 3; higher scores specify greater substance use.
**Brothers, sisters, cousins, or friends in a gang scores are either 0 or 1; 0 indicates no gang involvement, 1 indicates gang involvement.

As shown in figure 4, the trend is that any brothers, sisters, cousins, or friends in a gang produces a higher probability for substance use.

The influence of number of days per week typically hearing gunshots on delinquency and substance use
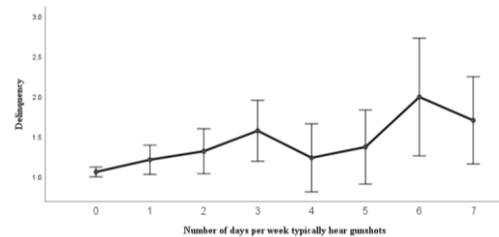A statistically significant multivariate test was obtained from number of days per week hearing gunshots, Pillai's Trace = .01, $F_{(14, 6204)}$ = 2.26, p = .005, η^2_p = .01.

6.3.1 Number of days per week hearing gunshots on delinquency
Univariate testing showed that there was a significant difference among the 8 levels (scores range from 0 to 7; higher scores indicate more days per week hearing gunshots) on delinquency (scores range from 0 to 10; higher scores specify greater incidents of delinquency), $F_{(7, 3102)}$ = 3.23, p = .002, η^2_p = .07. Post hoc comparisons using Fisher's LSD test specified significant differences between

two main groups of number of days per week hearing gunshots, wherein levels 0 (M = 1.06) and 1 (M = 1.21) had significantly lower delinquency compared to level 6 (M = 1.99). Level 0 also had significantly lower delinquency compared to levels 3 (M = 1.57) and 7 (M = 1.70).

Figure 5. The effects of number of days per week hearing gunshots on delinquency.

Covariates in this model are evaluated at the following values: ethnicity = 3.02, gender = 1.48, date of birth = 1983.01, age of biological mother at first birth = 23.13, gross household income in past year = 49543.90, biological fathers highest grade completed = 12.72, biological mothers highest grade completed = 12.82.
*Delinquency scores range from 0 to 10; higher scores specify greater incidents of delinquency.
**Number of days per week hearing gunshots scores range from 0 to 7; higher scores indicate more days per week hearing gunshots.
As shown in figure 5, the trend is that more days per week hearing gunshots produces a higher probability for delinquency.

6.3.2 Number of days per week hearing gunshots on substance use
Univariate testing indicated that there was no significant difference among the 8 levels on substance use, $F_{(7, 3102)}$ = 1.97, p = .055, η^2_p = .004.

CONCLUSIONS, LIMITATIONS, AND DISCUSSION

Confucian social learning theory specifics how learning in different social conditions influences behavioral outcomes—namely,

that immoral environments produce higher rates of deviancy through learning and imitation processes. This theory is largely reinforced by the NLSY97 variables and data investigated in this study. If Confucian social learning theory is observed, if children are provided a moral environment in which to imitate and develop, it appears that the likelihood for a healthy society increases. This theory seems to yield an advantage for young people, principally concerning delinquency and substance use.

The results indicate that: The more gang activity, or immorality, within an environment, the greater the probability that one will be delinquent and engage in substance use. The more gang activity, or immorality, among close relatives or friends (people to be imitated or engaged in close contact), the greater the probability that one will be delinquent and use substances. The more days gunshots are heard in a neighborhood per week, or immorality within a neighborhood, the greater the probability that one will be delinquent. These findings reveal a link between Confucian social learning theory and deviancy that deserves additional attention and further study to determine if these relationships are causal.

This analysis has attendant strengths. It is, as far as this author can determine, the first investigation into the connection between Confucian social learning theory and deviancy. A nationally representative sample was employed that formed quality data, which allowed for the control of several potentially confounding factors. Another advantage of this analysis is that the data was derived from interviews of young people; a period in development when thoughts and behaviors are generated that often affect life-course trajectories (Aquilino & Supple, 2001; Nikulina, Widom, & Czaja, 2011; Parker & Gladstone, 1996). In addition to the benefits of surveying young people, this sample was representative regarding gender (51 percent male, 49 percent female) and ethnicity (51.9 percent non-Black/non-Hispanic, 26 percent Black non-Hispanic, 21.2 percent Hispanic, and 0.9

Mixed raced respondents), and the data was gathered in both metropolitan and nonmetropolitan areas throughout the United States, all evidence of greater equity across the demographic strata (Bureau of Labor Statistics, 2019).

This study was also advanced by a generous amount of data, a main benefit of using the NLSY97 data set, which contained of a wide range of information on different variables concerning social influences, the family, education, delinquency, and substance use, thus amplifying the ability to detect conceivable influences on behavior. The NLSY97 data set is widely used in observational studies, in numerous areas of specialization, and is one of the leading data sets for these purposes.[3]

Limitations

It's important to recognize the complex relationship between learning from social conditions and behavioral outcomes. Gang activity in a neighborhood, gang activity among family and friends, and the number of days per week of neighborhood gunfire may be statistically linked to behavioral outcomes in ways that are not expressed in the current study. This statistical link may exist because each one is a consequence of the same fundamental variables, such as the family's socioeconomic background, parenting styles, community conditions, early parenthood, etc.

As this inspection is observational, statements of causation must wait for future studies. Several possibly confounding influences were controlled, but other factors may still be altering the results. Even though gender, year of birth, ethnicity, the age of the biological mother at first birth, household income, and parents' level of education were controlled, many other individual and social variables were not controlled, making it plausible that other variables were impacting the outcomes in different ways. To consider Confucian social learning theory as the

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[3] See the NLS Annotated Bibliography for an extensive list of studies utilizing NLSY97 data: https://nlsinfo.org/bibliography-start

overarching predictor of future delinquency and substance use is to possibly miss a larger convergence of factors that may or may not be influential.

Further Study

Given the results of the current assessment, future studies might examine other adverse influences within social environments to determine if they produce negative behavioral outcomes. Furthermore, an examination of alternative deviant behaviors and how they relate to Confucian social learning theory would be helpful, as would employing other, dissimilar, data sets.

There might be some incongruity between inspecting crime data gathered from people in the United States to test the impact of Confucian theory. Future work might evaluate crime data gathered from Confucian cultures to test Confucian theory.

It's non-casual investigatory structure, questions of variable directionally, and the potential impact of confounding variables restricts the persuasiveness of the influence of Confucian social learning theory within this study. At the same time, the significate results attained, along with the corresponding theoretical support, further signals that Confucian social learning theory may meaningfully alter behavioral outcomes among young people. In the end, this investigation shows possible benefits of Confucian social learning theory, which expands the conventional concentration in prior assessments.

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