

Sexual Offenses against Children: Social Learning Theory and Dark Web Reinforcement

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Abstract— As cybercrime activity increasingly uses anonymous technologies, the dramatic growth of child sexual exploitations on the dark web has posed a challenge to law enforcement agencies. Data were gathered in 2019 and 2020 through face - to - face interviews with a juvenile in New Taipei City, Taiwan. This paper extends the application of social learning theory to online child sexual abuse behavior. Research testing Akers's social learning theory has been confined to sexual offenses against children on the dark web. A social learning concept of differential association, definitions, imitation, and differential reinforcement is illustrated and supported by online child sexual abuse behavior findings. Before it occurs, preventing child sexual abuse has become a critical issue and necessary effort from all areas of society: family caring, school instruction, community-based treatment, and social values. An innovative social learning strategy to battle online child sexual abuse is proposed to reduce juvenile delinquency on the dark web. Every child, parent, teacher, or social worker who works with children should realize what child sexual abuse is and prevent it.

Keywords— Sexual Abuse, Dark Web, Social Learning Theory, Criminology, Juvenile Delinquency

I. INTRODUCTION

A. Cybercrime Activities on the Dark Web

It is easy for immature teenagers to browse the dark web or learn many criminal methodologies online. That has caused many juvenile delinquencies everywhere. The dark web makes it straightforward for criminals to use bitcoin transactions and coordinate together. That makes it difficult for the police to gather information regarding the buyer and the seller [8]. Moreover, law enforcement officers on the dark web cannot effectively pursue crimes. The invisible feature is challenging for law enforcement agencies to face jurisdictional issues and pinpoint their traffic sources [9]. The dark web is a hidden space for users to remain anonymous in the Internet's encrypted browser, which is inaccessible through a standard search engine. That is difficult to track any breadcrumb trails for investigators but provides attractive access to illegal activities, such as sex trafficking, child pornography, illicit drugs, or counterfeit goods [10]. There are some examples of malicious cybercrime activities on the dark web below [5]:

1) Identity theft

Hackers are accustomed to revealing others' real identities. Selling passports and other official identifications are ordinary on the dark web with various sellers' price lists. Buying and selling stolen accounts are probably prevalent for credit cards, banks, online auction sites, and games.

2) Assassination services

Killer hiring or assassination services is one of the most worrying services on the dark web.

3) Money laundry

Bitcoin laundry services increase the anonymity of money movement, making transactions substantially harder to track.

4) Illegal contrabands

The dark web often provides videos and photos about sexual offenses, adultery, and zoophilia. People can easily procure drugs, weapons, or other items on the dark web.

Anyone can use the freely downloadable TOR (The Onion Router) browser to browse and communicate the Internet anonymously without being identified on the dark web [9]. It is very complicated to track the digital footprint of criminals on the dark web [7]. Many criminals will feel more comfortable anonymously connect the dark web market than the surface web market or the physical world. The increase of dark web activities has steadily proliferated within the last decades. TOR programs' convenience and anonymization are used for illegal or unethical practices such as selling illicit goods, drug trafficking, sexual offenses, sexual transaction, or assassination services. Any juveniles can browse the dark web and learn lots of criminal events without physical instructions.

B. Social Learning Theory

Akers's social learning theory believes that criminal or compliant behaviors are obtained and updated through people's interactions. Behavior, conforming, or deviant was a function of its consequences. Their difference lies in the compliance or deviation of social influences. The following four central concepts in Akers's theory are illustrated below [1]:

1) Differential Association

Differential association refers to the favorable or unfavorable process in which a person is exposed to criminal or compliant behaviors. The intensity, duration, and frequency of influential groups in a person's life significantly influence

their definition. These groups include churches, family, friends, and small groups. However, few discussions and analyses on the dark webs or online group activities [6].

2) Definitions

Definitions refer to a person's attitude to a given behavior, which rationalizes or defines right or wrong. If a person has a negative definition of someone's behavior, he will be less likely to participate in it.

3) Imitation

That is the participation of one behavior after observing the same or similar action of another behavior. The observed result, the empirical model, and the observed behavior determine whether the observer will copy the behavior.

4) Differential Reinforcement

Differential reinforcement means the balance of actual or expected rewards or punishments after engaging in a given behavior. When a person is rewarded for abnormal or criminal behavior, the possibility of a person engaging in deviant or illegal behavior will increase from that positive reinforcement. When a crime avoids the unpleasant consequences of imprisonment or fines, the possibility of crime will be further enhanced from that negative reinforcement.

Section 2 provides the case of child sex abuse. The proposed comprehensive strategy for policymakers is illustrated in Section 3. The conclusion is drawn in Section 4.

II. CASE STUDY

Data were gathered in 2019 and 2020 through face - to - face interviews with a juvenile in New Taipei City, Taiwan. This paper extends the application of social learning theory to online child sexual abuse behavior. Research testing Akers' social learning theory has been confined to sexual offenses against children on the dark web.

A. Sample Case

The session discusses a Taiwan juvenile sexual abuse case and analyzes his social learning behavior. Figure 1 presents a Taiwan juvenile sexual abuse case after he browses the dark web. David Chen (alias) lived in a Taiwan low-income family with his father and grandmother. His parents were divorced when he was an infant. His father worked hard at the construction site and rarely took care of him. He usually borrowed his father's smartphone and computer. The computer history records showed his father's recent browsing erotic webs (Differential Association). Then he browsed the erotic web of his father's history records when he was 8-year-old. He utilized the TOR program to browse the dark web and watched sex films in his spare time. His father's domestic violence against him took several forms, including physical, verbal, and emotional abuse. He was scared of his father. Intergenerational education in families has a profound historical origin and becomes a critical issue in outdated ideas, spoiling a child, or pouring on excess praise. His grandmother cared for him and let him do anything he wanted. She rarely taught him about sexual knowledge (Definitions). He likes his

grandmother. He utilized the TOR program to surf the dark web and watched sex films at the home computer in his spare time (Imitation). His classmate usually went to his home and watched sexual videos together (Differential Reinforcement).

Since he was 8-year-old, he often dreamed about how to abuse others sexually, from girls to teachers. In his 11-year-old summer vacation, he raped a 5-year-old girl with his finger inserting the girl's vaginal at the lavatory of cram school. That made him go to juvenile courts for the follow-up compulsory corrections and treatments.

B. Case Analyses

Aker's social learning theory believes that almost all the results of learning from direct experience can be learned instead by observing others' actions and their consequences [6]. Through observation and learning, individuals can obtain large-scale, comprehensive behavior patterns and define whether the behavior is ethical or unethical. His behavior lacked control in advance since his father neglected to limit his online activity. After browsing the dark web for a long time, he has committed sexual assault. His delinquent behavior is further observed in Figure 2 through the following four learning elements [1]: (1) differential association, (2) definitions, (3) imitation, and (4) differential reinforcement.

1) Differential Association

David Chen had an excess of connections with child sexual abuse in the dark web, which causes juvenile delinquency [2].

Erotic Stimulus from the Dark Web. Long-term exposure to pornographic materials or contents from the dark web may increase illegal behavior [10]. Sexual offenses from the dark web attracted him because it provides a powerful erotic stimulus. He might acquire sexual abuse patterns by watching the sexual video. Like juvenile delinquency, child sexual abuse provides a powerful erotic stimulus to visualize fantasies during masturbatory manipulation alone.

Lack of Sexual Knowledge. Differential associations in individual families have a strong influence on the behavioral learning process [4]. His father had no time or intent to teach him sexual knowledge. He usually watched a particular sexual video to satisfy his curiosity about girls and learn some dark web knowledge for sexual pleasure. He lived in a one-parent family, and no one stopped him from browsing these erotic videos. Teachers in schools also did not teach sexual education. All the above made him having a wrong cognition about sex.

2) Definitions

Definitions are a cognitive result in a social learning context and can occur after online observation or direct instruction. When David Chen is differentially associated with child sexual abuse from the dark web, some new definitions of personal behavioral performance occur in his mind. He received a positive definition of emotional stimulation and pleasure from watching sexual offenses.

Love Map from Sexual Materials. When he often watched the sexual abuse photos or videos in his leisure time, his sexual fantasy is further projected to idealize his mind's sexual activity plan. The content of his sexual fantasies comes from prolonged sexual anomalies in childhood. When his sexual fantasies are aroused, he might ideally construct his erotic lovemap and an ideal lover's internal blueprint. It enhanced his sexual fantasies and helped him form the lovemap about raping kids [10].

Neutralization Techniques for Appropriate Enjoyment. He tried to rationalize or justify his juvenile delinquency and considered that the children and adults enjoyed their joint activities in the sex videos. These sexual videos could convince him that it was normal for children to have sex with girls. He thought to himself that his sexual aggression is considered appropriate. Many kids did the same or similar thing, and the video shows the evidence. It is no different from other non-sexual attacks.

3) Imitation

After observing the sexual aggression on the dark web, David Chen replicated the behavior and committed sexual

aggression in the real world. Exposure to pornographic materials will increase his tendency to rape ideal girls.

Finding a Victim. He chose a five-year-old girl in the same cram school to act out his lovemap. She has no resistance to him. Individual lifestyles may bring his victim into a suitable target.

Sexual Aggression. He utilized the lack of capable guardianship to conduct sexual aggression to the five-year-old girl. The absence of capable guardianship from the kindergarten, teacher, and other students is the key to carrying out this juvenile delinquency.

4) Differential Reinforcement

Possible Punishment. The unethical behavior of sexual juvenile delinquency may reinforce his delinquent behavior, which leads to possible punishment. However, his sexual offenses produce sex gratification, get confidence, and eliminate his insecurity.

Sexual Gratification. After imitating his former browsing sexual videos, his juvenile delinquent behavior was differential reinforcement to reinforce stimulus in sexual gratification. Negative reinforcement might remove an aversive stimulus in sexual behaviors.

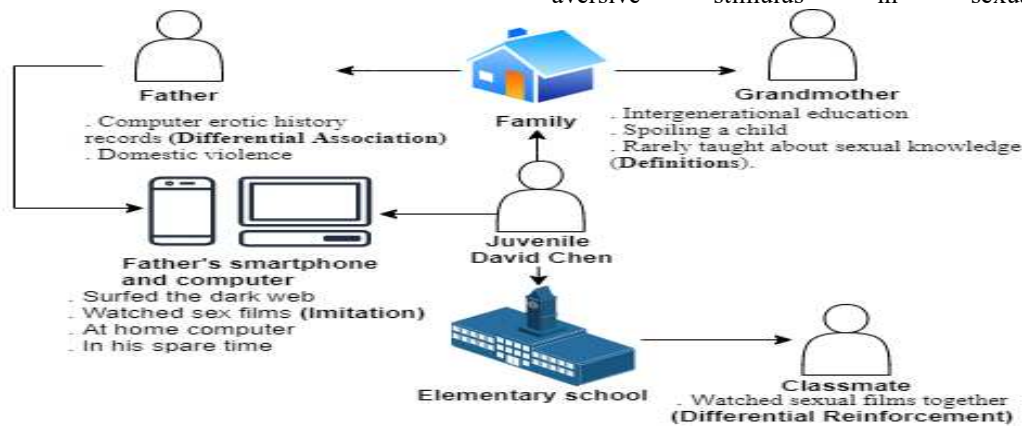


Figure 1. Case scenario

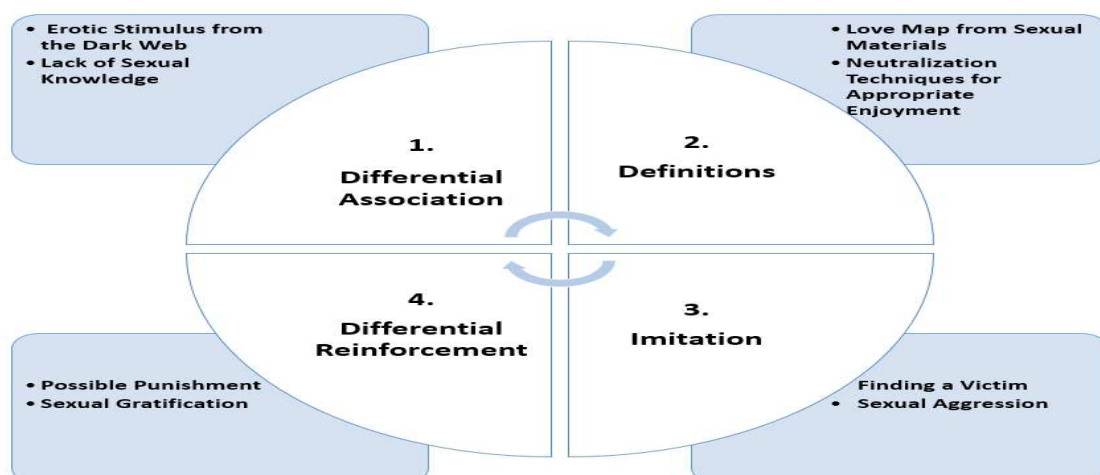


Figure 2. Four learning elements observations on this juvenile delinquency

III. AN INNOVATIVE STRATEGY TO BATTLE SEXUAL

The individual's environment is likely to reinforce their specific behaviors. It is an urgent need to prevent children from learning juvenile delinquency from the dark web. A comprehensive correction strategy is proposed for policymakers to fight against criminal learning events on the dark web, where the bulk of unethical activities occur. The proposed innovative strategy for battling sexual offenses against children and reducing juvenile delinquency on the dark web is discussed and analyzed in Figure 3 from the following viewpoints: family caring, school instruction, community-based treatment, and social values.

A. Family Caring

The parents of pre-school children will invisibly accept the adults' words and deeds when they are still young. Parents can instill immature children from their initial cognition, emotional understanding, or conscious judgments [3].

1) Caring Method

After he committed juvenile delinquency, his father cared more about physical condition and psychological state. His father teaches him correct and legal knowledge and reduces his wrong perception of sex. That makes him more willing to communicate with his father. Parents' care for their children should pay attention to their academic performance, daily lives, friendship status, leisure entertainment, feelings, health, and dreams. Parents can take the initiative to ask about their children's lives and further understand if their children are overly addicted to the Internet and handle it as soon as possible.

2) Regulation of Children's Internet Usage

After he committed juvenile delinquency, his father limited his daily use of mobile phones and computers and often reminded him not to use mobile phones and computers to watch sexual videos. Besides, his computer is moved to the living room so that family members can monitor his Internet activities. That reduces his chance to repeat his juvenile delinquency. It is unwise for children to use smartphones and touch tablets to pass the time. Parents can give their children some time for Internet entertainment at a reasonable time. Parents need to pay more attention to identifying the Internet behaviors from children. It is a great choice to install the children's computer in an open room, such as a living room or dining room, to keep it in parents' sight.

3) Strengthen Parent Education

Children often rely on parents to protect and care for them in early childhood when their knowledge, skills, and abilities are built, redefined, and shaped by the family environment. The children's behavior also generates many happy or sad emotions in parents' lives. Parents play a critical role in helping children build and refine their behaviors during childhood and beyond. No one is born to be good parents in their lives. Parents can attend some parent-child relationship lectures or seminars to improve their parenting roles. They

need to take the initiative to learn how to raise their children to grow up in a caring and understanding environment.

B. School Instruction

Much of children's time is spent in classrooms. The deviant behaviors are connected with the poor academic performance of children's achievement at school. When juveniles have failing grades, causing trouble, or dropping out, there is a likelihood of juvenile delinquency problems. Schools and instructors can notice the learning environment to prevent students from committing juvenile delinquency [6]. Children can learn their values, responsibilities, and attitudes in the school environment to make a smooth transition to adulthood and guide their behaviors from adolescence into the rest of their lives.

1) Juvenile Delinquency Education

During the interview, he expressed guilt over his illegal acts. After his constant exposure to the wrong perception, he took his juvenile delinquency for granted. He also expressed that it was not his fault since his teacher did not mention any dangerous dark web or sexual videos in class. Education should be a long-term task. Educational institutions need to have the power to remove them from browsing unethical web pages. The dark web is similar to the dark corners of the Internet, which allow children to fall into the environment of learning juvenile delinquency. Teachers should refuse their access to the dark web, illegal violence, child sexual abuse, or cyberbullying on the Internet.

2) Improving School Counselors

After the school counselors were regularly dedicated to his juvenile delinquency and concerned about his school life, he prevented repeating his juvenile delinquency. If schools fail to play a supervisory role, they may commit juvenile delinquencies or other unethical acts. When a student has a problem, the counseling room for teens is always the last to meet school counselors in a crisis time. It is impossible to achieve the counseling's effectiveness if the counselor always waits for something to occur. Due to digital information's expeditious growth, efforts to prevent and reduce juvenile delinquency should be made to understand the youth's thoughts better. The direction of counseling should also be amended to adopt proactive prevention. Taking active measures to take care of students can enlighten them toward a better future.

3) Strengthening Relationships between Schools and Families

It is a traumatic experience for him to recall his sexual offense in their lives. After David Chen committed juvenile delinquency, his father often exchanged his learning status with his teacher to ensure him back to regular interactions or behavior patterns. Schools and families can strengthen their relationships. Teachers and parents may communicate with each other and discuss children's behavior, performance, or abnormalities in the classroom. They can exchange real-time information to prevent reoffending by adolescents.

C. Community-based Treatment

Community-based treatment assists young offenders and promotes a consistent correction environment with the general social environment [5].

1) Various Youth-Oriented Activities

After David Chen participated in traditional temples' folk activities, he changes his moral values and abides by the law and morals. The community can often hold various youth-oriented activities, create a youth subculture atmosphere, and increase community dependence. The stronger a youth's reliance on family, school, or society, the stronger their belief in moral values.

2) Psychotherapy Institution

After David Chen regularly went to a psychiatrist for mental treatment, he gradually understands his deviation thoughts. He upgraded his moral values and had a correct understanding of sexual attitudes. His psychotherapy improved his mental health, alleviated his unethical sexual emotions, and improves his interpersonal relationships and social skills.

3) Improving Juvenile Environment

Once pornography or gambling invaded the community, the quality of life was affected, and juvenile delinquency was fostered. Proper community planning can protect people and reduce the corners of public security. Internet cafes in the community can manage teenagers who are often connected to video games and the Internet. Internet cafes can have a real-

name system for underage teenagers and contact their parents in due time.

D. Social Values

1) Establishment of Standard Norms

The school can teach correct sexual concepts and strengthen the negative reinforcement of sexual juvenile delinquencies in young people's minds.

2) Network Supervision

Increasing online pornographic searches conducted by cyber policemen can add a public monitoring force. Protecting young people from online pornography can be implemented from the following item:

- Establishing public reporting websites,
- Supervising young people's online situation at any time,
- Reflecting the police's handling of illegal pornographic websites, and
- Providing young people with a healthy online environment.

3) Social Media as a Positive Educational Role

Social media can spread correct values without sexually suggestive or discriminatory words [1]. The Internet can be an effective mentor and cultivate humanitarian behaviors. That can make young people unwilling to violate society's universal values. Society can supervise social media and deepen the negative reinforcement of illegal pornography.

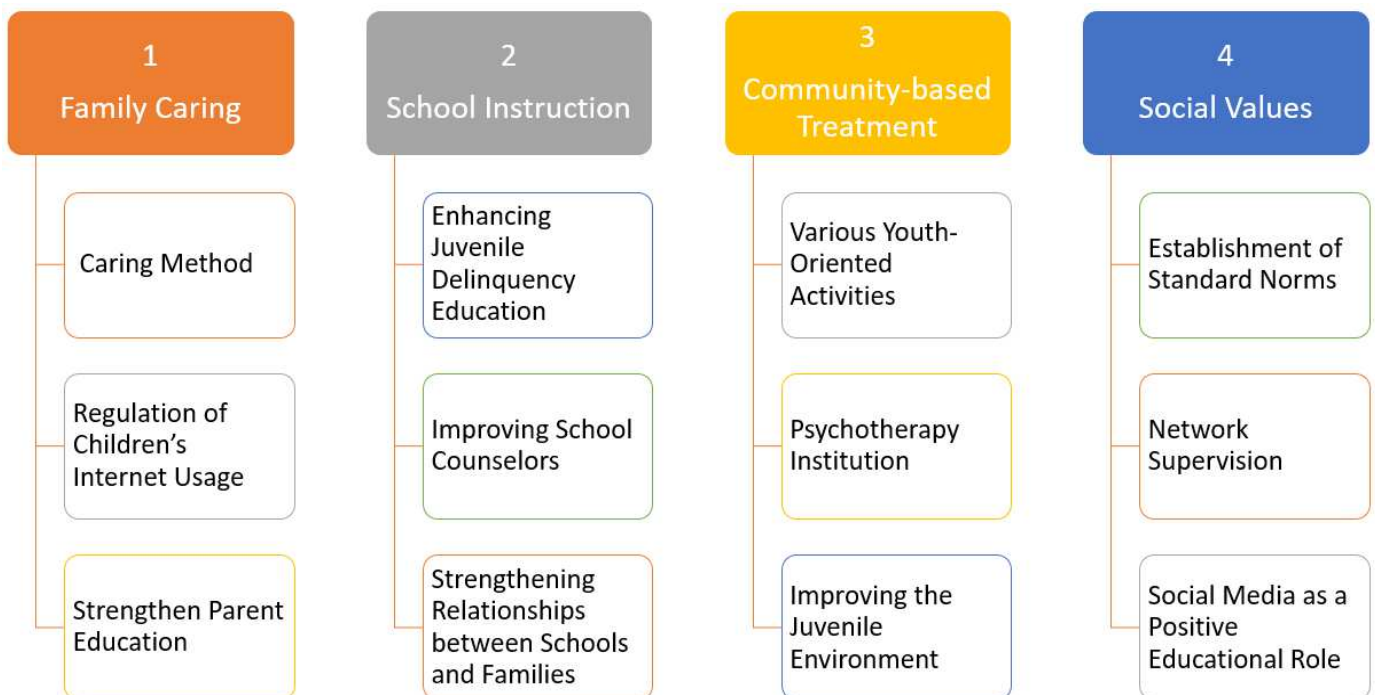


Figure 3. An innovative strategy to battle sexual offenses against children

IV. CONCLUSION

As cybercrime activity increasingly uses encryption and anonymous technologies, the dark web's nature has to frustrate law enforcement agencies' tracking efforts. The hidden dark web presents a secure environment for proliferating hidden sexual markets. Due to the lack of technical capacity, legal constraints, poor international enforcement coordination, the dramatic growth of child sexual exploitation, weapons trafficking, and illicit substances on the dark web, it has posed a challenge to law enforcement agencies. It is a timely opportunity to deal with the increasingly complex sexual abuse market. Teenagers may redefine their minds and commit juvenile delinquencies if exposed to sexual videos during childhood and adolescence. They are at the age of ignorance of juvenile delinquency. David Chen has not committed other juvenile delinquency for five years after improving his living environment. Related organizations can pay more attention to young people's care and transmit knowledge to correct their understanding of sex.

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REFERENCES

- [1] Akers, R., *Social Learning and Social Structure: A General Theory of Crime and Deviance*, Northeastern University Press, pp. 21-108, 2009.
- [2] Bandura, A., "Social Learning Theory of Aggression," *Journal of Communication*, Vol. 28, No. 3, pp. 12-29, September 1978.
- [3] Brown, S., Esbensen, F., and Geis, G., *Criminology: Explaining Crime And Its Context*, Anderson Publishing, pp. 312-313, 1998.
- [4] Chan, H., Heide, K., and Beauregard, E., "What Propels Sexual Murderers: A Proposed Integrated Theory of Social Learning and Routine Activities Theories," *International Journal of Offender Therapy and Comparative Criminology*, Vol. 55, No. 2, pp. 228-250, February 2011.

- [5] Jahankhani, H., *Cyber Criminology*, Springer International Publishing, pp. 95-140, 2018.
- [6] Jaishankar, K., *Cyber Criminology Exploring Internet Crimes and Criminal Behavior*, CRC Press, pp. 53-126, 2011.
- [7] Kremling, J. and Parker, A., *Cyber Space, Cyber Security, and Cybercrime*, Sage Publishing, pp.144-162, September 2017.
- [8] Punam, B., Neha, G., and Vinita, J., *Encyclopedia of Criminal Activities and the Deep Web*, IGI Global, pp. 152-164, February 2020.
- [9] Shaver, B. and Bair, J., *Hiding Behind the Keyboard: Uncovering Covert Communication Methods with Forensic Analysis*, Elsevier Inc., pp.11-33, March 2016.
- [10] Taylor, R., Fritsch, E., Saylor, M. R., and Tafoya, W., *Cyber Crime and Cyber Terrorism (4th Edition)*, Pearson Education Inc., pp. 207-218, January 2018.



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