

# Research on the Criminal Regulation of Illegal “Laughing Gas” Operation in China

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## Abstract

The illegal operation of the “laughing gas” (nitrous oxide) has been widely identified as a key driver of its abuse in China. It is now prosecuted and punished under Article 225 of the *Chinese Criminal Law*, that is, the crime of illegal business operations, which, nevertheless, is legally problematic, whether in theory or in practice. Laughing gas can be legally used in the industrial, food, and medical fields. The criminal conviction of its illegal operation lies not in the lack of a hazardous chemical business permit, but in the misuse of its medical properties, which poses a serious risk to human health. Article 142-1 of the *Chinese Criminal Law* establishes the crime of obstructing drug administration, in which item 2 stipulates that “violating drug administration regulations, producing or importing drugs without obtaining relevant approval documents, or knowingly selling the above drugs, which sufficiently to endanger human health seriously”. The act of illegal operation of laughing gas belongs to the illegal operation of “drugs”, which is sufficiently serious to endanger human health and should be convicted and punished as the crime of obstructing drug administration.

## Keywords

Illegal Operation of Laughing Gas, Crime of Illegal Business Operation, Principle of Legality, Crime of Obstructing Drug Administration

## 1. Introduction/Background

“Laughing gas”, chemically known as nitrous oxide (N<sub>2</sub>O) or dinitrogen monoxide, is a gas that induces mental relaxation and has anesthetic properties. Inhalation produces a brief euphoria, causing a loss of control over facial muscles that results in a smile—hence its colloquial name. However, long-term excessive inhalation of laughing gas can cause brain hypoxia and damage the central nerv-

ous system, leading to decreased memory, visual and auditory abilities, intellectual function, and worse more, difficulty in walking, paralysis, and death (Zhang, 2022). In recent years, laughing gas abuse has spread from abroad to China, greatly threatening public health and safety, attracting widespread attention from all sectors of society, and urgent regulatory action is needed. As the source of laughing gas abuse, the illegal operation of laughing gas is mainly manifested as violating the permits and uses for hazardous chemicals, food additives, and drugs, and illegally selling nitrous oxide for others to consume. How to regulate this behavior, particularly the question of which criminal charge should apply, is crucial.

Currently, in both criminal law scholarship and judicial practice, the prevailing view is that the behavior of illegally distributing laughing gas shall be convicted and punished under Article 225 of *the Chinese Criminal Law* (hereinafter the CCL) as the crime of illegal business operation.<sup>1</sup> As stated by Zhang (2022), “In China, laughing gas appears in neither the *Catalogue of Narcotic Drugs of the People’s Republic of China* nor the *Catalogue of Psychotropic Substances of the People’s Republic of China*. Furthermore, it is not listed as a statutory drug in the *Anti-Drug Law of the People’s Republic of China*, nor is it included in the *Catalogue of Precursor Chemicals of the People’s Republic of China* (hereinafter the *Catalogue of Precursor Chemicals*). Currently, laughing gas is classified as a chemical hazardous to human health, facilities, and the environment. Due to its toxic, corrosive, explosive, flammable, and oxidizing properties, it is included in the *Catalogue of Hazardous Chemicals*. According to Article 77 of the *Regulation on the Safety Management of Hazardous Chemicals of the People’s Republic of China* (hereinafter the *Regulation*):

‘Anyone engaging in the operation of hazardous chemicals without a license shall be ordered by the safety production supervision department to cease such activities... If the act is convicted as a crime, criminal liability shall be pursued in accordance with the law.’

Consequently, the unlicensed operation of laughing gas is suspected of violating Article 225 of the CCL” (Zhang, 2022). China’s judicial practice reflects a similar perspective. In 2018, China’s first case of illegally operating laughing gas

<sup>1</sup>Article 225: [Crime of Illegal Business Operations] If one violates national regulations and engages in any of the following illegal business activities, thereby disrupting the market order and with serious circumstances, they shall be sentenced to imprisonment of not more than five years or detention, and shall also be fined, either jointly or solely, an amount equal to one to five times the illegal gains; if the circumstances are particularly serious, they shall be sentenced to imprisonment of not less than five years and shall also be fined an amount equal to one to five times the illegal gains or have their property confiscated:

- (1) Operating items that are subject to exclusive or restricted trading under laws and administrative regulations without obtaining the necessary permits;
- (2) Trading import and export licenses, import and export origin certificates, and other business licenses or approval documents stipulated by laws and administrative regulations;
- (3) Operating securities, futures, or insurance businesses without the approval of the relevant state authorities, or engaging in money payment and settlement business illegally;
- (4) Other illegal business activities that seriously disrupt the market order.

was determined and it stated that, Defendant Yin XXX, in violation of state regulations and without obtaining a hazardous chemical business license, illegally operated nitrous oxide (commonly known as laughing gas), thereby disrupting market order, and the circumstances were serious. According to the provisions of Article 225, Item (1) of the Criminal Law, his actions constitute the crime of illegal business operation.<sup>2</sup> Subsequently, similar cases in China featuring the unlicensed operation of laughing gas have generally been convicted and punished as the crime of illegal business operation (Guo & Wu, 2022). Notably, in 2024, the Supreme People's Court of the People's Republic of China (hereinafter the SPC) issued ten typical cases concerning drug-related crimes. Case No. 10, the case of Yu XXX and Jia XXX for illegal business operation—involving the illegal sale of laughing gas to minors—was punished according to law as the crime of illegal business operation.<sup>3</sup>

Recently, however, doubts have been raised in both criminal law scholarship and judicial practice regarding the conviction and punishment of illegal laughing gas operations under Article 225 of the *CCL*. Some scholars argue that “applying the crime of illegal business operation to the operation of laughing gas is inappropriate. For instance, laughing gas is also a food additive, and operating a food additive business does not require a special permit. Furthermore, the *Eleventh Amendment to the CCL*, approved in 2020, added Article 134-1, establishing the crime of dangerous operations. This article stipulates that:

*‘Anyone who, without legally mandated approval or permission, engages in highly dangerous production activities such as the production, operation, or storage of dangerous goods, thereby creating a real risk of major accidents or other serious consequences, shall be sentenced to up to one year in prison, criminal detention, or public surveillance.’*

To convict unlicensed operation of hazardous chemicals under Article 225 of the *CCL* is clearly inconsistent with this newly added provision.” (Zhao, 2023a; Li, 2021) In practice, some also argue that “regulating the operation of laughing gas does not primarily serve to safeguard the market order access system, which is the objective under Article 225 of the *CCL*; rather, it primarily concerns potential harm to human health resulting from inhalation. Notably, the illegal operation of laughing gas does not entail risks such as fire or explosion that are associated with other hazardous chemicals. In contemporary practice, even the unlicensed operation of hazardous chemicals with a higher risk of fire and explosion, such as gasoline or natural gas, is difficult to convict as a crime of illegal business operation. If laughing gas, which poses either a lower ‘hazardous chemical’ risk or is involved

<sup>2</sup>The Supreme People's Prosecutor of the People's Republic of China (2018). The First National Case of Illegal Operation of “Laughing Gas” Sentenced in First Instance, Prosecutor Explains the Case in Detail. Retrieved from [https://www.spp.gov.cn/spp/zdgz/201804/t20180407\\_373579.shtml](https://www.spp.gov.cn/spp/zdgz/201804/t20180407_373579.shtml), on July 20, 2025.

<sup>3</sup>The Information Bureau of the Supreme People's Court of the People's Republic of China (2024). Strict punishment for drug-related offenses, severe penalties for addiction-related offenses, and heavy penalties for offenses involving minors! The SPC releases 10 typical cases. Retrieved from [http://www.legaldaily.com.cn/index/content/2024-06/25/content\\_9013937.html](http://www.legaldaily.com.cn/index/content/2024-06/25/content_9013937.html), on June 25, 2025.

in smaller transaction volumes, were to be criminalized under this crime, the outcome would be clearly inconsistent.” (Li, 2021)

It should be acknowledged that, as a primary source of laughing gas abuse, its illegal operation self-evidently endangers public health, thereby constituting serious social harm. However, the current practice of convicting and punishing this illegal activity under Article 225 of the *CCL*—which is designed to address disruptions to market order—indeed warrants further scholarly examination. Article 3 of the *CCL* enshrines the principle of legality. Therefore, determining the appropriate criminal regulation for the illegal laughing gas operation requires accurate identification of its essence of criminal illegality and thereby applying a conviction that corresponds to that nature. Accordingly, further research on the criminal regulation of illegal laughing gas operations is necessary.

## 2. The Usage Classification of Laughing Gas in China and the Criminal Illegality Essence of Its Illegal Operation

In fact, laughing gas has multiple uses in China, and the legal attributes associated with its operation vary accordingly. Without a typological analysis, it is difficult to accurately grasp the essence of the criminal illegality of its illegal operation.

### (A) Classification of the Uses of Laughing Gas

According to relevant Chinese national standards, including GB/T28729-2012, GB1886.350-2021, and GB2760-2024, the uses of laughing gas in China can be categorized into three main types:

1. Industrial use (as an oxidizer). Nitrous oxide has oxidizing properties similar to oxygen. Contact with combustible materials and strong reducing agents presents a risk of fire and explosion. When exposed to flammable gases such as ether and ethylene, it can promote combustion and intensify flames. Nitrous oxide is relatively stable at room temperature but becomes a strong oxidizer above 300°C, reacting violently with metals, carbon, and sulfur. When handling nitrous oxide, open flames, sparks, and smoking should be prohibited.<sup>4</sup>

2. Food use (as a food additive). Laughing gas serves as a propellant and foaming agent. Its use is permitted in the processing of water-in-oil emulsified fat products (limited to vegetable fat-based milk), emulsified fat products other than those in Category 02.02 (including mixed and/or flavored emulsified fat products, limited to vegetable fat-based cream), as well as in the processing of cream (light cream) and similar products.<sup>5</sup> For example, it is used to whip cream into a dense foam for cake decoration. In this context, as a food additive, it is not harmful to human health (Liu, 2019).

3. Medical use (as an anesthetic). Nitrous oxide is an anesthetic commonly used in clinical settings for intraoperative anesthesia in obstetrics and dentistry. Inhal-

<sup>4</sup>National Standard of the People’s Republic of China GB/T 28729-2012. Retrieved from <https://openstd.samr.gov.cn/bzgk/gb/newGbInfo?hcno=7F24D1CBA21F3C481573A697B4C185C1>, on June 25, 2025.

<sup>5</sup>National Standard of the People’s Republic of China GB 2760-2024, GB1886.350-2021. Retrieved from <https://gb2760.cfsa.net.cn/>, on June 25, 2025.

ing a gas mixture containing more than 90% nitrous oxide can induce deep anesthesia, and inhalation of high concentrations poses a risk of asphyxiation. Long-term or repeated exposure to nitrous oxide may cause harm to the bone marrow, nerve endings, and reproductive or developmental functions.<sup>6</sup>

(B) Analysis of the Legal Attributes of Operating Laughing Gas for Different Uses

It should be noted that the operation of laughing gas for different purposes implicates distinct fields of law.

First, the industrial use of laughing gas primarily concerns the management and safety of chemicals, given its oxidizing properties. Consequently, the *Regulation* and the *Catalogue of Hazardous Chemicals* list nitrous oxide (compressed or liquefied) as hazardous chemical No. 2561. Furthermore, Article 1 of the aforementioned Regulation states that:

*“The Regulation is formulated to strengthen the safety management of hazardous chemicals, prevent and reduce accidents involving hazardous chemicals, ensure the safety of people’s lives and property, and protect the environment.”*

Article 33 of the *Regulation* provides that:

*“The State implements a licensing system for the operation of hazardous chemicals (including storage operations, hereinafter the same). No unit or individual may operate hazardous chemicals without a license.”*

Second, the operation of laughing gas for food purposes primarily concerns food safety. Article 1 of the *Food Safety Law of the People’s Republic of China* (hereinafter the *Food Safety Law*) states that: *“This Law is formulated to ensure food safety and safeguard public health and life.”* Article 122 of the *Food Safety Law* provides that:

*“Where a person, in violation of this Law, engages in food production or operation without a license, or engages in food additive production without a license, the food safety supervision and administration department of the people’s government at or above the county level shall confiscate the illegal income, the illegally produced or operated food and food additives, and the tools, equipment, raw materials and other articles used in the illegal production or operation. If the monetary value of the illegally produced or operated food or food additives is less than RMB 10,000, a fine of not less than RMB 50,000 but not more than RMB 100,000 shall also be imposed. If the value is RMB 10,000 or more, a fine of not less than ten times but not more than twenty times the monetary value shall be imposed.”*

Finally, the operation of laughing gas for medical purposes primarily concerns the administration and safe use of drugs. Article 1 of the *Drug Administration Law of the People’s Republic of China* (hereinafter the *Drug Administration Law*)<sup>7</sup>

<sup>6</sup>National Standard of the People’s Republic of China GB/T 28729-2012. Retrieved from <https://openstd.samr.gov.cn/bzgk/gb/newGbInfo?hcno=7F24D1CBA21F3C481573A697B4C185C1>, on June 25, 2025.

<sup>7</sup>Drug Administration Law of the People’s Republic of China. <https://www.nhc.gov.cn/fzs/c100048/201909/3a86b1c3ae204640acf57080a6486240.shtml>, on June 25, 2025.

states that:

*“This Law is formulated to strengthen drug administration, ensure drug quality, safeguard the safety and lawful rights and interests of the public in using drugs, and protect and promote public health.”*

Article 2 of the *Drug Administration Law* provides that:

*“The drugs referred to in this Law are substances used to prevent, treat, and diagnose human diseases, to purposefully regulate human physiological functions, and which have specified indications or main functions, as well as prescribed usage and dosage, including traditional Chinese medicine, chemical drugs, and biological products.”*

Article 51 of the *Drug Administration Law* provides that:

*“Drug wholesale activities shall be subject to the approval of the drug regulatory department of the people’s government of the province, autonomous region, or municipality directly under the Central Government where the enterprise is located, and a drug operation license shall be obtained. Drug retail activities shall be subject to the approval of the drug regulatory department of the local people’s government at or above the county level where the enterprise is located, and a drug operation license shall be obtained. No entity or individual may engage in drug operation without a drug operation license.”*

In the Chinese legal system, laughing gas is considered a drug and should be managed as a drug.

#### (C) The Criminal Illegality Essence of Illegally Operating Laughing Gas

Given the varied uses of laughing gas, the legal domains implicated by its illegal operation differ accordingly. Only by accurately identifying which specific use is involved in the illegal operation—the very source of its abuse—can we properly discern the criminal illegality of the conduct. It should be noted that the current illegal operation of laughing gas pertains neither to its chemical use nor its food use; rather, it primarily concerns its medical use (as an anesthetic).

First, the primary purpose of the current illegal operation of laughing gas is to sell it to others for inhalation. The operation is typically conducted using cream chargers and the like. This business model generally does not involve large-scale production, transportation, or storage, which stands in stark contrast to the large-scale industrial use of nitrous oxide (compressed or liquefied) as a hazardous chemical with oxidizing properties.

Second, although some companies or individuals may operate under the guise of legally selling a food additive, labeling it as such, it is, in fact, intended for inhalation. Such operations are fundamentally not about food safety, but rather concern the medical—specifically anesthetic—properties of laughing gas.

Furthermore, the legal interests harmed by the current illegal operation of laughing gas are neither those protected under the hazardous chemical licensing system—namely, “preventing and reducing hazardous chemical accidents, ensuring the safety of people’s lives and property, and protecting the environment”—nor those under the *Food Safety Law*—namely, “ensuring food safety and safe-

*guarding public health.*” Rather, they are the interests embodied in the medical use of laughing gas: “*the safety and lawful rights and interests of the public in using drugs, and the protection and promotion of public health.*” In this regard, the criminal illegality of illegally operating laughing gas lies in the “drug abuse” resulting from such operations, which endangers human health.

### 3. The Criminal Regulation of Illegally Operating Laughing Gas in China

Having clarified the essential nature of the criminal illegality inherent in illegal laughing gas operation, we have a more precise basis and clearer direction for its criminal regulation. This nature lies in the “drug abuse” resulting from the illegal operation of laughing gas for medical purposes, which endangers human health. This understanding dictates that such illegal operation cannot be convicted under Article 225 of the *CCL*, nor as the crime of dangerous operations, nor as any drug-related crime. Under the current *CCL*, it satisfies the constitutive elements of the crime of obstructing drug administration as provided in Article 142-1 of the *CCL*, and should therefore be convicted and punished accordingly.

(A) Revisiting the Inapplicability of the Crime of Illegal Business Operation (Article 225)

In current Chinese judicial practice, the logic underpinning the conviction of illegally operating laughing gas as the crime of illegal business operation under Article 225 of the *CCL* is as follows: laughing gas is a hazardous chemical, and operating hazardous chemicals requires a license. Therefore, operating it without a license constitutes an illegal business operation, violates state regulations, and satisfies the constitutive elements of the crime of illegal business operation. However, this line of reasoning not only conflicts with the legal interests protected by Article 225 of the *CCL*—namely, market order and the state’s special licensing system, but also creates inconsistencies in the application of other related criminal provisions. More critically, it overlooks the criminal illegality essence of illegally operating laughing gas.

First, the crime of illegal business operation is located in Section 8, Chapter 3 of the *CCL*, which addresses crimes of disrupting market order. The prevailing view is that the legal interest it protects is the market economic order (Zhang, 2021a). However, Article 1 of the *Regulation* clearly states that its purpose is

*“To strengthen the safety management of hazardous chemicals, prevent and reduce accidents involving hazardous chemicals, ensure the safety of people’s lives and property, and protect the environment.”*

The licensing system for hazardous chemicals is primarily designed to prevent threats to public life and property arising from potential accidents involving such chemicals, thereby safeguarding public safety rather than market order. To apply the crime of illegal business operation—which is intended to protect market order—to safeguard public safety is, quite simply, a misapplication of the law (Hou,

2021).<sup>8</sup>

Second, the *Eleventh Amendment to the CCL* added Article 134-1 to the *CCL*, establishing the crime of dangerous operations. Item (3) of this Article stipulates that:

*“Anyone who, without legally mandated approval or permission, engages in highly dangerous production activities such as mining, metal smelting, construction, or the production, operation, or storage of dangerous goods, thereby creating a real risk of major accidents or other serious consequences, shall be sentenced to up to one year in prison, criminal detention, or public surveillance.”*

Even if one were to argue that the illegal operation of laughing gas violates the licensing system set forth in Article 33 of the *Regulation*, the act of operating it without a license, whether considered in terms of its nature or the legal interests it infringes upon, more closely aligns with the constitutive elements of the crime of dangerous operations than with those of the crime of illegal business operation. (Of course, this article does not contend that the illegal operation of laughing gas actually constitutes the crime of dangerous operations; this point is made solely to demonstrate its inapplicability under the crime of illegal business operation.)

Third, and most fundamentally, to convict and punish the illegal operation of laughing gas under Article 225 of the *CCL* fundamentally misunderstands the essence of criminal illegality. As noted above, although laughing gas is classified as a hazardous chemical, the core of the social harm arising from its illegal operation lies not in its oxidizing properties, but in the harm stemming from its unique medical attributes. Indeed, in the 2024 case of Yu XXX and Jia XXX for illegally operating laughing gas, issued by the SPC as a typical case, although the defendants were ultimately convicted of illegal business operation, the SPC’s emphasis in highlighting the case’s significance was on the harm caused by the anesthetic effects of laughing gas: “Inhaling laughing gas can cause dizziness and asphyxiation, and in severe cases, can be life-threatening. Chronic exposure to nitrous oxide can lead to physiological and psychological dependence, resulting in impairments to cognitive function, memory, and even brain nerve damage.”<sup>9</sup> In this light, given that the essence of the criminal illegality of illegally operating laughing gas lies neither in its hazardous chemical properties nor in the disruption of market order, convicting it as the crime of illegal business operation under Article 225 represents a clear departure from the principle of legality.

(B) On the Inapplicability of the Crime of Dangerous Operations (Article 134-

<sup>8</sup>In fact, in the reasoning of many such judgments, although the court ultimately convicted the defendants of the crime of illegal business operation, the emphasis was often placed not on the infringement of market order, but on other factors. For example, in the case where the Xu family was convicted of illegally selling laughing gas as the crime of illegal business operation, the judge stated that the Xu family had violated state regulations by illegally selling the hazardous chemical laughing gas without a license, thereby disrupting market order and endangering public personal and property safety. The circumstances were deemed serious, constituting the crime of illegal business operation, for which they should be punished according to law.

<sup>9</sup>The Information Bureau of the Supreme People’s Court of the People’s Republic of China (2024). Strict punishment for drug-related offenses, severe penalties for addiction-related offenses, and heavy penalties for offenses involving minors! The SPC releases 10 typical cases. Retrieved from [http://www.legaldaily.com.cn/index/content/2024-06/25/content\\_9013937.html](http://www.legaldaily.com.cn/index/content/2024-06/25/content_9013937.html), on June 25, 2025.

1 of the *CCL*)

Objectively speaking, if one considers only the hazardous chemical properties of laughing gas, the act of illegally operating it might appear to more closely align with the constitutive elements of the crime of dangerous operations under Article 134-1 of the *CCL*. Some scholars argue: “Although in current Chinese judicial practice, given that laughing gas is neither a narcotic drug nor a controlled psychotropic substance, but is only listed in the *Catalogue of Hazardous Chemicals*—with its production, transport, and storage regulated by safety supervision authorities and requiring an operating license—it has been held that operating it without a license violates state regulations and can be convicted as the crime of illegal business operation. However, after the *Eleventh Amendment to the CCL* added Article 134-1, which established the crime of endangering production operations (now the crime of dangerous operations—author’s note), this approach is no longer tenable. On the one hand, the legal interest infringed upon by the unlicensed operation of hazardous chemicals is not primarily market order, but rather public safety. From the perspective of legal interest protection, Article 134-1 is more appropriate. On the other hand, from a legislative standpoint, this new crime serves as an effective check on the expansion of the crime of illegal business operation into a ‘catch-all’ provision. The statutory maximum penalty for this crime is one year’s imprisonment, classifying it as a minor offense. Its constitutive elements require a finding of specific danger, which makes its penalty structure more coherent with that of crimes involving actual harm, such as the crime of causing an accident with hazardous substances or the crime of endangering public safety by dangerous means.” (Wang, 2020)<sup>10</sup> Similarly, in the case of Gao XXX et al. for dangerous operations, which was included in the *Typical Cases of Legally Punishing Crimes Endangering Production Safety* jointly released by the SPC and the Supreme People’s Procuratorate of the People’s Republic of China on December 15, 2022, the defendant sought illegal profits. Without the requisite approvals, he rented a self-built house located at No. 136, Shuiyan Group, Bianshan Village, Shawen Town, Baiyun District, Guiyang City, Guizhou Province, China, through Xiong XXX, and used it to illegally store and sell gasoline. The Baiyun District People’s Court of Guiyang City accordingly sentenced Gao XXX to seven months’ imprisonment for the crime of dangerous operations. In explaining the case’s significance, the Court specifically emphasized that “according to the *Catalogue of Hazardous Chemicals*, gasoline is a hazardous chemical. Pursuant to Article 33 of the *Regulation*, the State implements a licensing system for the operation of hazardous chemicals, and no unit or individual may operate hazardous chemicals without a license.”<sup>11</sup>

<sup>10</sup>It is also noted that there appears to be a lack of evidence to confirm whether the operation of laughing gas poses a real risk of causing major casualties or other serious consequences, and therefore, it is questionable whether the new crime could be established.

<sup>11</sup>The Supreme People’s Procuratorate of the People’s Republic of China (2022). *Typical Cases of People’s Courts and People’s Procuratorates Punishing Crimes Endangering Production Safety According to Law*. Retrieved from [https://www.spp.gov.cn/xwfbh/dxal/202212/t20221215\\_595675.shtml](https://www.spp.gov.cn/xwfbh/dxal/202212/t20221215_595675.shtml), on June 25, 2025.

However, the illegal operation of laughing gas remains distinct from the illegal operation of hazardous chemicals like gasoline. On the one hand, as noted above, the primary purpose of such illegal operations is to sell it for inhalation, typically using cream chargers and the like. This business model generally does not involve large-scale production, transportation, or storage. In this respect, operating laughing gas differs from operating hazardous chemicals such as gasoline; it does not constitute a highly dangerous operation and does not pose a real risk of causing major casualties or other serious consequences. On the other hand, the harm caused by the illegal operation of laughing gas lies in the fact that its inhalation seriously endangers human health and carries a certain potential for addiction. Long-term inhalation may result in damage to cognitive and brain functions, causing irreversible harm to the human body. Therefore, the illegal operation of laughing gas cannot be convicted as a crime of dangerous operations under Article 134-1 of the *CCL*.

(C) On the Inapplicability of Drug-Related Crimes

Although some argue that “we must fully recognize the role of laughing gas as a new type of drug substitute. As a novel, harmful, addictive substance, there is currently no precise treatment for it anywhere in the world. The fight against and control of drug-related crimes cannot be confined to existing standards for drug classification and regulation. These standards should not serve as a shield for the illegal sale of ‘laughing gas’, nor should they become an obstacle to its control. It is imperative to promptly include laughing gas in the drug catalogue, supplement and improve relevant laws and regulations, and enhance legislation and oversight across various aspects, including sale and inhalation. This would provide a robust legal framework for governing and preventing illegal and criminal activities involving laughing gas.” (Zhang, 2022)

However, on the one hand, under the principle of legality, as long as laughing gas is not legally classified as a drug, its illegal operation cannot, under any circumstances, be convicted and punished as a drug-related crime. On the other hand, whether laughing gas should be defined as a drug remains a matter of considerable controversy. Some scholars stated that: “whether laughing gas is addictive still requires professional assessment. There are no surveys on the current state of its abuse in China, nor are there clear statistics; thus, the scale of its abuse cannot be reliably determined, and the time is not yet ripe for listing it as a drug. Laughing gas has multiple identities in daily life and plays an important role in various fields, including food, medicine, and industry. If it were classified as a drug, the zero-tolerance drug policy would define common social behaviors as illegal or criminal. Enterprises using laughing gas would face strict restrictions on its purchase and use, which would not only increase market costs but also generate substantial administrative expenses.” (Xie & Zheng, 2018) Notably, many foreign countries do not currently regulate laughing gas as a drug. In the United States, for example, it has not been classified as a “drug” and falls under the jurisdiction of the Food and Drug Administration (FDA). In summary, the conditions for treating the illegal operation of laughing gas as a drug-related crime are not presently met.

(D) The Illegal Operation of Laughing Gas Should Be Convicted as the Crime of Obstructing Drug Administration (Article 142-1)

On December 26, 2020, *the Eleventh Amendment to the CCL* added a new article, Article 142-1, to the *CCL*, establishing the crime of obstructing drug administration. It stipulates:

*“Whoever violates drug administration regulations by engaging in any of the following acts, if the act is sufficient to seriously endanger human health, shall be sentenced to fixed-term imprisonment of not more than three years or criminal detention and shall also, or shall only, be fined; if the act causes serious harm to human health or involves other serious circumstances, the offender shall be sentenced to fixed-term imprisonment of not less than three years but not more than seven years and shall also be fined: 1) producing or selling drugs whose use is prohibited by the drug regulatory department of the State Council; 2) producing or importing drugs without legally required approval documents, or knowingly selling such drugs; 3) providing false certificates, data, materials, or samples, or employing other deceptive means in drug registration applications; or 4) fabricating production or inspection records.”*

The illegal operation of laughing gas precisely falls under item (2) of this provision. That is, it constitutes the act of violating drug administration regulations by producing or importing drugs without legally required approval documents, or knowingly selling such drugs, where the act is sufficient to seriously endanger human health. Specifically:

As noted above, although laughing gas has multiple uses, the fundamental purpose of its current illegal operation is to sell it to others for inhalation. The criminal illegality of this conduct lies in the abuse of its medical use as an anesthetic, thereby endangering human health. When used as a medical gas for its analgesic and anesthetic effects in clinical settings, laughing gas is classified as a pharmaceutical. The production and sale of medical laughing gas must comply with national drug administration laws and regulations. Its production requires a drug approval number (the *National Drug Approval Number*) from the *National Medical Products Administration (NMPA)*, and its wholesale and retail operations require a “*Drug Business License*” obtained from the relevant local drug regulatory authority. Operation without such a license is prohibited (Guo & Wu, 2022). Therefore, producing or importing medical laughing gas for sale to others for inhalation without obtaining the relevant pharmaceutical approval documents constitutes this crime. Secondly, if the laughing gas purchased by the seller did not originate as medical laughing gas, it is presumed that they knew it was the aforementioned drug and sold it, which also constitutes this crime. In short, violating drug administration regulations by producing or importing medical laughing gas without legally required approval documents, or by knowingly selling such laughing gas, where the act is sufficient to seriously endanger human health,<sup>12</sup> fully satisfies the constitutive elements of the crime of obstructing drug ad-

<sup>12</sup>Sufficient to seriously endanger human health, it can generally be assessed from the following aspects: frequency, concentration, quantity, sales amount, sales to minors, etc.

ministration and should be convicted as such.<sup>13</sup>

Convicting the illegal operation of laughing gas as the crime of obstructing drug administration not only fully aligns with the core legal interest protected—namely, human health—but, more importantly, it resolves two other difficult issues in current practice. These are: first, how to convict and punish enterprises or individuals that hold a hazardous chemical operating license but, knowing or having reason to know that the gas will be used for inhalation, nonetheless actively sell it or acquiesce in its sale; and second, how to convict and punish those that hold a food operating license but engage in conduct similar with those mentioned above.

Regarding the first issue, judicial records indicated that an individual, Zhang XXX, was apprehended by police in multiple jurisdictions for selling laughing gas, but was ultimately released on bail each time. The reason was that Zhang XXX held a hazardous chemical operating license, which made conviction under Article 225 of the *CCL*, as the crime of illegal business operation, difficult (Li, 2021). However, if we apply the framework of the crime of obstructing drug administration under Article 142-1 of the *CCL*, even with a hazardous chemical license, the conduct would still constitute this crime. This is because laughing gas sold for inhalation is to be treated as a drug being produced and sold. The production and sale of drugs require the appropriate drug operating license. Therefore, producing or importing drugs without legally required approval documents, or knowingly selling such drugs, where the act is sufficient to seriously endanger human health, constitutes the crime of obstructing drug administration.

The second issue is analogous. In one case, a defendant appealed, arguing that cream chargers are not hazardous chemicals but a food additive, and the company's lawful operations in the food sector do not constitute the crime of illegal business operation. Ultimately, the court upheld the conviction for illegal business operation under Article 225 of the *CCL*, finding that the defendant lacked a hazardous chemical operating license.<sup>14</sup> However, it must be acknowledged that the court's reasoning in this judgment is somewhat contentious. From the perspective of food regulation, obtaining a food license is entirely feasible, and it is difficult to simply equate cream chargers—used as a food additive—with hazardous chemicals. Yet, under the crime of obstructing drug administration provided in Article 142-1 of the *CCL*, even possession of a food business license does not, by any means, entitle one to sell laughing gas to others as a drug. This is because the production and sale of laughing gas as a drug requires the appropriate drug operating license. Producing or importing drugs without legally required approval

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<sup>13</sup>In fact, in the United States, the agency responsible for enforcing laws related to laughing gas is the Food and Drug Administration (FDA). Under relevant regulations, selling or distributing laughing gas to individuals without a valid medical prescription can result in a maximum penalty of one year in prison and a fine of \$100,000. This illustrates that, internationally, laughing gas is also regulated as a pharmaceutical.

<sup>14</sup>The Criminal Judgment of the Intermediate People's Court of Taizhou City, Zhejiang Province, China. Zhe 10 Xing Zhong No. 322 [2020].

documents, or knowingly selling such drugs, where the act is sufficient to seriously endanger human health, constitutes the crime of obstructing drug administration.

#### 4. Conclusion

Given the criminal illegality of illegally operating laughing gas lies in the “drug abuse”, which endangers human health, it dictates that such illegal operation cannot be convicted under Article 225 of the *CCL*, nor as the crime of dangerous operations, nor as any drug-related crime. Under the current *CCL*, it satisfies the constitutive elements of the crime of obstructing drug administration as provided in Article 142-1, and should therefore be convicted and punished accordingly. In the future, it may be necessary to add a new crime called the “crime of obstructing the management of psychoactive substances” to the *CCL* (Zhao, 2023b).<sup>15</sup> Constrained by the scope of this paper, only a brief outline of this idea is presented here. On the one hand, from the perspective of controlling the primary source for laughing gas abuse, it may be necessary to bring a wider range of actors—including producers, operators, sellers, transporters, and even those who provide premises or possess the substance—within the regulatory framework. The scope of actors subject to the existing crime of obstructing drug administration is limited. On the other hand, from a societal development perspective, substances akin to laughing gas are likely to proliferate. Criminal justice policy, and legislation in particular, should possess a degree of foresight and be typologically oriented (Zhang, 2006).<sup>16</sup> Furthermore, adding a new crime would enhance the clarity of the criminal law and better safeguard citizens’ ability to predict the legal consequences of their actions and their freedom to act (Zhang, 2021b).<sup>17</sup> The specific formulation of the constitutive elements, penalties, and other details of such a crime, however, remains a topic for future research.

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<sup>15</sup>For example, one scholar argues: “To resolve the current regulatory dilemma of addressing laughing gas transactions under the crime of illegal business operation, Section VII, Chapter VI of Part Two of the Criminal Law should be revised to cover the crimes of smuggling, trafficking, transporting, and manufacturing drugs and new psychoactive substances. A new Article 355-2—the crime of obstructing the management of new psychoactive substances—could be added, with specific constitutive elements, criteria for determination, and penalty ranges for the illegal production, trading, storage, or mailing of laughing gas. The highest judicial authorities should also promptly issue relevant judicial interpretations, providing clear provisions on applicable laws, transaction volumes, illegal gains, and grading conversion standards, so as to support public security organs in lawfully handling criminal cases involving laughing gas.”

<sup>16</sup>As claimed by Professor Zhang, crimes should be described typologically, not by exhaustively detailing the constitutive elements based on individual cases that have occurred. Typological description helps to reduce the number of legal provisions and ensures that all conduct deserving of punishment is subsumed under the *CCL*, thereby reducing loopholes and achieving stability and justice in the *CCL*. In short, criminal regulation cannot be merely reactive, addressing problems only as they arise.

<sup>17</sup>From the perspective of the principle of clarity—a requirement of the principle of legality—it has been observed that “if the constitutive elements of a crime are unclear, the law loses its function of providing predictability. Citizens, unable to determine whether their conduct constitutes a crime before acting, may refrain from legitimate activities, thereby chilling the exercise of their freedoms.”

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### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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