The Pro-Heroin Effects of Anti-Opium Laws in Asia

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• **Over 25 years anti-opium laws were enacted by three Asian governments in countries where opium use was traditional. Within months, heroin use suddenly appeared; and within a decade, heroin addiction surpassed opium addiction. The laws led to (1) increased price of narcotic drugs, (2) a heroin "industry," (3) corruption of the law enforcement system, and (4) major health problems involving parenteral drug use.**

The Asian experience indicates that antinarcotic laws can be effective only with careful preparations: (1) changing society's attitude toward the traditional drug from ambivalence to opposition; (2) mobilizing resources to treat and rehabilitate all addicts within a short period of time; (3) developing the social will to incarcerate all "recidivist" addicts for a prolonged period; and (4) preventing narcotic production or importation.

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Opium continued to be the narcotic drug of choice across Asia until the post-World War II era—a period long after the technology for morphine and heroin production had been developed. However, in very recent years, heroin addiction has appeared and spread rapidly in Asia. In order to elucidate the matter, this study, based on data from three Asian countries, was undertaken to see what factors might be operative in societies changing from opium addiction to heroin addiction.

METHOD

Between 1965 and 1975, seven trips were made to Hong Kong, Thailand, and Laos. Over this decade, the author spent a total of three years in Asia (primarily Laos). Data were obtained from (1) repeated visits to narcotic treatment facilities in Hong Kong and Thailand, (2) cross-cultural research of narcotic addiction in Laos,[1-4] and (3) consultation to a treatment facility for narcotic addicts in Laos from 1971 through 1974. These first-hand data were supplemented by reports from the literature regarding narcotic addiction in Asia.

FINDINGS

Hong Kong Data

From Opium to Heroin.—During a consultation for the World Health Organization, the American psychiatrist, Fort, first reported the change from opium to heroin addiction in Hong Kong. According to his informants, narcotic addicts in China and Hong Kong had overwhelmingly used opium prior to 1945. Fort noted the prevalence of heroin addicts over opium addicts in Hong Kong during the early 1960s,[5] an observation also reported by Way a few years later.[6]

These findings were supported by the extensive study conducted by Chinese psychiatrists Lau and Yap in the early 1960s.[7] Of 968 addict-patients in Hong Kong, none

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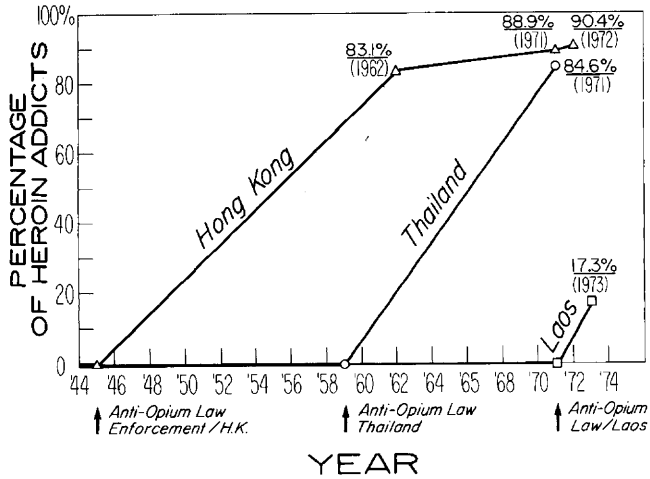

Rapid increase in percentage of heroin addicts in Hong Kong, Thailand, and Laos.

Year of Initial Narcotic Use Vs Type of Narcotic Drug
Hong Kong Inpatients–Castle Peak Hospital, 1961-1963

Year of Onset of Narcotic Use*	No. of Patients: Type of Addiction		
	Opium Only (%)	Opium Followed by Heroin (%)	Heroin Only (%)
1953-1962	25 (19.6)	85 (17.0)	282 (83.2)
1943-1952	26 (20.3)	192 (38.3)	57 (16.8)
1933-1942	40 (31.2)	144 (28.7)	0 (0)
1923-1932	28 (21.9)	65 (13.0)	0 (0)
1913-1922	8 (6.3)	13 (2.6)	0 (0)
1912 and before	1 (0.8)	2 (0.4)	0 (0)
	128 (100.1)	**501 (100.0)**	**339 (100.0)**

*In the monograph by Lau and Yap[7] these data were presented as "number of years" rather than "year of onset." However, the original data (collected primarily during 1962) were changed to calendar years in order to demonstrate (1) the appearance of "heroin only" addicts following World War II and (2) the change from opium to heroin addiction.

had used heroin prior to 1945. As evident from the Table, however, 301 of these patients (30.1% of the total) had been addicted prior to 1943; but all of these had begun their narcotic careers with opium. These findings indicated that only opium addiction occurred prior to World War II and that heroin addiction had only appeared after World War II.

These data demonstrated another trend: of these 968 addict-patients, 501 of them (ie, 51.8% of the total) had *initially* been addicted to opium but had *changed* to heroin usage. Conversely, all patients initially addicted to heroin (ie, 339, or 35.0% of the total) were still addicted to heroin. A relatively small percentage of patients were initially addicted to opium and remained addicted to opium (ie, 128, or 13.2%). Thus, there were trends for (1) more new addicts to initially use heroin, and (2) opium addicts to switch to heroin use. At the time of the study, 83.1% of all patients were addicted to heroin (Figure).

A Hong Kong survey done ten years later replicated these findings and showed that opium addiction was on the wane while heroin addiction was still increasing.[8] During 1971, a total of 782 addict-patients were surveyed at a Hong Kong treatment facility for narcotic addicts. Only 257 patients (ie, 32.9% of the total) had initially used opium–over 30% less than in the previous study. And at the time of admission for treatment, only 87 addicts (ie, 11.1% of the total) were still using opium. Conversely, 525 addicted patients (67.1% of the total) had begun addiction with heroin–an increase of more than 30% in just ten years. At the same facility, the total percentage of heroin addicts increased from 88.9% in 1971 to 90.4% in 1972 (Figure).

Sociopolitical Correlates.–Prior to World War II, the British maintained a laissez-faire attitude toward narcotic addiction in their Hong Kong colony. Following the war, they began to enforce narcotic laws. The passage of ordinance 34 in 1960 provided for treatment facilities (whence came these statistical data above). However, the treatment facilities could only handle a few thousand addict-patients per year, while the total number of addicted persons was estimated at 100,000 to 200,000.[9]

Thailand Data

From Opium to Heroin.–Beginning in 1959, government physicians in Thailand were obligated by law to treat narcotic addicts. While initially patients were treated sporadically and in small numbers, nonetheless Thai physicians and governmental health agencies began to garner experience with addict-patients in Thailand. Governmental reports, as well as personal accounts by several Thai physicians, showed that all of these early patients were addicted only to opium. Prayoon Norakarnphadung, MD, first reported the appearance of large numbers of heroin addicts on May 3, 1960.

Beginning in 1967, extensive data on large numbers of addict-patients began to be collected at the National Hospital for Addiction at Thanyarak (a town near Bangkok). In 1971, of 3,123 patients admitted to this facility, 84.6% were tabulated as addicted to heroin or morphine or both, 14.4% to opium, 1.0% to other drugs (Figure). The heroin/morphine addicts were mostly ethnic Thai city-dwellers, while the opium addicts were almost exclusively tribal people from the northern mountains where the opium poppy was raised.[10]

Sociopolitical Correlates.–Pressured by international organizations and agencies to control their opium production and use, Thailand passed an anti-opium law in 1959. This law rescinded the government franchises to sell opium to local consumers–a Thai social institution that had evolved over centuries of experience with opium addiction.[11] Opium use was forbidden; and opium production, transport, and sale were outlawed.

At the time of the 1959 law, opium addiction was the only commonplace narcotic addiction in Thailand. In the brief span of ten years, heroin/morphine addiction had replaced opium addiction–especially among ethnic Thai, who comprised the majority of addicts in the country. In addition, the law did not constrict the supply of narcotic drugs because (1) the tribal areas were not liable to effective Thai law enforcement, (2) opium is a primary cash crop for tribal people, and (3) the extensive mountainous boundaries with opium-producing Burma and Laos could not be adequately patrolled.[12-14]

As in Hong Kong, treatment facilities had not provided even a partial solution. They were grossly inadequate for the number of addicts (estimated at about 300,000 people[15]). Moreover, the treatment was not effective, since most Thai addicts at the Thanyarak Hospital were readmitted patients.

Laos Data

From Opium to Heroin.—Opium had been raised as a cash crop—and consumed by inhabitants of Laos—at least from the time of the earliest French contact, and the economic importance of opium to Laos had continued into recent years.[16,17] Of several score addicts surveyed in northern Laos from 1965 through 1967, all were opium smokers and eaters.[1] Early in 1971, a study of 40 narcotic addicts,[2] three opium dens,[3] and traditional forms of folk care for addicts[4] revealed only opium addicts. No cases of heroin addiction were reported or encountered prior to this time. However, by March 1972 several addicts reported that heroin was regularly available in Vientiane, the capital and largest city of Laos.

On Sept 1, 1972, a National Detoxification Center for narcotic addicts was opened. Between that time and June 30, 1973, a total of 439 addicts were admitted. Of this number, 363 (ie, 82.7% of the total) were addicted to opium; 54 (ie, 12.3% of the total) of heroin or morphine; and 22 (ie, 5.0% of the total) used both opium and heroin. In all, 17.3% of the addicts seeking treatment were using heroin part or all of the time[18] (Figure).

Sociopolitical Correlates.—In August of 1971 the national government in Laos passed a law imposing police control on the production, sale, and consumption of narcotics. This came about as a result of pressure from the United States, which was (1) experiencing a major increase of heroin addiction both within its own borders and among its soldiers in Vietnam, and (2) contributing large sums of money to the government in Laos. The law was implemented in November 1971 at which time police and customs officers began to interdict the transport of opium by road, river boat, and airplane within Laos. However, production of the opium poppy continued in the remote areas of northern Laos, as well as in adjacent northern Thailand and Burma.

COMMENT

The Opium-to-Heroin Pattern.—In these three separate areas of Asia, a constant pattern repeated itself. First, after centuries of opium addiction, the government passed or began to enforce anti-opium laws banning the production, transport, sale, and use of opium. Among all three countries, the pressure for such law came, not from these Asian countries, but from European, North American, and other international interests.

Then, after only months following the new law, a transition from opium addiction to heroin addiction began in these areas. Within a decade (in the case of Hong Kong and Thailand), most of the addicts in these areas were using heroin. Many former opium addicts switched to heroin use, and all new addicts began to use heroin rather than opium.

This pattern was the more striking in that, not only did it occur in three different locations, but also at three different times (Figure). It began in Hong Kong during the late 1940s and 1950s, in Thailand during the 1960s, and in Laos during the 1970s. This repeated sequence in three different places during three separate decades suggests a causal relationship between anti-opium laws and heroin usage.

Why the Change to Heroin?—Opium is bulky and has a characteristic odor that cannot be effectively masked by ordinary containers. Since it cannot be kept indefinitely, it must be shipped to market expeditiously. Moreover, it emits a strong and characteristic odor while being smoked, so neighbors and passersby are aware of its being used. All of these attributes inveigh against illegal transport and sale to the population centers of Asia: it is difficult to ship, sell, and use covertly. On the contrary, it can only be used in an open fashion within a society whose laws do not forbid its use.

Heroin has several advantages over opium in regard to illegal transport, marketing, and use. In addition to being almost odorless, it lends itself to varied packaging and precise division into exact doses. It occupies a small fraction of the space compared to comparable doses of opium. Unlike opium, heroin does not deteriorate so rapidly and can thus be stored for long periods. Heroin can be smoked or injected rapidly with a minimum of paraphernalia, thus being more convenient for surreptitious use.

Economic Effects of the Change to Heroin.—Prior to the anti-opium laws, the production and supply of opium to the consumer was essentially a cottage industry. Farmers who grew opium also processed it from its crude form to its smoking form, using only the simple equipment available in the home for food preparation. Small entrepreneurs, who were engaged primarily in nonopium business activities, managed the transport and sale to the consumer. Even where the government franchised the sale of opium to addicts, as occurred in Thailand, the operation remained one of individual suppliers and small shopkeepers.[11]

Once heroin was introduced, the picture changed. Importation and transportation of large amounts of chemical supplies, provision of modern laboratory equipment, and supervision by chemists became necessary. Since heroin production was illegal, but so complex as to attract attention, bribes to police and customs officials were necessary. All of this required large sums of capital and central (or, at least, multicentral) organization. Since the central organization had to be recompensed for its effort and financial risk, and the investment on its capital repaid with interest, all of this increased the price of heroin. And because the activity was illegal, the margin of profit went even higher to balance risk of loss or imprisonment.

For these countries of Asia, then, the change from opium to heroin meant a change from a cottage industry where the profits were kept primarily by farmers and small merchants to a large industrial complex where large profits were made by middle men, organizers, and government officials—in addition to modest profits still made by farmers and small merchants. For the addict, the economic effect was a higher price for the narcotic drug. For the addict's society, the result was another industrial complex with its own vested economic interests.

Law Enforcement Effects From Anti-Opium Laws.—The

legal, political, and law enforcement difficulties in controlling heroin supply and consumption have been well described.[19-22] All of these difficulties occurred following the anti-opium laws in these three Asian countries. Whereas before such laws the police had no jurisdiction over narcotic use, the new laws gave them the right to interfere with it. Since opium use itself did not offend many police officials in these areas, they did not object to its continuance. For some, the offer of a bribe was too tempting to resist. For still others, the passage of the law provided them with the opportunity to harass individual addicts or small shopkeepers for protection money.

Further, the anti-opium laws undermined the public's confidence in the equity of laws and in the equitable application of justice, since who suffers under the law and who does not became more and more a random event rather than a predictable one. That is, out of tens and hundreds of thousands of people involved as producers, refiners, transporters, sellers, and consumers of narcotic substances, relatively few were ever punished; and these few were generally the addicts themselves. Moreover, the punishments tended to be short, not unpleasant stays in treatment settings. Thus, the law worked in such a way that it adversely affected the criminal justice system but did not effectively alter the behavior that was outlawed.

Health Effects of Heroin.—Opium can only be taken by ingestion or by smoking; it cannot be injected. Conversely, heroin cannot be eaten in order to obtain its effect; but it can be smoked, and this is the most commonly used route of administration in Asia. However, heroin smoking is relatively expensive, since much of the heroin is lost through volatilization. Parenteral injection of heroin (either under the skin or intravenously) saves money and heightens the effect by utilizing all of the heroin.

Parenteral administration of heroin gradually appeared following its introduction. While indigenous addicts in Laos were not yet injecting heroin in early 1975, injection had begun to appear in Bangkok. In Hong Kong, few addicts began using heroin by injection (less than 0.5%); but at the time of admission to treatment, a significant minority were employing this route of administration (percentage of parenteral users in 1971-1972 was 16.0%).[8]

Opium smoking and heroin smoking do expose addicted persons to chronic pulmonary conditions. However, parenteral use exposes the addict to a great number of medical complications. These include abscesses of the skin and internal organs, serum hepatitis, malaria, pulmonary edema, endocarditis, tetanus, and certain neurological problems.[23-41] The conditions impose both a major morbidity and mortality on the parenteral use of heroin, and additional costs of medical services on society.

The Post-Opium Law Dilemma.—Simply legislating anti-opium laws leads to heroin use, which in turn produces the following effects:

1. An increase in cost of narcotic drugs (thereby precipitating other social issues, such as theft and malnourishment).
2. Creation of a heroin-industrial complex requiring capital, management, chemicals, supply, equipment, and increased profits.
3. Corruption of customs and law enforcement officials, and undermining of the legal system.
4. Medical complications associated with parenteral administration of heroin.

Conversely, the laws do *not*—in and of themselves—affect the following:

1. The production, transport, and sale of opiate products.
2. The addict's desire to use drugs.
3. The initiation of new individuals into addiction.
4. Social attitudes toward addiction.
5. Institutional behavior (in hospitals, clinics, police stations, and courts) toward the addicted person.

What Can Be Done?—While many opium addicts readily changed to heroin, the reverse did not occur: heroin-addicted people want to continue using heroin and are not interested in opium. Thus, once the market for heroin has been established, simply repealing the anti-opium law would not likely reproduce the status quo ante. If a laissez-faire attitude were resumed by a government, it would probably have to accept heroin addiction. Nonetheless, an attempt at a "legal opium, illegal heroin" law would be an interesting social experiment.

Several other countries of Asia have successfully implemented anti-opium laws, however. These include (among others) Japan,[42] mainland China,[43,44] and South Korea.[45] These countries all passed anti-opium laws as did Hong Kong, Thailand, and Laos. However, they employed the following additional measures as well:

1. Social reorientation toward narcotic addiction, using intensive propaganda in the mass media.
2. Mobilization of the health care system to provide detoxification of all addicts in a relatively short period of time, and social rehabilitation and employment for all addicts requiring such services.
3. Prolonged incarceration (or isolation in work camps) of all "recidivist" addicts, suppliers, and corrupt officials.
4. Effective control over all narcotic production or importation.

Of course, such an alternative involves the collaboration of the mass media, health workers, the welfare system, police, and judges to implement it—as well as a political system and political leadership that can command and integrate these diverse groups. Moreover, there must be the social will to greatly infringe on the civil rights of addicted individuals. Without such strongly coercive measures, these data from Asia indicate that the laissez-faire approach has much to recommend it—especially in comparison with half-way measures, such as simply legislating anti-drug laws.

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References

1. Westermeyer J: Use of alcohol and opium by the Meo of Laos. *Am J Psychiatry* 127:1019-1023, 1971.

2. Westermeyer J: Opium smoking in Laos: A survey of 40 addicts. *Am J Psychiatry* 131:165-170, 1974.
3. Westermeyer J: Opium dens: A social resource for addicts in Laos. *Arch Gen Psychiatry* 31:237-240, 1974.
4. Westermeyer J: Folk treatments for opium addiction in Laos. *Br J Addict* 68:345-349, 1973.
5. Fort J: Giver of delight or liberator of sin: Drug use and "addiction" in Asia. *Bull Narc* 17:1-11; 17:13-19, 1965.
6. Way EL: Control and treatment of drug addiction in Hong Kong, in Wilner DM, Kassebaum GG (eds): *Narcotics*. New York, McGraw-Hill Book Co Inc, 1965, pp 274-289.
7. Lau MP, Yap PM: *An Epidemiological Study of Narcotic Addiction in Hong Kong*. Hong Kong, Government Press, 1967.
8. Society for the Aid and Rehabilitation of Drug Addicts: *Annual Report, January 1971-March 1972*. Hong Kong, Sarda Press, 1972.
9. Hong Kong Legislative Council: *The Problem of Narcotic Drugs in Hong Kong: A White Paper, 11 Nov 1959*. Hong Kong, Government Press, 1962.
10. *Thanyarak Hospital Report: The Management of Drug Dependence Project*. Thanyarak, Thailand, Thanyarak Hospital mimeograph report, 1972.
11. Skinner GW: *Leadership and Power in the Chinese Community in Thailand*. Ithica, NY, Cornell University Press, 1968.
12. Marks TA: The Meo hill tribe problem in north Thailand. *Asian Survey* 13:929-944, 1973.
13. Dessaint AY: The poppies are beautiful this time of year. *Natural History* 81:31-37, 92-96, 1972.
14. Everingham J: The Golden Triangle trade. *The Asia Magazine* 15:24-30, 1975.
15. Kwanmitra S, Showanasai A, Mongkolcheep S, et al: *Drug Abuse in the Royal Thai Army and General Population*. Bangkok, Thailand: Pramongkutklao Hospital report, 1974.
16. LeBar F, Suddard A: *Laos: Its People, Its Society, Its Culture*. New Haven, Conn, Human Relations Area Files Press, 1960.
17. Halpern J: *Economy and Society of Laos*. New York, Inblinger, 1964.
18. Westermeyer J, Soudaly C: Addiction treatment in Laos: The first year's experience. Read before the 31st International Congress on Alcoholism and Drug Dependence, Bangkok, Thailand, 1975.
19. Simmons LRS, Gold MB: The myth of international control: American foreign policy and the heroin traffic. *Int J Addict* 8:779-800, 1973.
20. Delaney WP: On capturing an opium king: The politics of Law Sik Han's arrest. *Society* 11:62-71, 1974.
21. Clayne C: Legal strategies for dealing with heroin addiction. *Am Econ Rev* 63:263-269, 1973.
22. Koch JV, Grupp SE: Police and illicit drug markets: Some economic considerations. *Br J Addict* 68:351-362, 1973.
23. Baden MM: Medical aspects of drug abuse. *NY State J Med* 24:464-474, 1968.
24. Helpern M, Rho Y: Death from narcotism in New York City. *NY State J Med* 66:2391-2408, 1966.
25. Baden MM: Narcotic abuse—a medical examiner's view. *NY State J Med* 72:834-840, 1972.
26. Richter RW, Pearson J, Brunn B: Neurological complications of addiction to heroin. *Bull NY Acad Med* 49:3-21, 1973.
27. Dreyer NP, Fields BN: Heroin-associated infective endocarditis. *Ann Intern Med* 78:699-702, 1973.
28. Levine SB, Grimes ET: Pulmonary edema and heroin overdose in Vietnam. *Arch Pathol* 95:330-332, 1973.
29. Geller SA, Stimmel B: Diagnostic confusion from lymphatic lesions in heroin addicts. *Ann Intern Med* 78:703-705, 1973.
30. Neviaser RJ, Butterfield WC, Wieche DR: The puffy hand of drug addiction. *J Bone Joint Surg* 54A:629-633, 1972.
31. Dunne JH, Johnson WC: Necrotizing skin lesions in heroin addicts. *Arch Dermatol* 105:544-546, 1972.
32. Cherubin C: Epidemiology of death in narcotic addicts. *Am J Epidemiol* 96:11-22, 1972.
33. Rosenblate HJ, Eisenstein R, Baddwin D, et al: Nonviral hepatitis in drug addicts. *Arch Pathol* 95:18-21, 1973.
34. Menda KB, Gorbach SL: Favorable experience with bacterial endocarditis in heroin addicts. *Ann Intern Med* 70:25-32, 1973.
35. Force EE, Fisher RS, Millar JW: Epidemiological and ecological study of risk factors for narcotics overdose. *Arch Environ Health* 26:111-119, 1973.
36. Hall JH: Acute progressive ventral positive disease in heroin abuse. *Neurology* 23:6-7, 1973.
37. Richter RW, Rosenberg RN: Transverse myelitis associated with heroin addiction. *JAMA* 206:1255-1257, 1968.
38. Kurtzman RS: Complications of narcotic addiction. *Radiology* 96:767-774, 1970.
39. Rosenblatt JE, Marsh VH: Induced malaria in narcotic addicts. *Lancet* 2:189-190, 1971.
40. Citron BP, Halpern M, McCarron M, et al: Necrotizing angitis in drug addicts. *N Engl J Med* 283:1003-1010, 1970.
41. Young AW, Rosenberg FR: Cutaneous stigmas of heroin addiction. *Arch Dermatol* 104:80-86, 1971.
42. Committee on Alcoholism and Drug Dependence: United States-Japan cooperative drug abuse study. *JAMA* 224:1632-1633, 1973.
43. Lowinger P: How the People's Republic of China solved the drug abuse problem. *Am J Chinese Med* 1:275-282, 1973.
44. Lowinger P: How the Chinese solved their drug problem. *Medical Opinion*, 1973, pp 81-92.
45. Kim KI: Epidemiology of addictive or habit-forming drug use in Korea. *Korean Medi Assoc J* 14:207-209, 1969.