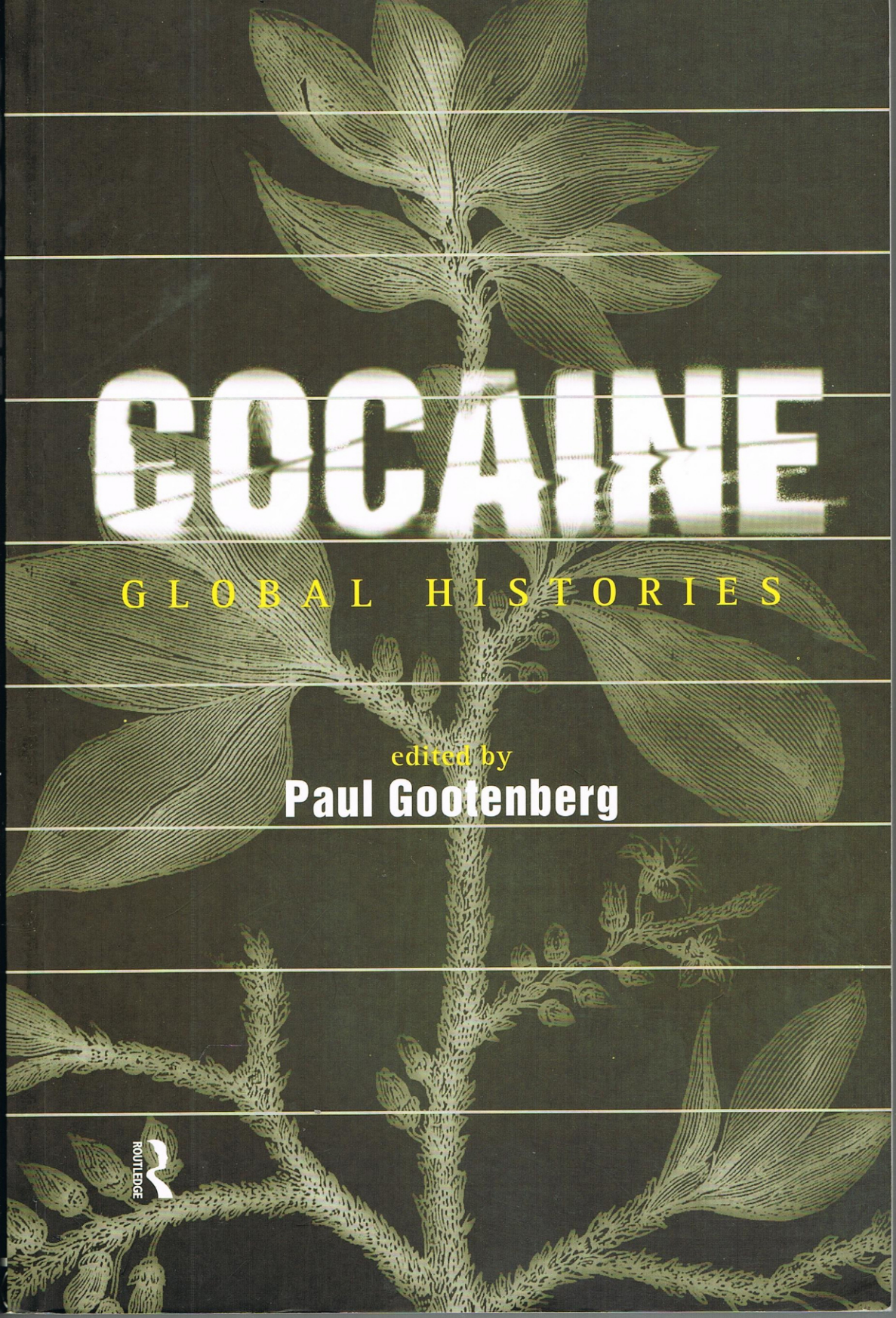
COCAINE
GLOBAL HISTORIES
edited by
Paul Gootenberg
ROUTLEDGE

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- export of cocaine prohibitions to Peru
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Paul Gootenberg is Professor of History at the State University of New York, Stony Brook, and author of *Between Silver and Guano* (Princeton, 1989) and *Imagining Development* (California, 1993).

HISTORY

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Foreword

Ethan Nadelmann

During the late 1980s – precisely one decade ago – cocaine became something of a national obsession in the United States. The war on drugs, rhetorically dormant since the Nixon Administration, found a new life in cocaine. TV "news" programs reported day after day on drug enforcement operations, "crack babies," and "cocaine-related" acts of violence. News magazines put it on their covers. President Bush gave a nationally televised speech to the nation on the cocaine threat. Public opinion polls pointed to drugs – notably cocaine – as the "number one" concern of American citizens. Outside of the United States, Colombia reminded some of Chicago during Prohibition, albeit on a much more substantial and deadly scale. Bolivia and Peru were implicated as well as producers and exporters of the raw and semi-refined coca materials used to produce cocaine. Elsewhere, in Europe, Asia, Africa, and beyond, cocaine was largely a non-issue, though some cocaine "scares" were to erupt there, too.

Drug crazes typically come and go, never lasting too long. They usually focus on a single drug, one that either is new or seems new. The rapid spread of crack – a smokeable form of cocaine – was new. Cocaine itself was not, but few Americans knew anything of its history. There were, in effect, few reality checks on depictions or perceptions of cocaine. Anything could be said, and almost anything was, about the drug's unique powers to destroy the bodies and souls of United States citizens and South American nations, or how the problem had emerged. Now the rage about cocaine has mostly passed in the United States, even as cocaine markets expand in other parts of the world.

Drug histories – particularly those of the scholarly caliber exemplified in this volume – rarely reflect well upon either contemporary drug warriors or their predecessors. Drug warriors, and the panics they stimulate, tend to focus on the drugs *per se* as a singular or at least dominant cause of multiple ills. They tend to portray all use of a particular drug as aberrant and destructive. They assume both the necessity of prohibitionist laws and the immorality of using particular drugs. And they rely heavily on simplistic caricatures of participants in drug markets. Drug histories, by contrast, tend to emphasize complexity and nuance: causal relationships become cloudier; political motivations more complicated; and drug-use patterns more diverse and interesting. Both drug use and drug

policies are analyzed in terms of the "sets and settings" (the social, cultural, and temporal contexts) in which they occur.

Paul Gootenberg's edited volume is valuable in so many ways. As the first substantial book on global cocaine history, it automatically makes a major contribution to the small but growing interdisciplinary arena of drug history, which has focused (at least as far as "illegal" drugs are concerned) largely on the opiates. The authors have all made valuable use of archives, both virgin and well worn, from around the world. They build responsibly on the extant literature, demonstrating a level of sophistication and insight that heralds a maturation of the field. And Gootenberg's talents are evident in the elegant complementarity of the diverse methodologies and perspectives displayed in the various chapters. It is a shame that no such book (aside from some journalistic attempts) was available a decade ago, when it might have provided at least a modest antidote to the ahistorical tone of political and journalistic commentary on cocaine, the cocaine trade, and the laws prohibiting cocaine. It is a healthy sign that now the drug policy reform movement, indirectly at least, has helped open doors to a new level of intellectual complexity on the origins of today's dilemmas with cocaine.

For example, Joseph Spillane's chapter on cocaine use in the United States between 1880 and 1920 is particularly useful in this regard. Spillane reminds us that cocaine was consumed in a great variety of oral concoctions, some containing modest amounts of fluid extracts of coca and others quite potent concentrations of pure cocaine. His analysis strongly suggests that the first cocaine prohibitions were most effective in suppressing the most benign forms of the drug. Today coca producers in Bolivia and Peru petition international organizations for permission to once again export products containing extracts of coca. Spillane's discussion makes one wonder if low-potency coca-based products might re-emerge as benign but profitable products in international trade.

The history of psychoactive drugs is almost inevitably a history of the regulation and prohibition of particular drugs. Gootenberg and his collaborators are highly sophisticated in their analysis, whether the focus is the political contexts and forces that resulted in cocaine's prohibition in different countries, or the impact of new regulations and prohibitions on drug markets and drug-use patterns. The editor in particular grasps that the emergence of global prohibition regimes is best understood by compiling and weaving together comparative and transnational studies anchored upon serious archival research. A new picture or story of cocaine develops. It is worth noting that no comparable volume has yet analyzed the evolution of opiate controls around the world (and indeed I know of no comparable analysis of the rise of alcohol prohibition in various parts of the world earlier in the twentieth century).

The history of cocaine in the twentieth century has not been pretty. Many millions of people have enjoyed the drug, and many with no regrets. But there is no forgetting the devastation associated with cocaine, particularly among those economically disadvantaged and socially dislocated folk who let cocaine get the better of them. Nor can we ignore the hundreds of thousands incarcerated in

jails and prisons, the tens of billions of dollars devoted to the war on cocaine, the devastating violence and corruption generated by the interplay of prohibitionist economics and morals, and the vast waste of human and economic resources devoted to "combating" cocaine. Taken together, the articles in this volume leave the reader with a set of questions worth asking before embarking on the drug crusades of the *next* century: Was all this necessary? Was the emergence of such a comprehensive global cocaine prohibition regime inevitable? Did it prevent a global epidemic of deadly cocaine abuse or did it result in more harm than good? Might coca and cocaine have been "domesticated" into contemporary societies with far fewer negative consequences than have resulted under the current regime? Is a more balanced cocaine regulatory regime possible in the next century? And can we learn anything from this century's experience that might help us avoid comparable disasters with different psychoactive substances in the future?

Ethan Nadelmann
The Lindesmith Center

7 Japan and the cocaine industry of Southeast Asia, 1864–1944

Steven B. Karch, MD

> I received instructions through military channels to provide opium for the Chinese people by establishing an opium suppression board.
>
> (Harada Kumakichi, Japanese Military Attaché at Shanghai from 1937–9)[1]

> [T]hey [German representatives at Geneva] don't understand action based on humanitarian motives and … would understand it still less when called on to enact legislation to restrict German traders [cocaine manufacturers] in the legitimate business of poisoning Hindoos and Chinese.
>
> (A British representative at the Hague Conference, 1912)[2]

Introduction

The Marqués de Cañete, the second Spanish viceroy in Peru in 1555, was the first Government official to enact a law requiring that alternate crops be substituted for coca. His attempts at limiting coca production in this fashion were utterly ineffective. His efforts were important, nonetheless, because they were the first example of what has now become the hallmark of government drug control programs everywhere: a preoccupation with production limitation. The difficulty with production limitation, at least in the case of coca, is that it can be grown anywhere. Coca has, in fact, been raised commercially in Nigeria, Sri Lanka, Malaysia, Indonesia, Taiwan, and Iwo Jima.[3] And because coca can be grown in many parts of the world, governments in many parts of the world have seized the opportunity to make money selling coca and refining cocaine. With so many potential players, and opportunities, schemes for production limitation have never worked particularly well.

The failure of production limitation was already apparent at the turn of this century. In 1910, Sir Edward Grey, the British Foreign Minister, wrote to the American Ambassador in London, warning that the "spread of morphia and the cocaine habit, is becoming an evil more serious and more deadly than opium smoking, and this evil is certain to increase." Sir Edward was correct. In 1910, total world production of refined cocaine amounted to less than ten tons. Drug Enforcement Agency analysts believe that as of 1995 South American production exceeded 740 tons.[4] Identifying which factors led to such explosive growth is

a difficult, and perhaps impossible, undo
part of the answer must have to do with
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rise and fall of the cocaine industry in
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How coca came to Southeast As

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a difficult, and perhaps impossible, undertaking. But whatever the explanation, part of the answer must have to do with the actual business practices involved in the making and selling of cocaine. The brief account that follows chronicles the rise and fall of the cocaine industry in Southeast Asia, with emphasis on the enabling technology and business practices.

How coca came to Southeast Asia

The Treaty of Tordesillas, signed on 7 June 1494, divided Africa and Latin America between Spain and Portugal. Spain got much of South America, along with the coca plant, and quinine. Spanish administrators were not exactly eager to share their discoveries with the rest of the Europe. After the treaty was signed, more than a hundred years passed before the rest of Europe learned much about New World plants, and even longer until significant numbers of Europeans got to see the plants first-hand. Cinchona was the first plant transported back to Europe. Malaria was rampant in both the New and Old World, and the medicinal benefits of "Jesuit bark" were immediately apparent.

At first, quinine was scarce, and very expensive. Administrators at the Royal Botanical Gardens at Kew, outside of London, changed that. They sent botanists Richard Spruce (1817–93) and Clement Markham (1830–1916) to South America where they succeeded in smuggling thousands of cinchona plants (the source of quinine) home to England. Once the seedlings recovered from their voyage, establishing new cinchona plantations in Ceylon and India was no great challenge. Dutch agriculturalists did exactly the same in Java. And they all made a great deal of money.[5] The same scenario was envisioned for coca. Coca seedlings arrived at Kew decades before anyone realized that cocaine could be used as a local anesthetic. Coca was of interest because the leaves were thought to relieve hunger and thirst, and to improve performance. Officials at Kew sensed an economic opportunity at hand.

Seeds of the coca plant are hardy, and were often sent via the regular mails, packed in a little moist soil. They were sent to the Botanical Gardens at Calcutta, to the Peradeniya Gardens in Ceylon, to the Agricultural Society of India, and to agricultural stations at Assam and Darjeeling. Seeds planted at the tea estates in Assam did very well, and coca remained a minor cash crop there for many years. Efforts at coca growing were very successful at the Botanical Gardens outside of Lagos, Nigeria, and also in Sierra Leone.[6] Attempts at coca cultivation in the Blue Mountains of Jamaica met with less success, and the fields were eventually planted with coffee.

The first coca seedlings were planted in Java in the 1850s. In 1854, a Dutch botanist named Hasskarl, who had helped the Indian government establish cinchona plantations, wrote a letter to the Dutch Colonial Office suggesting that coca cultivation might provide nearly as many opportunities as cinchona. Hasskarl described how coca chewing imparted energy and feelings of well-being, and he outlined in some detail his reasons for believing that coca plants were well adapted for growth in Java. However, his suggestions were rejected by

both the chief of the Public Health Service, and the Head of the Department of Agriculture.

Dutch colonial officials were convinced that once the Javanese found out how good coca could make them feel, they would not be "morally strong enough to refrain from excessive use."[7] They also argued that there was really no need to start growing another dangerous stimulant. After all, coffee already grew in Java. Why risk the "moral health" of the country just for colonial revenue? In spite of the early decision not to pursue commercial coca development, the agricultural chief did decide to start a trial garden, just to raise enough coca for "chemical and physiological" studies.

Coca seedlings were planted at Buitenzorg, the Dutch Botanical Gardens, located in the highlands just southeast of Jakarta. The experimental coca garden still existed in 1876, when Herman Linden, a Belgian seed exporter located in Ghent, sent a different set of coca seedlings to Buitenzorg. Just where Linden got his seedlings is not known, but wherever they came from, they thrived in Java. Government botanists were soon providing seeds to growers throughout Java. By 1883, the year before the cocaine market exploded, modest quantities of coca leaf, mostly for use in the production of coca-based wines, were being exported from Madera and Sumatra for auction in Amsterdam.[8]

Government surveys taken in 1885 revealed that many tea growers planned on switching over to coca growing entirely. They were advised not to by a colonial office agriculturist, Professor van Gorkum. He wrote a newspaper article suggesting that the tea growers should only plant coca between rows of the tea bushes. He warned that if the growers planted too much coca, prices would go down, and coca cultivation would not be worth the effort. Leaf from Java finally began to appear in London's Mincing Lane auctions in 1889, but did not sell very well.[9]

Coca cultivars and coca chemistry

Not only did Linden's seedlings grow well, but their leaves contained a great deal of cocaine – far more than the leaves being grown commercially in South America. All cultivated coca comes from two closely related New World species: *Erythroxylum coca Lamarck*, and *Erythroxylum novogranatense* from Colombia, the former Spanish colony of New Granada. Each of the two species has two distinct varieties. The seeds that botanists at Kew Gardens sent around the world were, almost certainly *E. Coca novogranatense var. truxillense*. Unfortunately for the Kew administrators, that was not the variety most commonly grown in the Amazon basin, where *Erythroxylum coca Lamarck* was the preferred cultivar. The first seeds of *E. coca novogranatense* did not arrive at Kew until 1870. They had been collected from the vicinity of Huánuco (eastern Peru). Unfortunately, the seeds chosen for distribution by the Kew Gardens botanists produced leaves that contained only modest amounts of extractable cocaine.[10]

Coca leaves contain a number of other chemicals besides cocaine, and it took some time for the chemists of the nineteenth century to identify all of the

different compounds. Growers took a more simplistic approach. They distinguished between "crystallized" and "uncrystallized" alkaloids. "Crystallizable" alkaloid is another word for cocaine. "Uncrystallized" alkaloid is another way of referring to all the other molecules, many closely related to cocaine, that are contained in coca leaves (mostly cinnamyl-cocaine). Leaves grown in Java contained much more "uncrystallized" alkaloid than leaves from South America. The total alkaloid content of *Erythroxylum coca Lamarck*, at least at the turn of the century, was usually in the range of 0.5 percent, nearly all of it crystallizable. The alkaloid content of *Novogranatense* varieties was between 1–2 percent, but only one-third was crystallizable. At first, most manufacturers felt that Southeast Asian coca leaf was not good for anything, except perhaps to make wine and beverages.[11]

The situation changed at the turn of the century. German chemists discovered how to convert uncrystallizable alkaloid to crystallizable cocaine. In 1898, a German chemical manufacturer patented a process that allowed drug manufacturers to convert all of the alkaloid in coca leaf into usable cocaine. The cinnamyl-cocaine in the leaves was first converted to ecgonine, and the ecgonine was then mixed with benzoic acid and methanol. All of the alkaloids were thereby converted into cocaine, giving a yield much higher than could be obtained from leaves grown in South America.[12] The only problem for the Dutch was that bulk coca leaf had to be shipped to Germany for processing. It remained therefore a perishable commodity, and the Dutch growers remained at the mercy of German importers.

The Netherlands and Germany did not sign a patent treaty until the 1920s, so there was nothing to prevent the Dutch Colonial Development Board, and coca growers in Java, from building their own coca refinery utilizing the patented German process. The Nederlandsche Cocainefabriek (NCF) opened in March of 1900 in Amsterdam. Even though Java leaf still had to be shipped halfway across the world, the presence of a second factory in Amsterdam broke Germany's stranglehold on the Indonesian market. The Dutch refinery was so successful, that a second floor was added to the factory in 1902. By 1910, the NCF claimed to be the largest cocaine manufacturer in the world, producing more than 1,500 kilograms per year of refined cocaine.[13] The NCF moved to new, even larger, premises that same year.

When the German patent expired in 1903, other German chemical makers began using the same process. In order to ensure adequate supplies, and to control costs, German manufacturers, such as E. Merck (Darmstadt), purchased their own plantations in Java. At the same time, privately owned Dutch factories opened and went into competition with the NCF. Another factory was established in nearby Bossum by a disgruntled NCF employee and another plant, called Brocades and Steehman, opened in Meppel. Coca exports from Java began increasing at a steady pace. Leaf exports rose from 45 tons in 1904, to 83 tons in 1906, and to 1,300 tons in 1913. Exports peaked at 1,650 tons in 1920.[14] Java leaf that was not shipped to Amsterdam was purchased by representatives of Japanese drug houses for their own cocaine refineries in

Tokyo. The Japanese had also mastered the German technique for refining Java coca. Dutch coca growers, unwisely, came to rely increasingly on exports to Japan.

Demise of the Dutch and rise of Japanese plantations

A number of factors combined to drive the Dutch out of the cocaine business. To begin with, the Netherlands ratified the 1925 Geneva Convention. Signatories to the Convention had to initiate import and export controls for coca and opium, and limit production of refined drugs to what could be justified by legitimate medical needs. Once the Dutch Government had signed the treaty, growers in Java and the management of the NCF in Amsterdam could no longer continue to produce cocaine on a massive scale and expect to find legitimate buyers for their product – a transformation explored by de Kort in Chapter 6.

Even without the treaty, the medical use of cocaine had already declined to negligible levels. Alternatives to cocaine anesthesia were developed during the early twentieth century, and there was simply no way to hide, or justify, the large amounts of cocaine being produced. The magnitude of the surplus production can be gauged from the fact that during the months leading up to the implementation of import certificate regulations, more than 220 tons of stored coca leaf were shipped from warehouses in the Netherlands.[15]

The other circumstance working against the Dutch was Japanese trade policy. Even as they continued to import coca leaf from Indonesia and South America, Tokyo drug companies also planted their own coca plantations in Taiwan, Iwo Jima, and Okinawa. By 1929, the plantations in Japan and its colonies were producing enough leaf to supply Japanese drug manufacturers. In 1929, the Japanese central Government simply stopped granting import permits for Java coca, unless, naturally, the leaves came from plantations owned by Japanese companies operating in Java. The Dutch Association of Coca Producers was understandably upset by this move. It filed a series of complaints with the Colonial Ministry's office in Amsterdam.[16] Japan ignored the complaints. By 1935, Java's exports of leaf fell to under 100 tons. Professor van Gorkum had been correct: coca proved an unreliable cash crop.

Taiwanese coca

When Japan took control of Taiwan (then Formosa) in 1895, agriculture and forestry were the basic industries on the island. The Japanese occupation did little to change those industries. But, by 1930, the effects of the depression in the United States were being felt as far away as Japan and its possessions. If anything, farmers in Japan suffered more than their counterparts in the United States. During the early 1930s, the average Japanese city dweller experienced a 35 percent decline in earnings. In the countryside, the earnings decline was closer to 60 percent. Peasant farmers were reduced to eating bark and selling

their daughters to brothels. Starvation was a reality for many. A textile export boom fueled by devaluation of the yen from US $.50 to $.21 in November 1931, did little to improve overall conditions.[17] Overseas sales of sugar were particularly hard hit and slow to recover. Japan's entrance into the cocaine trade coincided with a steep decline in its sugar exports.

With sugar almost impossible to sell, some Formosan growers decided to explore other possibilities. The Home Office ordinances that governed Taiwan, initially contained no specific provisions relating to coca production or cocaine refining. In theory, going into business was easy. To start making refined cocaine, a drug company only had to get a business license (like any other business on the island), and submit quarterly statements of the raw material processed. No limitations were placed on the quantities produced or sold, no records or reports of sales were required and no inspections or audits were conducted.[18]

Coca production in Taiwan began in 1916. The first coca plantation on the island was developed by the *Ensuiko* Sugar Company of Formosa. Ensuiko held the monopoly to grow sugar cane and manufacture sugar in the Kagi area, which included the village of Sinei, where Ensuiko's sugar refinery was located.[19] During the early twentieth century Ensuiko was the fourth largest sugar producer on the island, processing nearly 10 tons of sugar each month. It also owned large sugar cane plantations in Java and regularly shipped large quantities of sugar cane back to Taiwan for refining.

In 1916, while the medical community still used cocaine, and legitimate profits were to be made in refining and selling pharmaceutical-grade cocaine, Taiwan's Governor General encouraged a plantation owner named Abe Konosuke to try planting coca. A cocaine refinery was built and coca seedlings were planted in different areas around the property. According to the British Consul in Taiwan, the cocaine refinery was a crude affair built a few yards away from the site of the original sugar refinery. Konosuke's efforts were not successful. Coca was not native to Taiwan and had never been grown there before; the planters knew a great deal more about growing sugar than coca.[20] Konosuke lost his business in 1922, and was forced to sell out to the Ensuiko Sugar Company.

When the demand for sugar exports declined, Ensuiko shares dropped precipitously. Ensuiko's Chief Director, Tetsu Maki, needed a white knight. A member of Ensuiko's Board of Directors, Norakata Takahashi, thought his father might be interested. Takahashi's father was not just any venture capitalist; in fact, he was Japan's Minister of Finance. Takahashi's father invested 100,000 yen. A friend of Takahashi's, Matasakau Shiobara, invested an additional 150,000 yen. After World War II, United States intelligence agents interviewed several sources who claimed Minister Takahashi was acting as a frontman for Mitsui's trading division, *Mitsui Gomei Kaisha* (MGK), the same company that was supplying opium to the government monopoly.[21]

Regardless of the source of the money, the new investors changed the name of the company from Ensuiko to *Taiwan Shoyaku*. They brought in new technical

experts, streamlined operations, planted coca, and quickly reversed Ensuiko's downward slide. Takahashi, as the country's Finance Minister, was certainly in a position to steer military and government purchases towards his son's company, although no evidence for that practice was ever produced. By the fall of 1936, shares of Taiwan Shoyaku were trading at pre-depression levels. How much Taiwan Shoyaku's performance was bolstered by the Takahashi connection is difficult to say, but Shiobara's influence probably contributed to the success of the restructured company as much as Takahashi's did.

The legal system and Japan's drug industry

Opium smoking was unheard of under the old Tokugawa feudal system, and after diplomatic relations were established with the West, Japanese leaders took great pains to ensure that opium smoking never gained a foothold. In 1858, ten years before the Meiji Restoration and the end of feudal law, Japan signed treaties with the United States ("Treaty of Amity and Commerce") and England ("Regulations under which British Trade is to be Conducted in Japan"), which both specifically prohibited opium importation and imposed strict punishment on offenders.

After the Restoration, controls on drug use were tightened even further. In April 1868, Japan passed a new law that carried heavy penalties for opium users and sellers. Other laws controlling the medical use of opium were also passed in 1870 and even stricter sanctions were added to the criminal code in 1882. There simply were no Japanese opium smokers, at least none living in Japan. Not only was opium smoking unknown, the use of heroin and other narcotics was unthinkable. This, perhaps, explains a very peculiar anomaly in Japanese law: the criminal code only dealt with opium smoking.[22]

The same laws applied in Taiwan, then a Japanese colony, but the laws applied only to opium. Heroin and cocaine production were not specifically mentioned. Production and sales of other narcotics came under the Home Office ordinances, not the penal code. For all intents and purposes, regulations applicable to the production and sales of morphine, cocaine, and heroin were no different than the regulations that applied to the production of sugar or tobacco. As a consequence of this strange dichotomy, penalties for the violation of laws relating to narcotics other than opium were much more lenient than penalties for violations of the opium laws.[23] Conviction for opium-related offenses brought sentences of ten years' hard labor, but cocaine and heroin dealers could be sentenced to no more than three months. In most cases, Japanese offenders were simply fined, and the fines were not very large. In essence, the market was entirely unregulated.

The role of Hoshi Pharmaceuticals and Sankyo Pharmaceutical

Whatever the original intentions of the Diet, the existence of such large legal loopholes proved irresistible to the drug firms. Sankyo Pharmaceutical and Hoshi Pharmaceuticals were the biggest players, but there were many others. The Sankyo Pharmaceutical Company Ltd of Tokyo was one of only five companies in Japan licensed to process coca and produce cocaine from coca leaf. Sankyo Pharmaceutical also happened to be the largest pharmaceutical company in Japan. Its wholesale branch office in Taiwan had gross sales of more than a million yen per year.[24] As cocaine was added to the product lines of these companies, it was only natural that they would apply the lessons already learned marketing opiates.

Minister Takahashi's friend, Matasakau Shiobara, started Sankyo Pharmaceutical in 1899 to import and sell a digestive aid invented by an expatriate pharmacist, Jokichi Takamine (1854–1922). Takamine owned a private research laboratory in New York City, and had done contract work for Parke, Davis, which, along with Merck of Darmstadt, was one of the world's major producers of pharmaceutical cocaine. Takamine was, at first, unsuccessful in his attempts to sell his enzyme, but he did make a favorable impression on George Davis, who hired him as a consultant. Takamine remained in the United States for a number of years, working for Parke, Davis, which finally successfully marketed "Taka-Diastase" as a digestive aid.[25] Parke, Davis eventually was able to exploit another Takamine discovery: adrenaline. In 1894, researchers in London had discovered that, when given to animals, extracts of the adrenal gland raised blood pressure and heart rate. In 1901, Takamine and a second scientist named Thomas Aldrich, working independently, both managed to purify and isolate the compound: Takamine called it adrenaline.

Four years later, a German chemist, Friedrich Stolz (1860–1936), managed to synthesize adrenaline without using any animal extracts, and adrenaline became the first hormone to be isolated and synthesized artificially. Parke, Davis decided to manufacture adrenaline, and Takamine was placed in charge of setting up production. This is ironic because cocaine toxicity is partly the result of excessively high adrenaline and noradrenaline levels! In his position as a supervising industrial chemist at Parke, Davis, Takamine would certainly have been well acquainted with the latest techniques used by the company for making cocaine. And that knowledge almost certainly was of some use to Takamine when he returned to Japan, at the invitation of Matasaju Shiohara, the chairman of the board of Sankyo Pharmaceutical.

Sankyo Pharmaceutical had strong connections with the American chemical industry and held cross-licensing agreements with both Johnson & Johnson, and Parke, Davis. After World War I, Shiohara invited Takamine back to Japan and made him president of Sankyo Pharmaceutical, with Shiohara remaining as managing director. Partly because of the valuable training Takamine had received from North America's largest cocaine producer, Sankyo Pharmaceutical

was able to produce more cocaine than either Emmanuel Merck or George Parke would ever have imagined possible.

In 1928, Sankyo Pharmaceutical signed a contract to purchase cocaine from Taiwan Shoyaku, the company partly owned by Shiohara and Takahashai (or Mitsui, if Allied allegations are true). Of course, Taiwan Shoyaku had other legitimate customers besides Sankyo Pharmaceutical. Its sales amounted to nearly 500 kilograms per month. Most of the semi-refined cocaine went to drug companies in Japan, including Koto Pharmaceutical, Takeda Pharmaceutical Industries, Sankyo Pharmaceutical, the Shinonogi Pharmaceutical Company Limited of Osaka and Hoshi Pharmaceuticals in Tokyo.[26]

The other important Taiwanese coca grower was Hoshi Pharmaceuticals. Hoshi Pharmaceuticals was founded by Hoshi Hajime who, like Takamine, had studied and worked in the United States. Hoshi even earned a Master's degree in Journalism from Columbia University in 1901. But instead of becoming a journalist, Hoshi returned to Japan and started a profitable business selling patent medicines.[27] In 1910, building on that base, he expanded into morphine production. The transition was facilitated by Japanese law; producing morphine for medical purposes was legal in Japan, but the government controlled opium imports. The government did not, however, regulate semi-refined morphine, a by-product produced when raw opium was converted to smoking opium. Hoshi went to Taiwan, cut a deal with the government-owned opium monopoly, and started buying their stocks of surplus semi-refined morphine. It was shipped back to his factory in Tokyo where it was, quite legally, converted to morphine and heroin.

Following a trend first begun by legitimate European manufacturers, Hoshi used his success in the morphine business to launch an equally successful expansion into the cocaine trade. Hoshi added cocaine to his product line in 1918. With the approval of both the Japanese Home Ministry and officials in Peru, Hoshi purchased a large coca tract in the Huallaga Valley – a trans-Pacific connection documented by Gootenberg in Chapter 3. At the same time, Hoshi began growing coca leaf in the Kagi district of Taiwan. Initially, the plantation covered 242 acres; by 1944, Hoshi had 392 acres (some documents put the number at 292) under cultivation in Taiwan. Whatever the actual number was, it was more than sufficient to supply Hoshi Pharmaceuticals with raw materials.[28] In the mid-1930s, Hoshi Pharmaceuticals was forced to sell off its lands in Peru, relying entirely on its Taiwan plant for raw materials. Hoshi Pharmaceuticals, at least, did its part for the environment, even if its motives were only for profit. During the 1930s, Hoshi Pharmaceuticals sold the residue of its leaves, which contained large amounts of nitrogen, to farmers for fertilizer. That practice was discontinued after ten years because the project was not very profitable. The extracted leaf was then used as fuel.

Creative cocaine accounting

Cocaine producers in Taiwan had three important advantages over their South American and European competitors: shipping costs were much lower, import permits could be had from the Foreign Office just for the asking, and, most importantly, Formosan coca contained more cocaine alkaloid than leaf grown in South America. Most of the cocaine and other narcotics produced by Japanese drug firms found their way on to the world's black markets and drug makers did little to hide this fact. Once the refined cocaine was produced in Tokyo, Japanese law made disposing of the cocaine an easy matter. Smugglers did not even bother to repackage the standard 700-gram packages of cocaine they purchased from the wholesalers. As a result, the brand names of the Japanese manufacturers, such as Hoshi Pharmaceuticals, Dai Nippon, and Sankyo Pharmaceutical, were as well known in Calcutta as they were in Tokyo, even though medicinal cocaine exports to India were nil. Black marketeers also bought the 1- and 5-gram packets of cocaine that were intended for sale to doctors' offices, repackaged the smaller containers into larger ones and then affixed their own brand name, for example, "Fujitsuru."[29] Even though there really was no company named Fujitsuru, customs inspectors around the world were all too familiar with the Fujitsuru-brand cocaine.

International treaties required Japan to file yearly reports on cocaine and narcotic production with the League of Nations. Officials at the League of Nations were apparently unaware of the differences between Southeast Asian and South American coca, and Japan was able to get away with understating its production figures with impunity. Between Taiwan Shoyaku and Hoshi Pharmaceuticals there were 684 acres under cultivation in Taiwan.[30] The average yield for South American coca is generally approximated as 0.6 ton per acre per harvest, with only three harvests per year. An area of 684 acres devoted to coca production in the Andes would be expected to yield 1,230 tons of leaves per year (684 acres × 0.6 tons per acre × 3 crops per year = 1,230 tons), which would give a total yield of refined cocaine of approximately 3 tons.

Yet official Japanese statistics for 1927 show total Taiwanese coca leaf production at 204,640 kilograms (i.e. 230 tons). This production number is hardly believable given that coca grown in Taiwan was presumably the same strain as that grown in Java, and Javanese coca was harvested four times a year. Leaf production in Taiwan should have been about 25 percent greater than for an equivalent area in the Andes; instead it was reported as 50 percent lower. And the coca leaf produced in Taiwan yielded twice as much cocaine as leaf grown in the Andes.

A general, and very rough, rule of thumb is that 400 pounds of South American leaf will yield a single kilogram of cocaine. For Southeast Asian cocaine, the number would be closer to 200 pounds of leaves to yield one kilogram of cocaine. Thus 230 tons of coca leaf grown in Taiwan should have yielded at least 2.3 tons of cocaine, even if there were only three harvests per year. A realistic estimate for Taiwanese coca production, based on production experience from Java, would be 1,500 tons of leaf per year from 684 acres, which (as Asian leaf)

should have yielded nearly 7 tons of purified cocaine. Whatever the real figures were, they amounted to a great deal more than could ever be accounted for by legitimate medical use. The Health Committee of the League of Nations estimated that in countries possessing sophisticated medical care systems, the average annual cocaine requirement was 7 milligrams per person.[31]

Evidence subsequently developed by General MacArthur's intelligence staff subsequently revealed that Japanese bureaucrats routinely "cooked the books," adjusting production figures for opium and heroin production so that they agreed with the permissible values set by the League of Nations.[32] In the case of cocaine, a somewhat different approach was used. The Japanese imported coca leaf and crude cocaine not just from Taiwan, but also from coca plantations on Iwo Jima, Okinawa, and Java. During the 1920s, imports from Java averaged more than a million pounds a year.

The Ministry of Finance in Tokyo managed to hide all of these imports by lumping coca leaves together with other raw materials used to manufacture drugs. So when Japan's representative to the League of Nations' Opium Advisory Committee (OAC) stated that "The new policy of the Japanese Government would consist in reducing the output of cocaine," and that this reduction had been accomplished by "limiting the import of raw material," his claims were greeted with some skepticism. When asked by the Foreign Office for his opinion on the Japanese statements, G.P. Patton, the British Consul in Taiwan, wrote "How the import of raw material is to be limited without keeping an exact record of these imports transcends one's comprehension, though possibly to the statisticians in Japan it may not be so difficult."[33]

The role of the military

Over and above wholesale exchanges with black marketeers, large quantities of cocaine and heroin, far beyond any conceivable medical needs were sold to the Japanese armed forces. Onishi Takamatsu, an auditor with Sankyo Pharmaceutical until 1923, reported that when he was appointed Director of Taiwan Shoyaku's Tokyo branch, he had arranged sales of semi-refined cocaine to the Japanese army and navy. Sankyo Pharmaceutical, he said, acted as an intermediary. In 1938, Sankyo Pharmaceutical purchased 739 kilograms from Taiwan Shoyaku for direct sale to the army. From 1940–2, smaller quantities were brokered through other companies for delivery to the navy.[34]

At one point, the colonial Government of Taiwan took over partial control of Taiwan Shoyaku's factory and went so far as to supply special labels for the cocaine packages. During the early 1930s, packets of cocaine marked with the label "Taiwan Governor General, Central Laboratory" were regularly seized by customs agents in China and India. The Indian Government loudly complained to opium officials at the League of Nations, specifically mentioning the "Taiwan Governor General" brand by name. And for several years "Taiwan General" cocaine appeared to have completely replaced Tokyo-produced "Fujitsuru" as the most popular illegal brand of cocaine in India.

As the years went on, and the start of World War II approached, Japan's presentations to the League of Nations became ever more fanciful. Member countries were required to file yearly reports, detailing each country's production and sales of narcotic drugs. In 1930, Japan reported that it manufactured 320 kilograms of cocaine in the preceding year, claiming that only 28 kilograms had been produced in Taiwan.[35] Documents discovered after World War II show that Taiwan's cocaine refineries were producing more than that amount each day.

Of course, the other members of the OAC had a fairly good idea of what was going on and criticism of Japan became even more intense. Japan had quit the league in 1933, in response to condemnation over the occupation of Manchuria. However, even after Yosuke Matsuoka led Japan out of the League of Nations in 1933, Japanese representatives continued to attend OAC meetings for another six years. But finding legitimate buyers for excess Formosan cocaine was a problem. By 1920 the medical profession had pretty much abandoned the use of cocaine except for head and neck surgery, and the "legitimate" market for cocaine had almost disappeared.

Pharmaceutical companies in Europe and the United States were not interested in purchasing cocaine from Japan. Even if they had been, it would not have solved Japan's problem. Licit purchasers who could get export certificates would not pay anywhere close to the amount of money that smugglers were willing to pay. In 1938, the legal wholesale (factory) price of cocaine was only about 1,200 yen a kilogram (about $600 at then two yen to the dollar). Bulk shipments fetched almost twice that much on the Chinese black market.

Mitsui's trading division tried to help sell the surplus cocaine. They referred a representative of Taiwan Shoyaku to a Mitsui agent in Shanghai. Mitsui had a major presence in Shanghai and was already doing a profitable business supplying opium to the new opium monopoly. In July of 1939, Taiwan Shoyaku sent Chen Ching Po to Shanghai with instructions to set up a branch office there. Chen Ching Po made tentative marketing arrangements with the manager of the Sino-Japanese Chung Wah Motion Picture Company, and promised to send samples of cocaine as soon as he arrived back in Taiwan. While recruiting the movie producer, Ching Po boasted that he had the backing of the Japanese authorities, and that he could arrange shipment of the cocaine to Shanghai via Japanese warships.[36]

The claim was almost certainly true. Evidence presented at the Tokyo War Crimes Trials revealed that not only did State-owned shipping companies carry opium and other drugs for the government, but at times the Japanese navy also participated.[37] At one point, two destroyers of the Imperial Navy were dispatched to Ceylon to escort a tramp steamer laden with 80 tons of Iranian opium. The captain of the steamer was concerned about German submarines and refused to proceed any further without an escort. Naval concerns about the safety of the ship's cargo were understandable; at wholesale prices alone, the shipment was worth more than thirty million dollars. Transporting smaller quantities of cocaine certainly would have posed no great difficulties. Whether

Ching Po was successful is not known, but somehow a willing buyer was found. When Allied forces arrived in Taiwan, there was no cocaine left in the warehouse.

Conclusions

It would be wrong to suppose that cocaine was a vital product line for any of the major Japanese drug firms or, for that matter, to suppliers of raw materials such as Mitsui and Mitsubishi. Here, the cocaine trade was just not that important. And once World War II began there was simply not enough coca leaf available to meet black-market demands. Japanese interests then turned to heroin and the opium from which heroin is made. Opium was easier to procure, demand was high, and producing heroin was simpler than refining the kind of coca grown in Asia. It was all the same to the Japanese drug firms. Specialized drug sales, with one group selling cocaine and another heroin, were a phenomenon that only emerged after World War II. Before then, Japanese and some European manufacturers made whatever drug they could place on the market. Recent events in South America suggest a similar pattern: South American "cartels" now supply heroin *and* cocaine, not to mention methamphetamine and marijuana.

Four hundred years have elapsed since Europeans first heard about an exotic American plant called coca. During that time, a great deal has been learned about cocaine making and about cocaine producers, not to mention international cartels. It is hard to escape the conclusion that the attempts at solving the cocaine problem by controlling cocaine production, either of raw materials or finished product, have not worked very well. One reason they have not worked is that they rely on international co-operation between governments. Governments in need of revenue have been, and probably always will be, willing to allow sales of drugs to foreigners. Given that reality, there is no reason to expect "supply-side" drug-control strategies to be any more effective today than in the past.

Efforts at international narcotics control rely on the co-operation and good-will of participating nations. It is presumed that all member nations will recognize drug abuse as a dire threat and that all states will act for the common good – presumptions similar to those of international agreements to stem use of biological and nuclear weapons. Neither the Japanese Government nor Japanese drug firms shared any of these perceptions. Drug abuse was unheard of in Japan and the country's leaders did not view it as a menace to the Japanese people. So Japan entered the drug business; Japanese authorities at every level participated, producing quantities of drugs that had no conceivable medical use. As long as the drugs were not used at home or in Europe, manufacturers remained untroubled and the drug business continued on.

Primary sources: Japan and Southeast Asia

Botanists at London's Kew Gardens oversaw the distribution of coca plants around the world and documented the results in papers published in their *Bulletin of Miscellaneous Information*. The Botanical Gardens in Java had its own journal, *Tesymannia*, which details many early experiments growing coca in Java. Data on coca cultivation in Java can be obtained from various sources, including minutes of the League of Nations Opium Advisory Committee ("OC" documents, available in major depository libraries) and in a particularly useful Ph.D. thesis – Emma Reens, 'La Coca de Java' (1919) – of which only two copies are available in the United States: one in the National Library of Medicine, the other at Yale. Another vital site is the Netherlands National Archives in the Hague, and surprisingly many records dealing with the NCF and the Coca-Growers Cartel are in English. Japan's cocaine and drug trafficking is described, though not in detail, in trial transcripts from the Tokyo War Crimes Trials. The best source, however, is the recently declassified material from Harry J. Anslinger's old Bureau of Narcotics (FBN). Anslinger supplied drug intelligence officers to General Douglas MacArthur's occupation forces and archived copies of their reports. FBN records from the 1930s were taken over by the Drug Enforcement Agency and were still classified until I filed "Freedom of Information" requests in 1993. The most relevant documents are contained in RG 170, Records of the DEA, acc 71-A-3554, boxes 10–30. Many consider any information from Anslinger or his cohorts suspect, but much of the material they turned up for MacArthur has been substantiated by sources in Japanese archives. The recent book by John Jennings (*The Opium Empire: Japanese Imperialism and Drug Trafficking in Asia, 1895–1945*, Praeger, 1997) is based entirely on Japanese archival research and reaches substantially the same conclusion outlined here. Finally, interesting information is also to be found in the "SCAP" records (Supreme Commander Allied Pacific); the Public Health section deals with drug-related problems, though some files still remain classified. These records, along with DEA papers, are now found in the new United States National Archives in College Park, MD.

Notes

1 British Foreign Office (London, FO). Letter from Max Muller, FO 371/1076/461, 1912.

2 "Introduction" by B. Röling, in Bertram Röling and Charles F. Rüter, eds, *The Tokyo Judgement: The International Military Tribunal for the Far East (IMTFE), 29 April 1946–12 November 1948* (Amsterdam: APA University Press, 1977).

3 This chapter is based on my recent book, *A Brief History of Cocaine* (Boca Raton: CRC Press, 1998); Paul Gootenberg generously helped with organization of these notes. Joseph Gagliano, *Coca Prohibition in Peru: The Historical Debates* (Tucson: University of Arizona Press, 1994), ch. 2. For the issue of dispersion, see: Anon., "Erythroxylon coca," *Bulletin of Miscellaneous Information* (Royal Botanical Gardens, Kew), (hence: *BMI*) (1892), 72–3; "Cultivation of medicinal plants in India," *Chemist and Druggist* (London) (17 April 1886), 324; "Ceylon coca leaves," *BMI* (1890), 152–3; and James Holland, "The useful plants of Nigeria," *BMI*, additional series, IX, (1909), 116–21.

4 Quote: Sir Edward Grey to Whitelaw Reid, United States Department of State [British FO 33412], 1910. Louis Atzenwiler, "Prewar production and distribution of narcotic drugs and their raw materials." League of Nations, Permanent Central Opium Board (hence: PCOB), 1944; United States Office of National Drug Control Policy, *The National Drug Control Strategy*, Table 5-24, "Worldwide potential net

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HISTORY

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