DID PROHIBITION WORK? REFLECTIONS ON THE END OF THE FIRST COCAINE EXPERIENCE IN THE UNITED STATES, 1910-1945

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Abstract

The use of cocaine began in the United States during the mid-1880s, reached a peak between 1900 and 1915, and then went into a sustained period of decline. By the end of the 1920s, most observers regarded cocaine as a purely historical phenomenon. Cocaine remained at the margins of the American drug scene for over four decades, yet historical accounts have not attempted to explain why the once-popular drug disappeared. The overlap between the declining-use trend and the shift from a legal, regulated market to an illicit market has supported the assumption that the start of legal prohibition successfully ended cocaine use. This study examines several theories of cocaine's decline, and concludes that legal prohibition was only partly responsible. Stricter laws regarding distribution eliminated the legal market, and made the cocaine that remained through illicit channels more expensive and harder to find. Nevertheless, this study suggests some qualifications to the conclusion that prohibition was a success. First, legal prohibition did not change the nature of the cocaine business as dramatically as is often assumed. Rather, prohibition merely accelerated trends that had begun much earlier as a result of regulation and informal controls. Second, the "success" of legal prohibition was depended upon a number of unique historical circumstances, including the interest and ability of cocaine manufacturers to exploit new legal markets outside the United States, and the ready supply of cheap heroin for domestic drug markets. The conclusion of the first cocaine era was neither an inevitable end to a "cycle" of drug use, nor the outcome of a well-planned set of drug policies, but the product of a combination of national and international trends.
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Did Prohibition Work?: Reflections on the End of the First
Cocaine Experience in the United States, 1910-1945

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Future historians will undoubtedly observe that the central concern of late twentieth century drug policy has been the astonishing growth of cocaine use during the 1980s, and the confounding problems of public health and safety raised by its continuing use through the 1990s. The contemporary cocaine experience is but the latest example of the remarkably fluid drug-using culture of the United States. At its most basic level, the historical study of trends in drug-using is often an account of the movement of various drugs on and off the national stage.

Cocaine illustrates the changeability of drug-using patterns as well as any drug, with distinct periods of popularity and decline that lend credibility to a "rise and fall" approach to cocaine's history. The nation's first cocaine experience lasted roughly four decades before the drug largely vanished by the 1930s, only to return during the 1960s and 1970s. To many contemporary observers, of course, the "rise and fall and rise" view of cocaine's history suggests that another "fall" should be part of the long term pattern of consumption.

The purpose of this essay is to take a closer look at the end of the first cocaine experience--in effect, to explore the "fall" of cocaine. Cocaine did largely disappear, though not as quickly as has sometimes been intimated. The "peak" of consumption was itself more of a decade-long plateau, followed by at least another decade of gradually declining usage. Commentators increasingly spoke of the cocaine problem in the past tense by the 1920s, as cocaine moved far toward the margins of American society. Cocaine's vanishing act lasted until the late 1960s, when renewed interest in the "forgotten" drug launched a new era of widespread use.
It is by no means certain, however, that historical patterns of drug use are inevitably repeated. Indeed, to analogize historical and contemporary cocaine problems without considering the dissimilarities between periods risks drawing seriously misleading "lessons" of history. Having demonstrated the reality of cocaine's disappearance, this essay examines some of the causes most commonly identified as responsible. The critical question--did prohibition work, or were other factors unrelated to drug policy responsible for cocaine's fall?

Documenting Cocaine's Decline

Although historical accounts of the first cocaine experience vary on most points of fact and interpretation, there is total consensus that cocaine, once relatively popular, disappeared from the drug scene for several decades before reemerging in the late 1960s or 1970s. Lester Grinspoon and James Bakalar's important study of cocaine offers a typical summary: "Between 1930 and the late 1960s the use of cocaine and medical and general interest in the drug seem to have declined greatly."(1) David Musto likewise wrote of cocaine's "demise" and the process by which it became a "minor problem."(2)

Two important sources of knowledge supported the thesis that cocaine had "vanished", the most important being personal experience. The revitalization of consumer interest in cocaine during the 1960s and 1970s not only sparked the first generation of historical studies, but highlighted the drug's absence from the national consciousness in the post-World War Two era. The task of "relearning" what earlier generations had discovered about cocaine further demonstrated the distance between cocaine experiences in the United States.(3)

In addition to personal experience, there was the testimony of those who had studied drug abuse from both medical and law enforcement perspectives between the 1920s and 1960s. Medical authorities on drug abuse, addiction, and treatment, expressed the near-unanimous view that cocaine was not a serious problem in the United States. Lawrence Kolb and A.G. DuMez, writing in 1924, reported that [b]efore the enactment of the Harrison law there was apparently quite a number of pure cocaine addicts, but at the present time this type is almost invariably addicted to some form of opium as well, hence it is almost unnecessary to take these addicts into
consideration from a numerical standpoint."(4) Alfred Lindesmith, writing in 1938, observed that "individuals who use only cocaine are rare."(5) After World War Two, cocaine barely merited even a footnote in many major works on drug abuse.(6)

The law enforcement view echoed the medical consensus that cocaine was scarcely visible during these decades, although such sources were more likely to identify the cocaine problem as merely "in remission." Charles Siragusa's lively account of life as a federal narcotics agent noted that "[i]n the first few years after World War II, cocaine, otherwise known as 'coke' or 'snow,' had been practically unheard of in the New York and Chicago underworlds."(7) The head of the Federal Bureau of Narcotics, Harry Anslinger, was sufficiently impressed with cocaine's decline to opine that "cocaine addiction had disappeared."(8) By at least one measure of law enforcement activity, quantities of cocaine seized, there was indeed very little activity during this period. According to the Permanent Central Narcotics Board of the United Nations, worldwide seizures of illicit cocaine averaged only 7kg. between 1958 and 1962.(9)

Legal importation data begins to illustrate the declining-use trend that medical and law enforcement experience suggested. Table One shows the five year averages of legal cocaine manufacture and importation in the United States between 1882 and 1932.

Table 1: Total Manufactured and Imported Cocaine, 1882-1931 (Five Year Averages)

<table>
<thead>
<tr>
<th>Years</th>
<th>Cocaine, tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1882-1884*</td>
<td>0.1-0.2</td>
</tr>
<tr>
<td>1885-1889</td>
<td>1.2-1.7</td>
</tr>
<tr>
<td>1890-1894</td>
<td>2.0-2.3</td>
</tr>
<tr>
<td>1895-1899</td>
<td>2.5-3.2</td>
</tr>
<tr>
<td>1900-1904</td>
<td>5.5-7.4</td>
</tr>
<tr>
<td>1905-1909</td>
<td>4.4-6.3</td>
</tr>
<tr>
<td>1910-1914</td>
<td>3.7-4.8</td>
</tr>
<tr>
<td>1915-1919</td>
<td>2.7-3.9</td>
</tr>
<tr>
<td>1920-1924</td>
<td>1.1-1.5</td>
</tr>
<tr>
<td>1925-1929</td>
<td>0.5-0.8</td>
</tr>
<tr>
<td>1930-1931*</td>
<td>0.7-1.1</td>
</tr>
</tbody>
</table>

Sources: Weekly New York importation records, Oil Paint and Drug Reporter, and annual importation reports, United States Treasury Department. Ranges indicate results based on varying estimates of the yield of cocaine from imported coca leaves.
Until the early 1920s, most cocaine consumed in the United States was legally imported or manufactured by chemical and pharmaceutical companies. The trends in the legal supply indicate that legal cocaine consumption was at its highest level during the first decade of the century, followed by a period of slow decline, and then a rather precipitous drop after 1920. The conclusion that the decline in cocaine consumption was a gradual one is reinforced when the issue of cocaine smuggling is considered. Illegal imports of cocaine were already being reported before passage of the Harrison Narcotic Act in 1914; by 1920, many descriptions of cocaine distribution reported that smuggled cocaine was the primary source of supply.

In the absence of reliable estimates of smuggling with which to determine the post-prohibition supply of cocaine, the decline in cocaine can be tracked through studies of drug-addicted persons. Nearly every study indicates that cocaine was of minor importance among addicts. In 1919, the Treasury Department reported that only 8% of addicts in public institutions, and only 1.66% of addicts in private institutions, used cocaine. Among addicts studied at the short-lived Los Angeles narcotic clinic (whose doors closed in August, 1920), 18 of 532 (3.4%) employed cocaine as their drug of abuse—although the medical director of the clinic reported that many of the patients had been users of cocaine before turning to an opiate. Finally, Alexander Lambert's study of 1,593 private practice patients published in 1922 included only 56 cocaine users (3.5%), of which only 9 used cocaine exclusively.

The limited amount of long-term case data from treatment centers further confirms that the low levels of cocaine use among addicts after the First World War represented a shift from earlier patterns. One set of data which highlights the trend is from the Leslie E. Keeley Institute in Dwight, Illinois. The Keeley Institute was the headquarters of a nationwide network of private treatment centers in the late nineteenth and early twentieth century which dealt in the treatment of alcohol and drug habits. According to patient records, 18.0% of drug-using patients between 1893 and 1897 used cocaine. In 1900, 16.3% of drug cases used cocaine, and 9.7% of drug cases in 1905. By 1910 and thereafter, the Keeley Institute treated no patients with cocaine addiction.
Finally, there is the word of addicts themselves. In interviews with elderly methadone patients concerning their drug use histories between the 1920s and the 1960s, Courtwright et. al. identified a common theme concerning cocaine--that the drug was available, but its expense relegated it to the status of occasional pleasure only.(14)

The decline in cocaine can thus be readily established, although conclusions about the decline should be qualified in at least two significant ways. First, cocaine during the nation's first experience did create many serious problems, but the drug was almost certainly not the chief drug abuse even at its peak. Second, the trend toward declining use, though definite, was very gradual. Indeed, the "peak" of consumption was really more of a decade-long plateau, which suggests that there was no abrupt interruption in levels of use. Moreover, this plateau of popularity was followed by another decade of gradually declining use, which further reinforces the historical observation that this important shift took a long time to complete.(15)

Supply Reduction Theories

There is a general division between those historical accounts which attribute the declining-use trend to a reduction in user demand and those which suggest that cocaine simply became harder to obtain. Still other accounts acknowledge confusion over whether disappearing supplies were a "cause or consequence of the decline in interest."(16) The most common supply-control argument focuses on the impact of restrictive legislation, and on the ability of law enforcement to marginalize distribution networks (to "drive them underground") and thereby increase the cost of using cocaine.(17) In addition to the role of laws and law enforcement, this report briefly considers two other hypothesized causes for a reduction in cocaine's availability--the disruption of supply and the diversion of supply. The former refers to the suggestion that disruptive events (World War One, for example), may have effectively cut off supplies to the United States and precipitated decline in consumption. The latter has scarcely been considered in the existing literature, but concerns the possibility that legal cocaine production may simply have sought out less-regulated markets outside the United States.
Increased Price and Marginalization of Distribution Networks

The most commonly cited explanation for cocaine's disappearance in the United States is that the cost of cocaine use was raised by the passage of anti-cocaine legislation to the point where users were no longer willing to suffer the high price and legal harassment that would accompany a "cocaine habit." Although consensus disappears when the question of what cocaine users then did is raised (i.e., did most turn to other drugs or abstain altogether?), there appears to be common agreement that cocaine became harder to use. My examination of the trends in availability of cocaine confirms the trend, but raises an important qualifying point. While legislation and law enforcement clearly reinforced the trend toward higher costs, they by no means started the trend. Rather, I believe that there were at least three distinct phases of cocaine's control: the imposition of informal controls on legal distribution; the creation of state and local controls; and, finally, the start of national-level control oriented toward prohibition.

To understand the importance of the first, informal phase of cocaine's control, requires an appreciation of the distinction between "legitimate" and "illegitimate" sale and use. "Legitimate" sales were those which were intended for accepted categories of medical/therapeutic use. Among the types of sales which would have been deemed "illegitimate": sales to minors, sales to "disreputable persons", sales of large quantities, sales to persons known to be cocaine addicts, and sales for recreational use. Although such categories left considerable room for interpretation, the basic distinction was nevertheless commonly made and widely agreed upon. The pressure to control "illegitimate" sales—which nevertheless may have been, and often were, entirely legal--focused on the retail druggist.

As the primary source of legal retail sales of cocaine, the retail druggist was an especially susceptible target to public pressure to voluntarily limit sales. In the first place, the position of retail druggist, once open to nearly everyone with the resources to purchase an inventory of drug products, was increasingly subject to professional standards. For professional-minded druggists, the wide open sale of cocaine was not only a public-relations nightmare, but an unwelcome reminder that they were far from the kind of professional control of their ranks that physicians
were consolidating. Moreover, many druggists firmly believed in the "legitimate/illegitimate" distinction, and regarded the exercise of discretion over sales (even where not required by law) as part of their professional responsibility.

The result of these informal pressures on the legal supply was that, by 1900, many purchasers were forced to seek out those "specialized" sellers who would provide cocaine. Perhaps inevitably, those retailers less concerned with their professional reputation and community status began to cluster in particular areas, often those neighborhoods where other kinds of illegitimate economies already flourished. For their willingness to sell cocaine, these retailers exacted a remarkable premium. As early as 1900, the New Orleans Item described the sales practices of a French Quarter druggist, whose drugstore was "the central distribution point for cocaine fiends from all over the city." Sales were conducted chiefly at night, through a side door with one pane of glass broken out. These nighttime consumers paid five cents for every one cent worth of cocaine—a remarkable price inflation in the absence of restrictive legislation.

The "informal" phase of cocaine control is important because it places developments after anti-cocaine laws into context. This first phase lasted until roughly 1905, at which time many states and cities embarked on efforts to write into law the legitimate/illegitimate distinctions which had already been made. The period of state and local regulation, extending roughly from 1905 to 1920, can therefore best be described as a legal extension of informal controls. The effect was to further isolate cocaine sales geographically, and raise cocaine prices still further.

In Chicago, it appears that the geographic isolation of cocaine sales was among the chief goals of anti-cocaine reformers and the police. During 1904, and for several years following, the question of controlling cocaine sales emerged as one of the most important social questions Chicagoans confronted. The basic cause for concern, raised by groups including the Juvenile Protective Association, Hull House, and juvenile court officials, was the legal sale of cocaine to minors living in West Side neighborhoods. The resulting legislation, together with publicity
campaigns, did effectively drive cocaine sellers out of the immigrant neighborhoods served by reformers.(21)

The effort to drive cocaine out of these neighborhoods, however, appears to have resulted in a continuation of sales in Chicago's underworld neighborhoods--as it did in other cities as well. Cocaine distribution networks in the 1905-1915 period became increasingly sophisticated; as recalcitrant druggists were forced out of business, the street-level dealer in cocaine emerged as an important figure in retail sales. Although most distributors operated fairly independently, the largest underground retailers began to employ large numbers of distributors and runners. Supplies of cocaine sold on the street were still largely obtained through sales from the legal market, although tightly controlled areas such as Chicago were increasingly supplied by cocaine brought in from other areas.(22)

If increased price is any measure of declining availability (or the marginalization of distribution), then cocaine was indeed harder to obtain. David Musto has observed that in New York City between 1908 and 1914, the amount of cocaine in a twenty-five cent street "deck" was about 1.3 grains (85 mg.).(23) Musto estimates this to have been roughly eleven times the wholesale price of cocaine. By comparison, the same amount of cocaine in 1900 New Orleans would have been sold on the "illegitimate" market for about half that price, or five times the wholesale price.

Between 1895 and 1905, the influence of informal controls over the legal supply resulted in the early development of an underground distribution network for cocaine, one which was largely supported by small number of legal retailers willing to supply an enormous quantity of cocaine. During the period of state and local controls, between 1905 and 1920, distribution networks grew less dependent on druggists, and more reliant on dealers and their employees. In addition, in cities like Chicago, cocaine sales were increasingly confined to the areas where other illicit businesses thrived--the tenderloins, levee districts, and red-light neighborhoods of the nation. The post-1920 period constitutes the third phase in the control of cocaine supply, during which national prohibition of cocaine's sale and use emerged as the dominant goal.
Several important new features of cocaine distribution marked the post-1920 period. First, although controls had at one time focused largely on retail druggists practices, prohibitionist policy now sought to closely control cocaine's manufacturers and wholesalers as well. As a consequence, smuggling cocaine into the United States now became a critical part of cocaine distribution. Fred V. Williams, a reporter for the San Francisco Daily News, published an account in 1920 in which he described the distribution system for morphine, heroin, and cocaine. Cocaine, manufactured in the United States (worth roughly $12), was shipped to Canada where it was wholesaled to smuggling rings. The cocaine then reached San Francisco through agents in Vancouver in 10 to 20 ounce lots valued at $80-90. This cocaine was adulterated, then retailed in San Francisco at roughly $200-300 an ounce. Most of this cocaine, however, was further adulterated and sold to habitual users on the streets of the city for $480-500 an ounce.(24) The Jones-Miller Act of 1922, further restricted the availability of cocaine by banning the importation of cocaine and limiting the amount of coca which could be imported for manufacturing.(25)

Under these circumstances, life for cocaine users almost certainly became difficult. Again, using price as a measure of the effectiveness of control, the typical estimate of the retail price of cocaine in the 1920s was roughly $200-300 an ounce, with costs at some levels running as high as $500 an ounce. Put in terms of Musto's representative 1.3 grain (85mg.) "deck" of cocaine, the street price had risen from roughly 12.5 cents in 1900, to 25 cents in 1908-1914, to between 50 and 75 cents after 1920 (with some street sales running as high as one dollar).

**Disruption of International Supply**

The study of the historical epidemiology of drug use reveals that, at various points in the twentieth century, serious disruptions in international drug manufacture and distribution have led to dramatic declines in drug consumption, as well as the initiation of drug use. In the United States, there are at least two such episodes in the history of heroin use: the worldwide shortages caused as result of World War Two, and (more arguably) the disruption in heroin supplies in the United States caused by the success of international law enforcement in breaking up distribution
of Turkish-French heroin in 1972-1973. (26) In each case, the disruptions were reputed to have caused significant (albeit temporary) shortages of heroin, which resulted in a virtual absence of heroin for consumption. Other studies have also claimed that such disruptions also resulted in a cohort of "heroin-free" Americans passing through high-risk young adulthood without initiating use. (27)

Whether this was the case with cocaine seems highly unlikely. To begin with, the decline in consumption was hardly sudden—use declined over a period of twenty years or more. Moreover, the decline was long-term; in the heroin examples, the periods of supply disruption were followed by a return of supply a good deal more rapidly than the case of cocaine.

Nevertheless, supply disruptions DID affect the United States. The best measure of problems with supply is probably the legal price of cocaine. Table Two indicates the legal, wholesale price of an ounce of powdered cocaine between 1893 and 1933. The price data suggests, first of all, that the wholesale price was hardly stable during this period.

Table 2: Wholesale Price of Cocaine (per ounce), 1892-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1892</td>
<td>7.00</td>
</tr>
<tr>
<td>1895</td>
<td>5.50</td>
</tr>
<tr>
<td>1897</td>
<td>3.50</td>
</tr>
<tr>
<td>1900</td>
<td>6.30</td>
</tr>
<tr>
<td>1903</td>
<td>4.55</td>
</tr>
<tr>
<td>1906</td>
<td>3.80</td>
</tr>
<tr>
<td>1909</td>
<td>2.80</td>
</tr>
<tr>
<td>1912</td>
<td>4.05</td>
</tr>
<tr>
<td>1915</td>
<td>4.60</td>
</tr>
<tr>
<td>1918</td>
<td>12.05</td>
</tr>
<tr>
<td>1921</td>
<td>15.75</td>
</tr>
<tr>
<td>1924</td>
<td>10.60</td>
</tr>
<tr>
<td>1927</td>
<td>12.10</td>
</tr>
<tr>
<td>1930</td>
<td>12.85</td>
</tr>
</tbody>
</table>

Source: 1892, 1895, 1897, and 1900, weekly wholesale price lists, Oil, Paint, and Drug Reporter. 1903 and subsequent years from Mallinckrodt Chemical Works price lists.

Throughout the most of the 1890s, as global production of cocaine increased, and manufacturing processes improved, the wholesale price of cocaine declined consistently. The first notable increase came at the turn of the century, when prices nearly doubled between 1899 and 1901. Commentaries published in the trade journal Oil, Paint, and Drug Reporter confirm that the price
increase was caused by a disruption in the cultivation and export of coca leaves from Peru. The chief source of coca for North American and European manufacturers, Peru was also the site of considerable political turmoil in these years, resulting in the closure of major Pacific ports through which coca traveled.(28)

The second, and more significant increase in wholesale cocaine prices came after another period of declining prices between 1902 and 1908. The first stages of the increase were the result of the imposition of tariffs by the United States government on both imported cocaine and coca leaves. After 1914, disruptions caused by the First World War caused wholesale prices in the United States to triple in just three to four years. To appreciate how the World War could have affected cocaine prices so dramatically, it must be remembered that German manufacturers led the world in cocaine production; German distributors also controlled most of the business in Peruvian coca production as well.(29) The outbreak of hostilities in Europe cut off supplies of German and Dutch cocaine (the Netherlands was at the time the third largest supplier of cocaine, after the United States and Germany). German influence in Peruvian coca markets also insured that supplies of coca leaves would also be in short supply, especially after the American entry into the conflict in 1917.

The changes in the legal price of cocaine during the First World War--which were largely sustained after the war--give rise to the possibility that increases in illicit cocaine prices during this period may have been partly attributable to international events. This is particularly true when one measures illicit prices of cocaine against legal prices: a 5:1 ratio in 1900, 11:1 in 1908-1914, but only about 12-20:1 after 1920.

_Diversion of Supply_

Although the significance of international disruptions in cocaine manufacture merit some consideration, a careful examination of global cocaine supplies after the First World War reveals a startling paradox--while the use and availability of cocaine both declined in the United States, the world's supply of cocaine remained equal to or higher than pre-war levels. It is reasonable to ask why so little reached the United States. The key to the puzzle appears to have two parts.
First, the post-war world witnessed the growth of cocaine consumption in regions with previously minor cocaine problems, including much of Europe, the Soviet Union, India, and Asia. Second, the production of cocaine remained exclusively in the hands of the legal pharmaceutical and chemical industry with an interest in exploiting newer and less regulated markets for cocaine. Despite the potentially high profits of doing an illegal business in the United States, many companies apparently preferred to legally distribute cocaine in areas where they could still do so. The result may have been that supplies of cocaine were increasingly diverted away from the United States, further reducing the availability of the drug.

There can be no question that the decline in domestic consumption corresponded with the growth of consumption to unprecedented levels in other regions of the world. Europe, in particular, experienced an explosion of cocaine use following the war. Believed to have spread through the ranks of the European armies, widespread cocaine use was first reported in major cities such as Paris and Berlin. Often linked to the "social disorganization of postwar society, or the emerging bohemian lifestyles of Europe's largest cities, cocaine appears to have spread throughout European society. By the early 1920s, cocaine use of unprecedented dimensions was widely reported in Britain, Germany, Austria, France, Switzerland, Spain, and Italy. In the Soviet Union, returning soldiers of the Russian army apparently helped launch a major cocaine epidemic in the 1920s.

Outside of Europe, British India was perhaps most commonly associated with cocaine consumption. Unlike European countries, British India had a cocaine problem of much longer standing. In fact, India was among the first areas outside the United States to develop a serious cocaine problem. The first legal restrictions were imposed in Bengal in 1902, about the same time as the first state regulations in the United States. The Bombay and Madras governments followed suit in 1903 and 1906, followed by all of British India in 1908. Yet the early imposition of restrictions seems to have largely failed to check consumption of cocaine, largely because of a near-total failure to control supplies coming from international manufacturers. As late as 1930, customs officials in Bombay alone reportedly seized 450 pounds of cocaine.
Most of India's supply of cocaine by 1930, however, was no longer coming from European manufacturers (mostly Dutch and German), but from Japanese distributors. Often working with Chinese smugglers, Japanese distributors of cocaine emerged as the largest supplier of cocaine to India and much of Asia during the 1920s. Indeed, Japanese production of cocaine was second only to Germany in the early 1920s, and may have actually exceeded German production by the middle of the decade.\(^{(34)}\)

How did these global developments effect the supply of cocaine in the United States? Before 1922, U.S. distributors could legally import foreign cocaine into the country; the expansion of use in other areas of the world may well have limited the availability of previously important source of cocaine (especially that of German manufacture). More importantly, however, is the evidence that American manufacturers (after 1922 the only legal source of cocaine) may have shipped cocaine outside the country to less regulated markets. The practice of shipping American-manufactured cocaine outside the United States was not new; even before passage of the Harrison Act manufacturers appear to have produced far more cocaine than reached the legal domestic markets. In 1914, for example, the United States Census of Manufacturers reported that American firms employed nearly 13 tons of cocaine in manufacturing, yet only about a third of that amount was produced for "domestic consumption."\(^{(35)}\) Much of the rest went through Canada and Mexico, where it was not infrequently smuggled back into the United States (see above).

The impact of the development of new markets for cocaine appears to be that less of this cocaine made it back to the United States. Although there is little direct evidence, American manufacturers appear to have sent a great deal of cocaine to Japan, for distribution in China. Sara Graham-Mulhall, Deputy Commissioner of the New York Department of Narcotic Drug Control, claimed that manufacturers in New York City shipped over five tons of cocaine via Seattle to Japan during 1918, 1919, and the first nine months of 1920.\(^{(36)}\) U.S. Representative Miller, co-sponsor of the Jones-Miller Act which aimed to curtail this practice, claimed that "[i]n the case of Japan, she can and does transship the drugs into China and justifies her conduct upon
the grounds that transshipments and in-transit shipments are not 'imports' within the meaning of Japanese law."(37) Although difficult to verify, it seems highly likely that the emergence of important new markets for cocaine reduced the availability of the drug in the United States.

To summarize, there are features of the retail sale of cocaine which appear indisputable. The first is that distribution networks were increasingly marginalized, a process which began well before the passage of restrictive legislation, and owed as much to informal notions of legitimate cocaine sales as it did to legal status. The legal control of cocaine, however, significantly furthered the process. The actions of law enforcement in communities such as Chicago indicate that law enforcement focused on driving cocaine out of particular neighborhoods and to the fringes of urban areas already associated with other illicit trades. Moreover, even in those areas, cocaine selling clung to the fringes, becoming the most surreptitious of all illicit trades. By the time of the Harrison Act's passage, such pressures had already driven the retailing of cocaine entirely underground.

Not surprisingly, as formal and informal measures to limit cocaine's availability had an impact, the price of cocaine increased dramatically. As far back as the turn of the century, many consumers were forced to pay as much as five times the legal price for their cocaine--this a decade before stringent state-level controls, and fifteen years before passage of the federal Harrison Narcotics Act. The increase in price was fairly constant as well, and prohibition accelerated the process--although more in absolute terms than relative to legal wholesale prices.

Finally, other factors may have limited the available supply of cocaine in the United States. The first possibility is that events such as the First World War disrupted coca cultivation and importation, resulting in reduced supplies. It is certainly true that, as a result of disruptions in the supply of Peruvian coca and German cocaine in 1914, the legal wholesale price of cocaine rose several times higher. Another intriguing possibility is that cocaine manufacture, still exclusively in the hands of pharmaceutical and chemical companies, was diverted to vast new markets less regulated than those in the United States. Across Europe and Asia, cocaine consumption surged during the 1920s, and there is even some evidence that United States
manufacturers sent more of their product to foreign markets. Although some was certainly smuggled back into the United States, it seems clear that some was also bound for new markets in places such as China.

Reducing Demand

Those explanations for cocaine's decline which focus on changing demand fall into two basic types. The first are those which suggest that the declining use trend was the result of increased medical and public awareness of cocaine's potential dangers. In effect, such historical explanations assume that drug use was in part a product of ignorance and misinformation. A related view of cocaine's decline suggests that the only type of "education" which produced real change in patterns of use was the accumulation of negative experiences among chronic, heavy cocaine users. In every case, these explanations share the rather optimistic view that education and hard experience can reduce patterns of serious drug use. The second basic category of explanation depends heavily on the assumption that demand for cocaine shifted to newer drugs. Although the decline in cocaine use has been linked increased use of various drugs, each theory shares the somewhat more pessimistic viewpoint that pressure on one area of drug-using merely shifts patterns of consumption.

The Role of Medical Opinion/Education

One hypothesized factor in achieving a reduction in demand for cocaine is the waning of medical demand, as well as the influence of negative publicity and warnings directed by physicians to the public. In neither instance, however, does existing historical evidence suggest that physicians played a substantial role in achieving the dramatic reduction in cocaine.

To be sure, physicians had a great deal of interest in cocaine when it was first widely used in the Untied States during the mid-1880s. In fact, it may well be said that physicians were almost wholly responsible for introducing cocaine, and encouraging pharmaceutical companies to develop consumer interest. By the early 1890s, however, the interest of physicians had diminished considerably. The wonder drug of 1884 was, a decade later, no longer regarded as
any kind of panacea. Although physicians continued to encourage its application in limited ways, especially as a topical anesthetic, mainstream medical opinion supported only limited medical use, and condemned outright any unsupervised use by the laity. Even these limited applications narrowed during the first decades of the twentieth century, as synthetic substitutes such as Novocain replaced cocaine.(38)

This decline in medical demand, however dramatic, cannot be said to have been critical in reducing overall levels of use significantly. Even if medical demand was assumed to have stayed constant at early-1890s levels for the next twenty years (rather than declining as demand certainly did), the largest increases in consumption occurred after 1895. The conclusion is inescapable that medical use of cocaine accounted for only a small portion of the United States cocaine supply during peak years of use. Even those who sought to minimize the extent to which cocaine was used for non-medical purposes were forced to concede that medical use after 1900 could account for no more than 50% of legal supplies. Most reliable estimates placed the percentage of legal supply which went for medical use at 20% percent or lower.(39)

Therefore, medical disinterest utterly fails to account for cocaine's decline, since it constituted a very small portion of the overall demand. As to the effectiveness of physicians' publicizing the potential dangers in using cocaine, it appears that the most substantial growth in cocaine consumption followed the medical counter-reaction to cocaine. Therefore, although most physicians quickly recognized the potential harms from widespread use of cocaine, the effect of medical disapproval may be said to have been fairly insignificant. It must be remembered, however, that the popular use of cocaine emerged at a time when physicians were still consolidating the kind of professional authority over drugs and medication that organized medicine would later enjoy. Therefore, the failure of medical disapproval to register any significant changes in pattern of use may be partly attributable to the disorganized state of medicine and the fierce competition for medical authority. Ultimately, the main achievement of physicians may have been the elimination patent medicine preparations which contained cocaine and which made therapeutic claims for cocaine. Such preparations constituted the greatest threat
to medical authority; they did not, however, represent that largest part of the cocaine problem. (40)

_The Role of Public Opinion/Education_

Closely related to the medical use/medical opinion hypothesis is the view that growing public awareness of cocaine's potential harms, encouraged by anti-cocaine publicity and propaganda, led to users decreasing their use of the drug.

The most extensive coordinated effort to publicize the dangers of cocaine occurred roughly between 1905 and 1915. During this entire ten year span, a broad coalition of reform-minded groups led a campaign to limit the legal sales of cocaine through the passage of restrictive legislation. A key weapon in their successful fight to achieve regulatory control over cocaine and other dangerous drugs was publicizing cocaine's dangers to the general public. The products of this campaign were horrifying stories of cocaine addiction, cocaine-related crimes, and cocaine-induced degeneracy which appeared in newspapers, popular magazines, books, plays, songs, and movies of the period. Some the anti-cocaine message was grounded in the very real experiences produced by extensive cocaine use. Residents of cities such as Chicago and New Orleans could readily testify to the realities of cocaine-related illness and crime. Much of the "information", however, was highly sensationalized. The popular image of the chronic, heavy user of cocaine--the "cocaine fiend"--appears to have been achieved by taking a kernel of truth and magnifying it through a lens of racism, fear, and prejudice.

This broad-based attack on cocaine appears to have borne some fruit, although not entirely in ways that its supporters anticipated. Indeed, the chief result of this anti-cocaine campaign was to reduce consumption in areas which posed the least concern for public health and public safety. Specifically, the efforts of reformers between 1905 and 1915 succeeded in thoroughly destroying what had been an important market in low-potency coca and cocaine preparations manufactured by both the patent medicine industry and pharmaceutical firms.

By way of illustration, it should be noted the most popular sources of cocaine were the numerous tonic and beverage preparations in which it appeared. Coca wines (such as Vin
Mariani and its competitors) and coca soft drinks (including Coca Cola and its competitors) were the two most important categories of products. Without question, such preparations accounted for the greatest number of doses of cocaine taken at the turn of the century. These doses, however, were exceedingly small--one glass of a coca wine may have contained between 5 and 15 milligrams of cocaine, and one glass of a coca soft drink as little as 2 milligrams. Therefore, although many persons were receiving dilute oral dosage forms of cocaine, they probably constituted only a small proportion of the overall demand for the drug.(41)

Ignoring these facts, most reformers eagerly attacked these products along with high-potency preparations and sales of pure cocaine. One result was that many consumers were no longer willing to take products they had once regarded as beneficial, while public pressure mounted on manufacturers to withdraw the offending preparations. As early as 1903, companies such as Coca Cola had seen the writing on the wall and voluntarily "decocainized" their product. Many other companies followed, with the result that by 1910, most of the low-potency cocaine and coca products had been removed from the market, and by 1915, they were entirely gone.(42)

What impact did this have on overall patterns of cocaine use? In a sense, the successful elimination of coca products can be said to have greatly reduced the prevalence of cocaine use in the United States. On the other hand, there is little evidence that use of such products contributed to a heightened desire for more potent forms of cocaine, and no evidence whatsoever that low-potency coca products such as Vin Mariani or Coca Cola created their own cocaine addicts. The trends in consumption highlighted in Table One bear out that the enormous collapse of the low-potency coca and cocaine preparation market between 1905 and 1910 appears to have had little or no impact of levels of consumption.

*Hard Experience and Discontinuing Use*

Given that medical consumption of cocaine, and the popular use of low-potency coca products accounted for a fairly small share of the total cocaine supply, the patterns of use among the remaining consumers of cocaine are probably critical to understanding why overall levels of use declined. The "remaining consumers" were the frequently users of cocaine, administering
the drug either intranasally or intravenously--in popular parlance, the "cocaine fiends." How did "cocaine fiends" change their patterns of use over time?

One formulation of their patterns of use suggests that the accumulated evidence of cocaine's harms, together with increased pressure from law enforcement, encouraged many users to simply quit altogether. How many chronic users of cocaine simply discontinued their use voluntarily is not clear, although there are some assertions which suggest that it was a significant number. One of the strongest statements to this effect comes from the New York Mayor's Committee on Drug Addiction, whose 1930 report asserted that "restrictive and punitive measures did not control the situation...[c]ocaine 20 years ago was a very prevalent addiction...[d]uring the last 20 years cocaine as an addiction has ceased to be a problem, not that those addicted ceased to use it, but because of the punishment involved. Cocaine addiction when persisted in over a certain period brings with it its own swift punishment by the development of acute mental disorders, and the fear and horror of this condition prevents its use as an addiction, even among the pathologic personalities of the criminal classes."(43) Similarly, the magazine Science reported in 1925 that "[c]ocaine addiction is of relatively short duration, estimated from one to three years, when the subjects voluntarily stop the use of cocaine because of the undesirable effects."(44)

In 1938, Alfred Lindesmith published the results of a survey of Chicago addicts' argot--the "special form of expression which arises out of the peculiar experiences that are associated with the use of opiate drugs." Although Lindesmith explicitly confined his study to opiate addicts, the frequency with which phrases and words associated with cocaine use appeared was notable. What is especially telling is the extent to which the addict argot focused on the "bull horrors" of cocaine overindulgence (especially paranoid reactions), or the cocaine "leaps" (describing cocaine-inspired hallucinations). These features were even personalized into "Steve": "a mythical character who is said to pursue persons who have over-indulged in cocaine."(45)
Drug addiction specialists were deeply divided over whether or not a frequent user of cocaine could easily discontinue use. Medical case studies and treatment descriptions published before 1910 commonly referred to cocaine as the most chaining of all substances, noting that cocaine's psychological hold on its users frustrated treatment efforts. Regarding users in treatment programs, one observer asked, "how many really stay cured?...of all drugs, cocaine addiction is the hardest to break off." Another concluded that "it may be that...no medical treatment can eradicate the habit patterns of the human mind." (46)

Later medical opinion, however, tended to place cocaine among the least addicting of commonly used substances. Emphasizing cocaine lack of physical addictiveness and withdrawal symptoms associated with opiate addiction, most treatment specialists declared cocaine to be merely a bad habit which required no treatment whatsoever. The Science magazine report noted earlier declared that cocaine use was no more complicated than that of tobacco. One possible explanation for the enormous distance between earlier and later views of cocaine use may lie in a statement from the same Science article, which contrasted the relative ease of withdrawing cocaine with the seriousness of morphine, "the drug to which cocaine addicts often turn." (47) This brief passage opens up the possibility that the "ease" of discontinuing cocaine use was aided considerably by the substitution of other drugs.

Shifts to Other Drugs

A final set of hypothesized causes for cocaine's decline involves shifts to other drugs. In some accounts, the increased availability of alternative drugs led to their increased substitution for cocaine, and led to cocaine's eventual decline. In other accounts, shifts to other drugs were largely in response to already declining availability of cocaine and lowering of interest. Whether shown as cause or effect, other drugs did indeed have an important relationship to cocaine. This study considers three drugs commonly linked to cocaine's decline: caffeine, amphetamine, and heroin.

Caffeine, a stimulant, was identified closely with cocaine as far back as the 1880s, when John Pemberton combined kola and coca in his new soft drink and tonic, Coca-Cola. The extent
to which caffeine "replaced" cocaine is hard to determine, although the continued use of caffeine certainly explains why it was that the enormous soft drink industry could entirely abandon the use of cocaine. Caffeine was a part of most major soft drinks even before the removal of coca, and its presence may well have already provided most the stimulant effect manufacturers and consumers attributed to the cocaine. Indeed, one question is whether manufactures raised the caffeine content of their products after removing the coca and cocaine to comply with federal food and drug laws.

One person who strongly believed that this was the case was Harvey Wiley, the head to the federal government's Bureau of Chemistry, responsible for administering the nation's Pure Food and Drugs Law of 1906. Wiley ordered an investigation of soft drink consumption patterns--patterns which he believed would demonstrate that Americans continued to drink Coca-Cola and other beverages in roughly the same ways they had before the removal of cocaine. Although Wiley's goal of declaring caffeine an injurious ingredient was never realized, the results of his investigations certainly bear out the fact that removal of cocaine from soft drinks--the most popular products in which cocaine appeared--made little difference to consumers, thanks to caffeine.(48)

While the use of caffeine as a substitute for cocaine has rarely been considered in the historical literature on patterns of cocaine use, the question of whether another stimulant replaced cocaine has received a great deal of attention. The most likely candidate--amphetamines, first marketed in the United States in the form of a nasal inhaler (the Benzedrine inhaler) in 1932. At least one review of the historical literature concluded that "the introduction of amphetamines in the 1930s is seen by several drug researchers as the principal reason for cocaine's decline in popularity during the era."(49)

There are several attractions to this thesis. First, the substitution of one stimulant for another confirms for some researchers the notion that drug demand is relatively constant, with legal controls merely serving to shift patterns of use. Moreover, the amphetamine production and distribution which began in the 1930s with few or no legal limits did mark the start of a long-
term problem of amphetamine misuse in the United States. Reports of amphetamines being overused by the public were already in wide circulation by the late 1930s; by the end of World War II a full-fledged amphetamine epidemic was underway. All of this occurred during the period when cocaine was largely absent from the national stage, a coincidence which appears to suggest a relationship between the popularity of the two substances. The suggestion of a relationship is further strengthened by the further coincidence of cocaine's reappearance and the emergence of a coordinated anti-amphetamine campaign in the late 1960s and early 1970s. The apparent success of the "speed kills" publicity campaign, for example, has been linked to the emergence of cocaine as the stimulant of choice. A typical description of cocaine's reemergence concludes that the trend was "in part because of new restrictions on amphetamines and their decreased availability."(50)

Despite the apparent coincidence of each drug's rise and fall, there is little direct evidence that amphetamine substituted for cocaine in the United States. The most serious problem with the hypothesis is, in fact, the timing. By the time the first amphetamine products (such as the Benzedrine inhaler) were commercially available in the United States, there is little evidence that many cocaine users remained. Certainly among drug-addict populations, the proportion of cocaine users was extremely small. In the simplest of terms, amphetamines did not make their appearance until after the "fall."

This does not mean, however, that the emergence of amphetamines in the early 1930s did not have any impact on cocaine consumption. Outside of the United States, it seems clear that cocaine consumption remained close to peak levels much later. In Europe, the peak of use appears to have been the mid-1920s, with a steady decline that probably bottomed out by 1930. In India and Asia, however, there is a great deal of evidence to indicate continued vitality in cocaine markets well into the 1930s. Exact figures are difficult to obtain, largely because the Japanese government did its best to obscure the extent of its trade in cocaine and narcotics during the decade. If anecdotal reports are to be believed, however, cocaine production may have been maintained at high levels until the late 1930s. It therefore seems possible that the growth of legal
amphetamine production may have helped doom the remaining cocaine production during the 1930s.

A persuasive case may also be made for the proposition that the enormous popularity effectively blocked a return of cocaine production in the decades following World War II. Legal manufacture on a global level was almost certainly in decline by the 1930s. Postwar production never resumed previous levels, perhaps because of the interest in amphetamine production. Finally, studies of amphetamine use in the 1950s revealed that heroin addicts had begun to employ amphetamine injections in conjunction with heroin, in much the same way that earlier generations of heroin and morphine users had employed cocaine.

Heroin is the substance whose growth in popularity is most closely linked to the decline in cocaine. The basic arguments runs as follows--Heroin, introduced in 1898 as a supposedly safe synthetic alternative to morphine, was employed by many drug users in conjunction with cocaine (in modern drug terminology, a "speedball"). The combination of heroin and cocaine was especially attractive, since the effects of the heroin appeared to balance those of cocaine. Among drug users, it was widely accepted that heroin could keep a cocaine user more functional, and less likely to suffer negative effects. When pressures on cocaine began reducing the availability of cocaine, many combination drug users simply shifted toward exclusive use of heroin, while exclusive users of cocaine may have turned to heroin as a more readily available drug.

The most basic element of this thesis, that heroin emerged as the chief drug of abuse in the United States, is absolutely supported by the existing historical studies of drug addicts. Moreover, the timing of heroin's emergence coincides very closely with cocaine's decline. In many eastern cities, the transformation to heroin began around 1912. By 1920, the transformation to heroin was near total in cities like New York, as well as the surrounding states of New Jersey Pennsylvania and Delaware, and into Washington DC and Baltimore--although less so in other cities, including Chicago.
From the beginning, observers noted the popularity of heroin among cocaine users. A related observation was the large discrepancy between state and local cocaine laws, which by 1912 were often extremely strict, and state and local heroin laws, which had not yet caught up to the trend of increased use. One of the earliest reports in the pharmaceutical literature, a 1913 editorial in the American Druggist, reported heroin's "substitution for cocaine by habitual users of that drug...[i]n Pennsylvania there is no restriction on its sale at present, and unfortunate cocaine victims have turned to it as an easily obtained substitute."(51) The continued importance of legal heroin sales at a time when cocaine had been driven almost entirely underground illustrate the effect that varying legal status may have had on drug availability. For example, New York City Health Commissioner Royal Copeland published an analysis of drug sales at 33 city drugstores during December, 1918, which revealed sales of 1690 ounces of heroin, 876 ounces of morphine, and only 72 ounces of cocaine.(52)

In addition to the coincidence of timing, and the greater availability of heroin, there are numerous studies of heroin addicts which indicate that many were former users of cocaine. Lawrence Kolb's study of over 200 opiate addicts, undertaken during the early 1920s, indicated that while few addicts currently used cocaine, virtually all of the heroin addicts had used cocaine at one point or another. Even more revealing is that, for many, cocaine had been the drug first used. Kolb concluded that "[b]efore the enactment of the Harrison Law there were apparently quite a number of pure cocaine addicts, but at the present time this type is almost invariably addicted to some form of opium as well..."(53)

A study of 318 drug addicted patients receiving treatment between 1928 and 1929 at Bellevue Hospital in New York City (Table Three) reveals similar patterns. The study confirmed that the vast majority of drug addicts in New York (270 of 318) were currently using heroin.(54) Although only four of the 318 addicts currently used cocaine, however, the patients histories carefully recorded for the study began to illustrate the extent to which cocaine had formerly been popular among current heroin users.
Table 3: Types if Drugs Used by Addicts at Bellevue Hospital, 1928-1929

<table>
<thead>
<tr>
<th>Drug</th>
<th>First Used</th>
<th>Ever used</th>
<th>Currently used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocaine</td>
<td>33</td>
<td>130</td>
<td>4</td>
</tr>
<tr>
<td>Heroin</td>
<td>153</td>
<td>295</td>
<td>270</td>
</tr>
<tr>
<td>Morphine</td>
<td>59</td>
<td>195</td>
<td>55</td>
</tr>
<tr>
<td>Opium</td>
<td>69</td>
<td>99</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>59</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: New York Mayor's Committee on Drug Abuse

These and other studies of drug use patterns in the 1920s suggest the strong possibility that cocaine users may have shifted to heroin use. Many were probably already employing cocaine in combination with opiates; for others (an unknown number), whose exclusive use of cocaine was no longer sustainable in an increasingly hostile climate, the abandonment of cocaine may have been eased by the availability of heroin.

Did Prohibition Work?

From the perspective of the late twentieth century, the first experience with cocaine holds a certain understandable fascination. As the United States grapples with the costs of the second cocaine experience, the search for historical lessons has begun in earnest. On the basis of this review of the historical evidence, several observations regarding cocaine's history seem especially important.

First, as a way of answering the question in the title of this essay, cocaine did work in one sense. The basic goal of legal restrictions on cocaine was to make the drug harder to obtain, a goal which seems to have been accomplished in several respects. Cocaine's prohibition succeeded in effectively eliminating the legal market in cocaine. By the early 1920s, legal production of cocaine in the United States was less than 10% of what it had been just fifteen years earlier. Prohibition also acted to effectively marginalize existing underground distribution networks. In cities like Chicago law enforcement effectively isolated cocaine selling in the city, pushing sellers from neighborhood to neighborhood until they reached the vice district of the
city's Black Belt, where sellers remained. These and other law enforcement efforts made cocaine more expensive, as intended, but they also raised the "costs" of using cocaine in other ways. Frequent brushes with the law, for example, became a regular part of the cocaine using experience. In the end, addicts reported that the infrequency with which supplies of heroin needed to be obtained (and thus, compared to cocaine, expose both buyer and seller to a reduced risk of arrest) was one factor in shifting use from cocaine.

As a second observation, however, it should be noted that the process of creating an underground market was not a begun under prohibition. In fact, the earliest signs of an underground market appeared even before the period of state and local regulation. The remarkable ability of social and professional disapproval to marginalize the sale and use of a legal drug should serve as an important caution to those who would argue that patterns of use are wholly dependent on legal status. This part of the historical experience will no doubt be troubling to those who would exaggerate the capacity of prohibitionist policies to "eliminate" a drug, as well as to those who may be tempted to idealize drug use under legalization.

Third, the group of cocaine users whose actions appear to have been most critical were the so-called "cocaine fiends"--those users whose frequent administration of large doses of cocaine, either by sniffing or injection, accounted for most of the cocaine consumed in the United States. The historical experience suggests that information and publicity over the negative effects of cocaine had little impact on overall levels of consumption, although anti-cocaine efforts do appear to have effectively ended a great deal of low-dosage consumption of coca products. On the other hand, there is some evidence that the hard education of experience did have some impact--over time, many simply reduced or ended their use of cocaine.

Fourth, the trend toward declining use in the United States must be placed in the context of the growth of consumption in other regions of the world. Cocaine may have become less available in the United States in part because both domestic and foreign manufacturers of the drug sought out newer, less regulated locations. The exploitation of newer markets makes particular sense in this instance because virtually all cocaine production remained under the
control of legal pharmaceutical and chemical companies. The extensive network of local, state, and federal restrictions on cocaine sales, together with negative publicity, almost certainly encouraged the exploitation of other markets around the world. Whether this would hold true for contemporary illicit distribution networks is, of course, much less certain.

Fifth, there is the rather unhappy conclusion that many cocaine users appear to have reacted to the decline in cocaine's availability—the great success of prohibition—by shifting in large numbers toward heroin.

Together, these conclusions appear to offer a more comprehensive answer the question of whether prohibition worked. To be sure, the informal and formal efforts at controlling cocaine accomplished much of what their advocates had hoped. Faced with serious (and real) problems associated with cocaine, the drug's would be controllers launched an enormously effective campaign to reduce consumption. What appears equally clear, however, is the extent to which advocates of cocaine's control failed to appreciate or anticipate the effect of their actions on patterns of drug use. These unintended effects, taken together, highlight what may be the central historical "lesson" of the first cocaine experience—the first "victory" over cocaine was not without costs, nor can it be entirely attributed to the action of a well-planned set of drug policies. There was little that was inevitable about the combination of national and international trends which ended the first cocaine epidemic.
NOTES


6. See, for example, American Bar Association and American Medical Association, Joint Committee on Narcotic Drugs, *Drug Addiction: Crime or Disease* (Bloomington: Indiana University Press, 1961).


13. For 1890s data, see Leslie E. Keeley Co., *Statistical Report of the Last One Thousand Opium Cases Applying for Treatment at the Keeley Institute* (January, 1899). The later data is compiled from patient ledgers, part of the Leslie E. Keeley Papers at the Illinois State Historical Library.


15. The kind of long term plateau which characterized the development of the first cocaine epidemic, appears to correspond to more recent patterns of cocaine consumption. See the estimates of cocaine consumption in C. Peter Rydell and Susan S. Everingham, *Controlling Cocaine: Supply Versus Demand Programs* (Santa Monica, CA: RAND Corporation, 1994).

17. The term "cost" here is meant to suggest both price and availability. The latter incorporates many aspects of cocaine use, including the involvement of law enforcement, and the relative ease or difficulty in locating sources of supply.


20. The dates which mark the start and end of different period of regulation are, of course, merely meant to suggest transitions which place over a longer period of time.


22. See, for example, *Report of the City Council Committee on Crime in the City of Chicago* (Chicago, 1915), as well as the papers of the committee's chairman Charles E. Merriam, housed at the University of Chicago.


28. The weekly drug trade reports of the *Oil, Paint, and Drug Reporter* furnished most of the accounts of conditions for coca cultivation and distribution in Peru and Bolivia.

29. Interestingly, this element of cocaine's history has been largely forgotten. When Edmundo Morales interviewed a young Peruvian manufacturer of coca paste in the early 1980s, the man's eighty year old grandfather recalled that he had met in his youth Germans coming to the area to set up cocaine factories. Morales notes parenthetically that the old man probably meant Anglos, but my evidence suggests that he may indeed have dealt with German manufacturers early in the century. Edmundo Morales, *Cocaine: White Gold Rush in Peru* (Tuscon: The University of Arizona Press, 1989), 75.
30. On Great Britain, Terry Parssinen concluded that "cocaine was by far the most popular street drug in Britain in the twenties." See Parssinen, Secret Passions, Secret Remedies: Narcotic Drugs in British Society, 1820-1930 (Philadelphia: Institute for the Study of Human Issues, 1983), 173. Parssinen also contrasts the development of U.S. and British "drug subcultures", noting that heroin was far more dominant in the United States. I.C. Chopra and R.N. Chopra, "The Cocaine Problem in India," Bulletin on Narcotics 10, cited in Lise Anglin. In Germany, the traffic in cocaine was already enormous in Berlin by 1920, and in the next several years spread throughout the country. According to Paul Wolff, by 1932, "[i]n comparison with our experience in the war and postwar periods, cocaine addiction no longer presents a grave scientific problem...in Berlin it is now a matter of no small difficulty to find a true case of pure cocaine addiction to demonstrate to students." The peak years of cocaine addiction in Berlin were apparently from about 1919 to 1925, according to data series on cocaine addiction, which shows the peak year to have been 1924. Paul Wolff, "Drug Addiction--A World-Wide Problem," Journal of the American Medical Association 98 (June 18, 1932). For the development of cocaine consumption in France, see Paul Wolff, "Drug Addiction--A World-wide Problem," JAMA 98 (June 18, 1932), 2181; and "Traffic in Cocain," JAMA (August 6, 1921), 494;


32. See, for example, Chemist and Druggist (February 17, 1906), 282, which notes that the Indian government banned the sale of cocaine from Calcutta, by requiring dealers there to register with the government.


34. Little systematic effort was ever made to estimate Japanese cocaine production. It seems clear, however, that Japanese chemical companies began cultivating coca on the island of Formosa. By 1924, the Formosan coca output was estimated at 225 tons. The chief centers for cocaine production were probably Tokyo, Osaka, and Kobe. According to the League of Nations and the British Government, both of which attempted to monitor Japanese narcotic and cocaine manufacturing, Japanese distributors were responsible for a great deal of illicit trafficking, most notably through China. Japanese cocaine was the chief source for the illicit markets in India, China, and Southeast Asia. See the British Foreign Office correspondence reprinted in The Opium Trade, 1910-1941, Vol. 6--1927-1941 (Wilmington, Del.: Scholarly Resources Inc., 1974). As for how much cocaine the Japanese manufactured, one suggestive note appears in a Chicago Tribune report from 1923, which claimed that 3,000,000 forged Merck labels had been shipped from Germany to China, where they were put on bottles of Japanese cocaine. Since the smallest unit of manufacture distributed by chemical companies was one-eighth of an ounce, this represented at least 11.7 tons of cocaine. In addition, director Hecht of Merck claimed that Japanese production was "probably more" than Germany's in 1923. "Illicit Traffic in Drugs Runs Allied Cordon," Chicago Sunday Tribune (May 20, 1923), 7.

35. The 1914 report is cited in Treasury Dept., Traffic in Narcotic Drugs, 7.


37. "Ending the Narcotic Menace," Literary Digest (June, 1922).

38. The first synthetic substitute for cocaine, eucaaine, was introduced by the European drug form Schering & Glatz in April of 1896. A decade later, the Farbwerke Hoescht marketed procaine (under the trade name of Novocain).


41. Information on product cocaine content is largely taken from information contained in the Interstate Seizure case files of the Bureau of Chemistry, now part of the Records of the Food and Drug Administration.


45. Lindesmith, 261-278.

46. Thomas Simonton, "Increase of the Use of Cocaine," 557.


48. The details of the caffiene investigation may be found in Seizure File # 352, Notice of Judgement No. 1455, "Coca Cola," Box 3, Records of the Bureau of Chemistry. These materials are now part of the records of the Food and Drug Administration.


53. Box 6, Lawrence Kolb Papers, History of Medicine Division, National Library of Medicine.
