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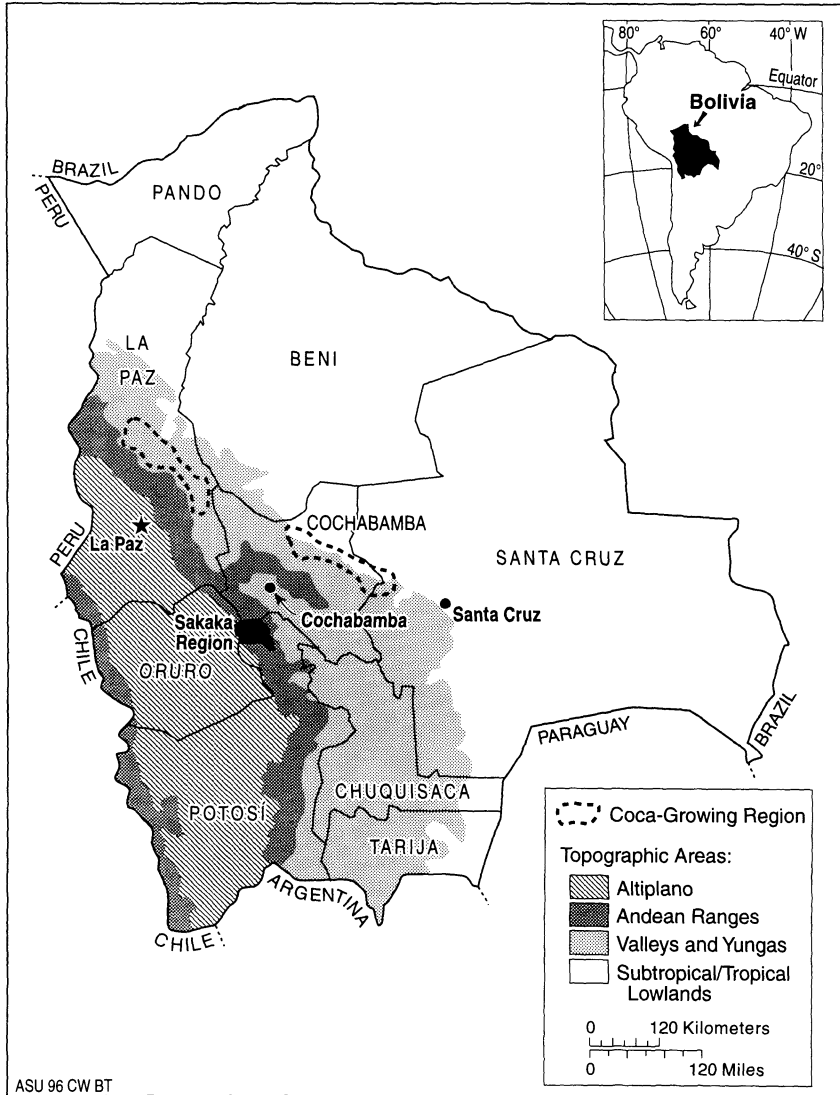
Coca and Cocaine in Bolivia: Reality and Policy Illusion

Madeline Barbara Léons and Harry Sanabria

Introduction

Located in the heart of South America, landlocked Bolivia is that continent's fifth largest but also its poorest country. Divided into nine major politico-administrative divisions or Departments (Map 1), most of Bolivia's 6.4 million inhabitants (Instituto Nacional de Estadística 1993) are concentrated in the high and cold plateau (*altiplano*) at 4,000–4,500 meters elevation between the eastern and western Andean mountain chains (*Cordillera Oriental* and *Occidental*, respectively) and the temperate high intermontane valleys (*valles*) in the easternmost part of the *Cordillera Oriental*. The vast eastern subtropical and tropical areas (*Oriente*), with over 70 percent of Bolivia's land mass, accounts for less than 20 percent of the population. Until recently most of Bolivia's population was concentrated in rural villages and towns where Aymara and Quechua, the two major indigenous, pre-Hispanic languages are spoken, often to the exclusion of Spanish, the country's official language.

Historically, Bolivia has been disadvantageously integrated into the international economy through the export of primary products. This pattern began with the Spanish conquest and the overthrow of the Incan empire, through the export of silver and, when that gave out in the national period, tin and other minerals took its place. Cocaine is the most recent of Bolivia's export commodities, facing boom or bust in an uncertain world market. In the last decades of the twentieth century the cultivation of coca and *narcotráfico*, the processing and distribution of cocaine sulfate and cocaine hydrochloride, the illegal derivatives of that plant, impact



Map 1. Bolivia: Political Divisions, Topographic Areas, and Coca-Growing Regions.

on the Bolivian reality in ways more profound than is true of any other country. Coca growing, a legal activity, has expanded tremendously to supply the illicit market, providing an income to tens of thousands of impoverished peasants. Bolivia was the second largest producer of coca leaves (after Peru) until 1995 when for the first time Colombia overtook Bolivia in extent of land planted in coca

(BINM 1996:65). Bolivia now accounts for about one-third of the world's production (BINM 1996:69). Income from the export of coca's illegal derivatives circulates in the Bolivian economy, subsidizing the consumption of services and imported goods, replacing export revenues lost due to the collapse of the tin market, and offsetting somewhat the financial drain of international debt service. Thus the economy is stabilized by coca and cocaine, which contribute more to the GNP and employ a larger proportion of the population than in any other country. Cocaine and narcotráfico preoccupy the national consciousness and the daily news, constant argument and conversation are full of it. It is the stuff of national political discourse, involving accusation and counter accusation among politicians, and debates on the formulation of policy to deal with it.

The Bolivian government is dependent on bilateral aid from the U.S. and international agencies such as the International Monetary Fund (IMF), which are under its influence. As a result, Bolivia is very vulnerable to pressures on the drug issue emanating from the U.S. embassy. Such pressures demand Bolivian collaboration in U.S.-designed supply side drug control policies, the "War on Drugs." These emphasize interdiction of cocaine shipments and the step by step elimination of coca fields by setting yearly eradication goals which, if not met, jeopardize aid delivery. U.S. drug policies, in turn, may be understood largely as a political response to internal U.S. politics, where appearing tough on drugs is a political asset but which prefers its "wars" to be fought on foreign soil.

This volume brings together Bolivian, British, and United States scholars representing a range of academic disciplines and theoretical perspectives. Our objective is to address key aspects of the Bolivian political, social, economic, and cultural order that must be understood more carefully in order to better discern the widespread and multifaceted role of coca cultivation and the cocaine trade, and the impact of state policies towards both. The basic premise of this volume is that "drug policies" pursued by the U.S. and Bolivian governments are having contradictory and often ruinous consequences that permeate the entire Bolivian social fabric, and that these policies are not consistent with the Bolivian reality.

Coca in Andean and Bolivian Society

The traditional importance of coca in Andean culture cannot be underrated because it is still a vital part of the lives of millions of Aymara and Quechua-speaking peasants who comprise the bulk of

the rural population in Bolivia and Peru. Chewing coca (*akullicu*) goes back to the complex associated with the earliest plant domestication in the Andes (Plowman 1986:23) and has been a fundamental part of the social and cultural experience of the Andean world. This tradition is known and is part of the discourse of all Bolivians, most who interpret it positively while some continue to be critical of its use, continuing the debates among sectors of the Bolivian (and Peruvian) elite, which began in the colonial period, on the value or potential harm of the indigenous use of coca (A. Weil 1995, Gagliano 1994, Lema, this volume). However, most Bolivians of all social classes now generally take some pride in at least the Inca past, acknowledge more favorably the place of coca in contemporary indigenous culture, and probably use coca medicinally themselves (J. Weil 1986).

Recent academic scholarship on the role of coca in Andean society by anthropologists has contributed to this acceptance. Carter and Mamani with Morales and Parkerson undertook a study in the 1970s on the widespread consumption of the coca leaf in Bolivia, examining it with sensitivity to its cultural context. Their results were published in Spanish and English and are widely cited by English speaking and Bolivian scholars (1980, 1978; also reprinted in the book version of this special issue of *América Indígena*). At the same time Mayer wrote a defense of coca in Andean society that was also widely republished (1978, reprinted 1986, English version 1988) and the in-depth ethnographic analyses by Allen of coca in highland Peruvian religion and society became widely available (Wagner 1978, reprinted 1986, Allen 1981, 1986, 1988). These accounts provided a new perspective to an academic literature previously more concerned with debating coca's physiological effects (Burchard 1975, 1980, 1992, Baker and Mazess 1963, Bolton 1973, 1976, 1979; Buck et al. 1968, Fuchs 1965, Hanna and Hornick 1977). Historical studies have emphasized the integrating role of coca cultivation and trade (Glave 1985, 1989) and the importance of taxes on coca in generating revenue for the Bolivian state (Parkerson 1980:II, 151–157, Soux 1993:144–148). Zorn (this volume) provides a case study of a modern variant of highland/lowland cultural interdependence mediated by the coca (and now cocaine) economy.

Until the 1950s most of Bolivia's coca was primarily cultivated on terraced fields (see Plates 1 and 2) in the steep subtropical *Yungas* valleys east of the city of La Paz where, as Spedding tells us in this volume, it had been grown since pre-Colombian times



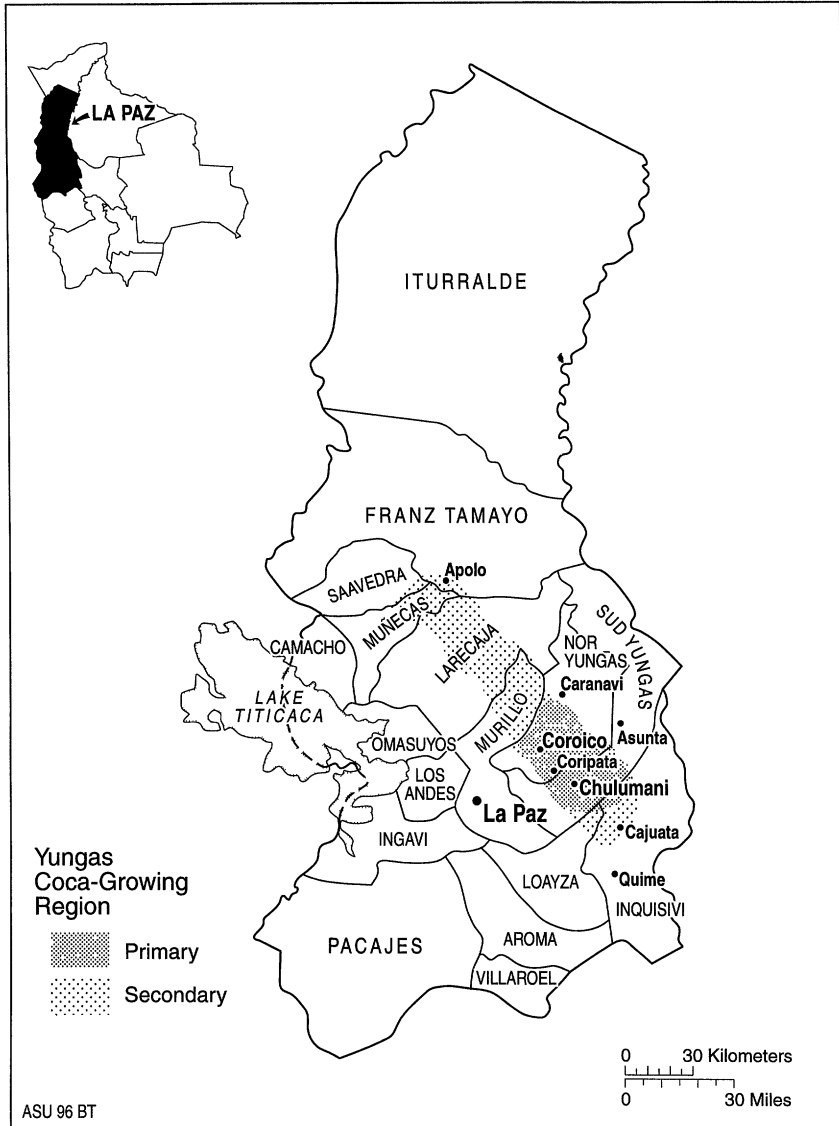
Plate 1. Workers preparing to dig a Yungas field, cleared and burnt off. The field is flanked by a young *cocál*. Photo by M. Barbara Léons.



Plate 2. Newly made *cocál* Nor Yungas. Photo by M. Barbara Léons.

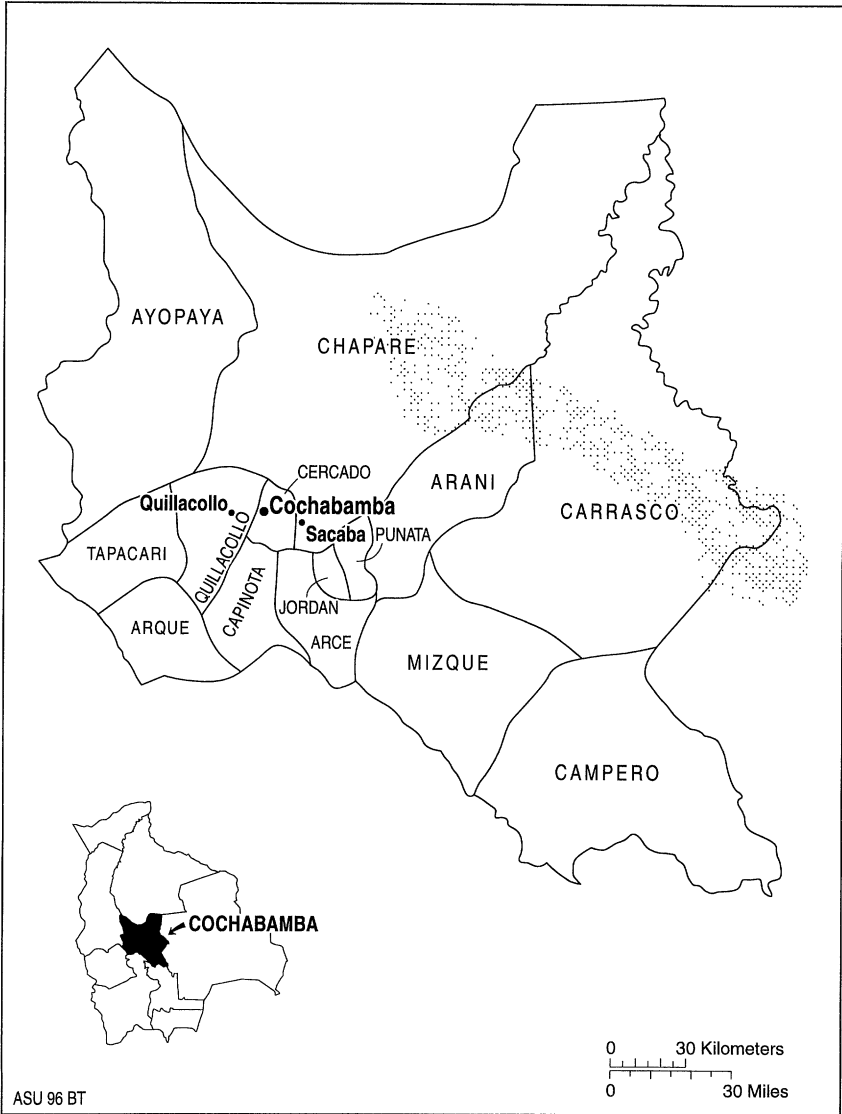
(Map 2). By the end of the eighteenth century, haciendas (landed estates) in the Yungas were the main commercial producers of Bolivian coca (Klein 1993:78) and the political power of their owners was consolidated by 1830 when the Society of Yungas Proprietors (SPY) was recognized by the government to represent them. It became the vocal pressure group at the national level described by Lema in this volume. The SPY also controlled local politics, and was responsible for such public works as road building and rail transport, which it collected taxes to support. Klein describes it as “a government within a government” (1986:63).

The land reform of 1953, enacted after the bourgeois National Revolution of 1952 which brought the *Movimiento Nacional Revolucionario* (MNR) to power, broke the political control of the estate landowners locally. As most of the land of each estate was distributed to its tenants (CIPCA 1977, Léons 1967, 1979), coca cultivation shifted largely to the hands of small peasant producers for whom it became the most important cash crop and mainstay of their household economies. This pattern of coca cultivation centering on small scale land holdings was replicated in the Chapare, the large subtropical and tropical region east of the



Map 2. Department of La Paz: Political Divisions and Coca-Growing Region.

city of Cochabamba (Maps 1 and 3), which became one of Bolivia's main colonization areas and its principal coca cultivating region between the late 1950s and mid 1980s (Weil and Weil 1993, Sanabria 1993, Healy 1994a, 1994b).



Map 3. Department of Cochabamba: Political Divisions and Coca-Growing Region.

Thus, coca is not grown on large estates but rather by small producers cultivating family farms. For coca growers (*cocaleros*) one of the most important impacts of the development of the drug economy was the promotion of capitalist relations of production within the rural sector, discussed by Toranzo in this volume, which

ranged from increased monetization and commercial orientation to the legitimation of “wealth” and profit as objectives of productive activity (Laserna 1992b:108). Nevertheless, as Healy points out (1994a:204), the coca economy has by no means transformed “peasants” into “farmers” who have been able to profitably institutionalize entrepreneurial cultivation patterns in a stable market. Rather they continue their diversified production systems, combining subsistence with cash crops (Flores and Blanes 1984). This pattern of smallholder production effectively shifted the risks of producing a product which constitutes the raw material for an illegal commodity to peasant producers (Laserna 1992b:107, Léons 1993:137). It is these cocaleros who are now in the midst of the political battles to protect their crop from international pressures and government mandated eradication and who bear the brunt of the associated human rights violations (Dudley 1994, and Sanabria and Farthing in this volume) while the personnel of the cocaine export pipeline go about their business relatively unimpeded.

The Social and Political Aftermath of Narcotráfico

In the face of constant bombardment with the cocaine issue in the news media, reporting scandal after political scandal, the Bolivian public, the majority of whom are uninvolved in drug trafficking, react ambivalently. On the one hand while claiming clean hands they can scarcely remain unaware that the economy has benefited and the political order has been stabilized by cocaine money. For example, national banking policies do not inquire into the source of deposits (Toranzo, this volume) and liquid capital held in banks has mushroomed in recent years. In 1985 less than \$100 million were held in deposits but by 1992 this amount had surpassed \$1.3 billion (Quiroga and Campero 1992:13). While some of these funds are tied to the glut of foreign assistance monies, the bulk is probably the result of the drug trade.

Nor are trafficking organizations seen as socially disruptive. Many of the original high level traffickers were, after all, members of the traditional elite. Rural elites from the lowlands of the Departments of Beni and Santa Cruz entered the trafficking business in the 1970's. Agrobusinessmen whose export cotton market had collapsed moved into cocaine production with loans from the government's Agricultural Bank (Bascopé 1982, Healy 1986, Gill 1987). Beni ranchers were well positioned to enter the distribution pipeline given the isolation of their properties and the small plane

fleet which provided them basic transportation and through which they marketed the beef from cattle raised on their ranches. The military has always provided a channel of upward mobility in Bolivia and military officers got involved in the action by acquiring land in the Beni and negotiated with the traffickers (Healy 1986:106).

Probably the best known and largest scale trafficker until his arrest in 1988 was Roberto Suárez Gómez, a Beni rancher and pilot who was said to have flown contraband to Brazil and Argentina and who easily moved into the smuggling of cocaine paste (the first stage derivative in the processing of coca into cocaine) to Colombia (Kandell 1984:233). Attempts by Suárez to bypass the Colombians did not have much success as his operation became the target of a Drug Enforcement Administration (DEA) sting operation (Levine 1990:90–91). Suárez, the biggest cocaine paste exporter at the height of the cocaine boom, was the grandnephew of Nicolás Suárez, the rubber baron who dominated the Beni during the late nineteenth century (Fifer 1970) and who, in his time, was known as the Rockefeller of the rubber trade. By 1890 his family owned 16 million acres of tropical forests bordering the Beni, an extension the size of Ireland (Kandell 1984:203), and in the Beni grasslands communities and ranches developed to provide logistical support for the rubber tapping operations. Thus Roberto Suárez might be said to have been continuing a family tradition as an exporter of primary products. His preeminent place in the drug trade was taken by his nephew, Jorge Roca Suárez, known as *Techo de Paja* (thatch roof) because of his blond hair, who had more success exporting finished Bolivian cocaine, primarily to Europe, but now is one of the few Bolivian traffickers in jail in the United States. The involvement of *Techo de Paja*'s mother and sister in his operation demonstrates a common pattern of kinship ties among traffickers many of whom, if not actual kinsmen, are members of the same small regional elite, the most cohesive and ambitious from the Beni (Tullis 1995:75).

As well, successful traffickers of varying social origins have entered as new game players, not behaving much differently than the old. Cortéz describes them this way:

By their age they are sons of the Revolution of 1952, the oldest being 36. They belong to middle class, agrarian families of modest means. They are dynamic, astute and efficient businessmen who have invested in hotels, restaurants, automobile imports,

agroindustry, livestock, airlines with Boeing 727s, even private schools (1992:68. Translated by M. Barbara Léons)

He continues (Cortéz 1992:69) that they are connected to the traditional bourgeoisie by marriage ties. Laserna sees in them a mixture of resentment and admiration for the Creole oligarchy into which class they ultimately seek to incorporate themselves (1992a:108), a familiar goal for the upwardly mobile in Latin America. With some exceptional incidents, such as the murder of the naturalist Noel Kempff at Huanchaca in 1986 (usually attributed to foreigners), Bolivian traffickers avoid the violence that their Colombian counterparts are known for and thus members of the general public do not feel personally threatened by them (Cortéz 1992:204).

Certainly there are ways in which the drug trade does hurt middle class Bolivians, as when rents in the city of Cochabamba rise above the level that those without drug income can easily pay, or when financial speculation causes banks to collapse. A well known example of the latter was the collapse of FINSA (*Firma Integral de Servicios Arévalo*) a savings bank established in Cochabamba which paid interest rates of 5-6 percent a month. It was an ideal vehicle for laundering money, where the financial flow was more important than long term viability. When it crashed in 1991 thousands lost their life's savings (Hargreaves 1992, J. Painter 1994). However, the connection of these problems to drug trafficking is not obvious to the public.

Laserna maintains that the cocaine trade created new opportunities and channels of social mobility, and promoted social differentiation (1992a:107). Nevertheless, the social structure of the drug trade corresponds to the conventions of Bolivian racism which dictate that society's dirty work be done by *campesinos*, the post-Revolutionary euphemism for Indians, culturally Quechua or Aymara, and identified by Malamud-Goti (1992:9) as *Kollas*, people of the highlands (altiplano). Quechua-speaking peasants, largely of highland and inter-montane valley origin, more recently joined by some displaced former miners, constituted most of the migrants into the Chapare and it is they who grow the coca for export in the form of cocaine paste or finished cocaine. Yungas peasants, who may be Aymara-speaking or the descendants of African slaves, fit the same category. On the other hand, Malamud-Goti (1992:10) and others (e.g. Krings Fortún 1991:5) identify the traffickers operating in the Chapare as *Cambas*, as were many of the lower level

traffickers operating in the Yungas in the mid 1980s (Léons 1993:148, also this volume). Cambas are the descendants of European settlers of the Bolivian lowlands, the Beni and Santa Cruz, (see Map 1), who mixed less with the tribal Indians who thinly populated these areas than did their highland counterparts with the native peoples there. Therefore the Cambas are of more exclusively Spanish descent, more phenotypically "white," in contrast to mestizos or "Indians" elsewhere. Many of the traffickers, including quite impoverished small time buyers are indeed Cambas from the provincial towns of the Beni and Santa Cruz.

In Bolivia, however, the preeminent social dividing line is one of "social race" (Léons 1978). The apparently biological terms *blanco* (white) and *misti* (mestizo) are equivalent to *vecino* (townsmen), *gente buena* (good people), and *gente decente* (decent people) as stand-in terms for social status and cultural style (Hispanic), not really a biological assortment of genes. Nevertheless, the distinction is no less real for its lack of a totally biological basis as it creates a cultural ceiling that one classified as indigenous is not permitted to rise above, in the narcotics trade as in everything else in the society. It ensures that Quechua and Aymara speaking peasants predominate in the jails, where they are joined by those Cambas at the lowest level of the pipeline who are also too poor to buy themselves out. As Laserna notes (1992b:68), the incarcerated are overwhelmingly young and primarily, but not exclusively, male. He calls those who get involved in the drug trade as small producers, buyers and enforcers, the proletariat of the illegal economy. With high aspirations and little opportunity elsewhere, they are drawn to the risky and low paid jobs of the drug trade and their reward is often prison.¹

One of the social costs of narcotráfico is said to be increasing corruption of the body politic (J. Painter 1994:53). Certainly bribes and payoffs are one way that drug dollars circulate in the Bolivian economy and law enforcement is a prime target of these efforts. The national elite anti-drug police force, the *Fuerza Especial de Lucha Contra el Narcotráfico*, (FELCN), heavily influenced by the DEA and with salaries paid directly through U.S. aid, was supposed to be incorruptible (Latin American Weekly Report 1994c). However, the seizure of four tons of cocaine at Lima's airport from a Bolivian plane in September, 1995 was followed by a purge and restructuring of the upper ranks of the FELCN for complicity with the traffickers (Latin American Weekly Report 1995c; BINM 1996:67).

The most blatant attempt at political manipulation to facilitate the drug trade was by Roberto Suárez who contributed mas-

sively to presidential campaigns (J. Painter 1994:58–59). His best known venture into politics resulted in what the Latin American Bureau (LAB 1982:46) called “the coup of the coca dollars” which brought General Luis García Meza to power in 1980. Suárez supported García Meza and contributed to financing the paramilitary squads led by Nazi Klaus Barbie that intimidated the General’s enemies (LAB 1982:140; Tullis 1995:168). The coup resulted in the installation of Suárez’ cousin, Luis Arce Gómez, as Minister of the Interior, where he thereafter became known as the Minister of Cocaine. Suárez’s action in backing a military strong man and his later pronouncements in the Bolivian press followed a conservative agenda in line with the values of his elite class. However, García Meza and Arce Gómez wanted to control the Bolivian drug trade, not just profit by protecting it (LAB 1982:143) and this open involvement with drugs embarrassed the country internationally and probably alienated the traffickers as well. Their unBolivian brutality, with the technical assistance of Argentine “security experts,” alienated everyone (Malloy and Gamarra 1988:145). García Meza was convicted in Bolivia of political crimes (Americas Watch 1993) while Arce Gómez was delivered to U.S. justice and is now imprisoned there.

As a result of this clear message no further efforts by traffickers to openly influence the political agenda of the country have come to light, although corruption and the buying of protection continue to be alleged. For example, former president Jaime Paz Zamora was denied a visa to enter the U.S. in 1996 on the grounds that he had colluded with drug traffickers (Latin American Weekly Report 1996a), and Bolivian government investigations continue (BINM 1996:68). Paz Zamora’s close associate, Oscar Eid, was sentenced to four years as “accessory to a drug trafficking racket” (Latin American Weekly Report 1996d). A major crisis in bilateral relations between the Bolivian government and the U.S. embassy was provoked in 1991 when then President Paz Zamora appointed Colonel Faustino Rico Toro, chief of a secret army intelligence unit during the Garcia Meza regime and implicated in cocaine trafficking, as the chief of the FELCN, the drug police, from which position he was forced to resign (Hargreaves 1992:163–166). The Bolivian Supreme Court, in one of the few such requests it honored, authorized Rico Toro’s extradition to the U.S. in 1995 to face drug charges (BINM 1996:69). Nevertheless, Paz Zamora is expected to be the presidential candidate of his party, the MIR, in the 1997 presidential elections (Latin American Weekly Review 1996d).

Coca and Cocaine in the Bolivian Economy

Cocaine is a commodity obeying the same economic principles as others and with the same kind of economic effects. Trade in this commodity, however illegal, responds to its demand in the developed countries, mainly the U.S., and contributes to the balance of payments of the supplying countries (see Toranzo this volume; Uprimny 1993). Latin American commentators in particular link the economics of the drug trade with economic processes that affected Latin America and less developed countries in the 1980s, more specifically the debt crisis and “structural adjustment” programs implementing neo-liberal agendas, and point out the irony that the imposition of controls on the cocaine trade violate the free market principles that neo-liberalism promotes (Campodónico 1989; Quiroga 1990a; del Olmo 1991).

In Bolivia the effect of the highest external debt proportional to its population in the region, and the disastrous 1985 fall in the international price of tin, on which the economy had depended for decades, which was followed by the closure of most of the government owned mines, was cushioned by the growing importance of coca and narcotráfico. Between 1981 and 1986, at the height of the economic chaos, the Gross National Product (GNP) fell by almost 25 percent (Jameson 1989:91; Pattie 1988:2). “Structural adjustment” policies to control the rampant inflation of the mid-1980s, advocated by the World Bank and the IMF (Walton and Seddon 1994, Rosen and McFadyen 1995), brought about a cutback in government and private enterprise employment (Conaghan and Malloy 1994, Morales 1994) and both urban and rural poverty increased. During this same time coca cultivation nearly doubled and the export of its illegal derivatives boomed. As a result of massive under- and unemployment, lack of agricultural alternatives in the rural areas, and depopulation of the mining regions due to mine closures, many displaced workers and their families migrated to the Chapare to grow coca, or were otherwise absorbed into the coca/cocaine economy. Toranzo (this volume) and others (Lee 1989:6, Smith 1992:9, Cortéz 1992:25, 38, 206) view the creation of employment in the drug trade and its multiplier effects throughout the entire economy as one of the most critical factors that cushioned the effect of the economic contraction.

Cocaine can be exported from Bolivia in varied forms. To convert coca leaf to cocaine hydrochloride, the white powder often called “snow” and sold as the drug of choice in the U.S. and Europe,

requires three transformations, usually carried out by different actors in different places. The product of the first stage is cocaine paste (impure cocaine sulfate, also known as coca paste and *pasta básica*), of the second cocaine base (*base* in Spanish, purer cocaine sulfate), and of the third, cocaine hydrochloride (*crystal* in Spanish).

The first stage, the processing of cocaine paste, usually takes place in the coca growing areas themselves to minimize the need to transport the bulky leaves very far. Only in the first years of the cocaine boom do we hear of the carriers known as *sepes* (ants) transporting loads of coca out of the Chapare on foot to distant processing sites (Healy 1986:119). The yield of cocaine paste depends on the quality of the leaves and the skills of the “chemist” who oversees the process. Great quantities of the coca leaves are needed as each leaf contains only a tiny amount of the cocaine alkaloid. Laserna, Vargas, and Torrico (1995:15–32), on whose description this account is based, suggest an average conversion rate of 246 pounds of coca to produce one kilogram of dry cocaine paste with an alkaloid concentration of 45 percent.² The coca leaves are mixed in a *pozo* (pit lined with heavy plastic) and filled with a large quantity of water to which sulfuric acid has been added. The leaves are mixed in the pit by *pisacocas* (coca treaders) hired to stomp the coca for several hours. The liquid which rises to the top of the pit is decanted into a smaller *pozo* where it is mixed with kerosene, diesel fuel, and calcium oxide (cement) to neutralize the solution. There is flexibility here; gasoline may replace kerosene and calcium carbonate may replace calcium oxide. The kerosene is drawn off and sodium carbonate is added to the resulting liquid, producing a sulfate precipitate, cocaine paste. What is striking is that this process is a model of “appropriate technology” based on artisan production and common chemicals, allowing coca growers themselves to profit from the “value added” by the extraction process. Despite campaigns to control access to these “chemical precursors” no shortages severe enough to impede processing have materialized. “Chemists” overseeing the process have specialized knowledge acquired by apprenticeship and not beyond the ability of those of peasant background. Some cocalers process their own coca while others hire a chemist to process their harvest, or sell their leaves to processors (Léons 1993, Laserna, Vargas and Torrico 1995).

Cocaine paste contains 40 to 50 percent cocaine alkaloid and that amount is increased to 85 or 90 percent by converting it to cocaine base, a process which entails only a slight loss of weight. The

impurities of cocaine paste are oxidized by dissolving it in water to which potassium permanganate is added and reprecipitating it from the solution with ammonia. This second stage is not usually carried out in the countryside near peasant coca leaf growers but rather by townspeople. Nor is it a necessary intermediate step for the production of cocaine hydrochloride (El Día 1992). However, as a more purified product, it can sell for a higher price, bringing in up to five times the price of a kilo of cocaine paste (Presencia 1992b). In the early years of the coca boom most cocaine left Bolivia in the form of paste or base, which was converted into the final product, cocaine hydrochloride, in Colombia. From there it was exported to the consumer countries, with much of the profit accruing to Colombian traffickers.

The third and final stage through which cocaine hydrochloride is produced requires more complex equipment and hard-to-get chemical inputs, and the process is much more dangerous because of the flammability of some of the ingredients. Cocaine sulfate is dissolved in acetone and water, heated carefully for several hours, and then mixed with ether. Finally, adding hydrochloric acid precipitates the cocaine crystals. Although cocaine hydrochloride may be produced in small quantities, economies of scale are achieved by processing larger quantities in factories hidden in terrain as inaccessible as possible in the Departments of Santa Cruz or Beni, alongside secret airstrips. In the late 1980s and 1990s, particularly with the eclipse of the largest Colombian cartels, more finished cocaine has been processed in and exported from Bolivia with increasing ability to bypass Colombian intermediaries.

The Magnitude of the Coca/Cocaine Economy

It is notoriously difficult as others (e.g., J. Painter 1994:1–14) have suggested to obtain accurate and reliable figures on the overall significance of coca and the cocaine economy for Bolivia. Estimates are often proffered with little or no indication of how they were arrived at, vary widely from source to source, and are clearly manipulated for political purposes. The following estimates of the amount of land under coca, volumes of coca leaf produced, the number of Bolivians engaged directly or indirectly in the coca/cocaine economy, and the overall value generated by the coca/cocaine economy, cannot be regarded as definitive assessments but they *do*

point to the quite extraordinary weight of the coca/cocaine sector in the overall Bolivian economy.

Despite the fact that various government agencies have been gathering data for decades, considerable disagreement exists on the exact number of hectares under coca, with U.S. State Department estimates until 1990 consistently lower than those of the Bolivian government. According to the *Dirección de Reconversión Agrícola* (DIRECO),³ the Bolivian agency responsible for coca eradication, the amount of land under coca cultivation grew by five times from 11,285 hectares in 1950 to 60,956 hectares in 1987 (Quiroga 1990a:81), declining afterwards to 55,450 hectares in 1989, and 47,644 by 1990 due to eradication efforts (J. Painter 1994:15).

Bolivian government estimates, for obvious political reasons, do not include the new *cocales* (coca fields) that those on the scene acknowledged were being planted (El Mundo 1992a), and thus show a sharp decline in land under coca. However, the planting of new coca fields, although illegal, is a continuing phenomenon (Sims 1995, Escobar 1995). Most accounts from U.S. sources point to slight increases in coca cultivation through the mid 1990s despite the destruction of many thousands of hectares of coca through eradication. For example, by 1993 surveys "showed increases in cultivation in all three growing areas, the Chapare, Yungas, and Apolo regions" despite strides in eradication efforts (BINM 1994:90).⁴ Some 49,600 hectares were cultivated in 1993 according to one source (BINM 1994:90). In the following year, 1994, "coca cultivation expanded by two percent . . . as a result of declining eradication and increased planting" (BINM 1995:67). For 1995 the estimate was 54,000 hectares (BINM 1996:65) with "substantial new cultivation . . . detected in both the Chapare and the Yungas regions" (BINM 1996:xviii), although a decrease in the amount grown around Apolo (BINM 1996:65) was noted. Other U.S. government estimates are consistent in pointing to slight increases in overall coca cultivation, particularly in the Chapare, despite enormous efforts at and resources deployed towards eradication. If indeed U.S. officials in 1994 "expressed their conviction that the war on drugs is being won and indeed will be won in Bolivia" (U.S. House of Representatives 1994:4), such enthusiasm clearly does not appear to stem from a careful examination of the U.S. government's own data on coca cultivation.

Estimates of the tonnage of coca leaves harvested each year vary even more widely but still point to its magnitude. For example, a study by the International Center for Drug Information,

relying on satellite photos, estimated that 300,000 metric tons (mt) were harvested in 1989, while Bolivia's Alternative Development Agency (*Subsecretaría de Desarrollo Alternativo*, SUBDESAL) put the figure at 145,124, and the U.S. embassy claimed a harvest of 80,000 mt (Hoy 1990). Such discrepant figures may be partially the result of different assumptions regarding productivity and yields (such as differences in calculating actual and potential yield, and yield from harvestable and non-harvestable coca plants), or the use of dissimilar methodologies and techniques in calculating such estimates. However, this wide span also raises questions concerning the possibility that figures are manipulated to maximize or minimize the problem of coca cultivation and the illicit drug traffic at any particular juncture. The Bureau of International Narcotics Matters estimated that 78,400 mt were harvested in 1991, of which some 10,000 were destined for licit consumption, and admitted that its previous estimates might have been too low (BINM 1992:95). More recent estimates from this same U.S. agency have been revised upward and clearly indicate an increase: over 84,000 mt of potential harvestable coca leaf in 1993 and almost 90,000 in 1994 (BINM 1995:72). Only for 1995 does the State Department report a downturn to 85,000 mt (Wren 1996:5; see also BINM 1996:65).⁵

The number of Bolivians involved in the multitude of income generating activities linked to the coca/cocaine economy is equally notable. It has been estimated, for example, that in 1987 between 250,000 and 300,000 Bolivians, representing 50,000 to 60,000 families, and seven percent of the economically active population, earned their living directly from the cultivation of coca and production of cocaine (El Mundo 1990, 1992b, Cabrera Lemuz 1991, Presencia 1991d). The impact of this employment boom was most acutely felt in the Department of Cochabamba's Chapare area where Rivera (1990:6) distinguishes between a transitory "floating population" of relatively mobile migrants and a "permanent population" of settled colonists. Zorn's discussion of temporary migrants in this volume refers to the former category while Sanabria's chapter in this volume discusses the latter. Rivera (1990:5-7) shows that while the overall population (transients, migrants, and settled colonists) in the Chapare more than doubled between 1984 and 1989, it began to substantially decline after 1989 for, as the returns from the coca economy fell, many left the region. He suggests that some 91,000 persons were residing in the Chapare in 1990 (less than one third of those

present in 1989), of which about 33 percent were members of the "floating population." The exodus was particularly noticeable in 1990 as coca prices fell to an all time low (McFarren 1990) but the population rose again as prices increased. The total population of this region is very responsive to short term economic fluctuations.

According to a study published in *The Economist*, 1 in every 3.4 economically active Bolivians is involved in the coca/cocaine economy (Krings Fortún 1991) while "drug policy experts" estimated that about 10 percent of Bolivia's work force in 1994 received at least part of their income from "drug related activities" (Sims 1995). As the importance of the coca/cocaine economy weakens, as it is suggested, employment is reduced, which Bolivians recognize could cause serious social upheavals (Krings Fortún 1991, Salm and Liberman, this volume). J. Painter (1994:40), while also emphasizing the large numbers of people making their living from coca/cocaine, also reminds us of the "wide disagreement on the total number of people employed in the coca/cocaine chain, with recent estimates ranging from a low of 120,000 . . . to a maximum of 500,000." Employment estimates, thus, are certainly not definitive, but they do suggest that a great many Bolivians currently depend for all or part of their income on the coca/cocaine economy.

The estimates of the overall economic value generated by the coca/cocaine economy likewise vary greatly. Figures cited widely in Bolivia fix the value generated by the coca/cocaine economy at its highest point in 1987 at \$1.4 to \$1.5 billion (Presencia 1991c, *El Mundo* 1992b), some 24 percent of the GNP (Cortéz 1992:205), with the assumption that \$300 to \$500 million remained in the country. The value of cocaine exports were said to represent three to four times that of legal exports (Quiroga 1990a:37). Blanes (1989) called attention to the fact that the Bolivian black market was supplied by an inflow of cocaine dollars. Campodónico put the worth of the coca itself in the late 1980s at \$304 million (1989:231) while others suggest around \$240 million (Soruco 1991, Cabrera Lemuz 1991). Coca leaf cultivation represented 28.5 percent of the value of the agricultural sector in 1987 according to an UDAPE (*Unidad de Análisis de Políticas Económicas*) study conducted for the Bolivian government, while for the Department of Cochabamba that percentage rose to 63.8 (Soruco 1991, Cabrera Lemuz 1991). According to that same study, coca cultivation alone represented 6.38 percent of the Gross National Product, half of that of mining and hydrocarbons combined (*El Mundo* 1992b).

The value of the coca/cocaine economy declined after 1987. In 1990 the coca growers received only one-third of the prices they had received in 1987 (Presencia 1992b). Although coca prices rebounded somewhat from that nadir, Spedding and Léons demonstrate (this volume) that coccaleros have already had to deal with the end of the coca boom and must now accommodate to a much more volatile coca market than was formerly the case. Similarly, the price commanded by cocaine paste, cocaine base, and refined cocaine in Bolivia declined by about half in the same period (Presencia 1992b). This decline corresponded to an increased supply of coca leaves, as more land was devoted to its cultivation, and a flattening of demand for cocaine in the consumer countries, primarily the U.S. As a result, it is believed that the contribution of the coca/cocaine trade to the total Bolivian economy has decreased, although U.S. estimates are typically lower than Bolivian ones. The United States Agency for International Development (USAID) has claimed (1994:6) that "coca/cocaine represented 37.1 percent of exports and 3 percent of the legal economy in 1992." Continuing decline in 1993 was claimed in a report by the U.S. embassy in Bolivia: from an estimated \$425 million generated by the coca/cocaine economy in 1988 (8.6 percent of the GNP at that time), to only \$166 million, or 2.7 percent of the GNP in 1993, a fall attributed to price decline and more effective law enforcement (Presencia 1995).⁶

Bolivian government estimates, such as those by UDAPE, acknowledge similar trends if not to the same levels. The weight of the coca economy (cocaine is presumably not included in this estimate) in the early 1990s was estimated at between 4.3 and 5.3 percent of the GNP, a decline of some 25 percent over the previous five years (Presencia 1993). Sims (1995), citing "drug policy experts" in Bolivia, reports that cocaine trafficking brought an estimated \$356 million into the Bolivian economy in 1994, or 6.2 percent of the GNP. Although there is no consensus over its exact magnitude, Carlos Toranzo, a Bolivian economist and contributor to this volume, agrees that there probably has been some decrease in the value of the coca/cocaine economy in Bolivia (Presencia 1995). The stabilization of consumption in the U.S. and competition from other drugs which are increasingly in vogue, such as heroin and amphetamines, apparently have made the coca/cocaine industry less lucrative to Bolivia. Bolivia is no more immune to shifts in the international market for this primary product than for any other.

Coca Control Treaties and Legislation

Since the first half of the twentieth century the international diplomatic community has viewed the control of coca cultivation and consumption to be an intrinsic part of efforts to control drug trafficking, as Lema demonstrates in her chapter. The inclusion of coca in anti-drug efforts under the auspices of the League of Nations and, later, the United Nations, continued in the latter half of the century as represented by the Single Convention on Narcotics (the *Convención Unica*) which the Bolivian government ratified in 1961. The Single Convention covered not only cocaine but also coca, requiring that coca chewing be prohibited within twenty-five years. As a result of ratifying the *Convención Unica*, in 1962 the Bolivian government passed a decree calling for a census of coca cultivation and prohibited planting new coca fields. It was clearly recognized even at that time that peasants who could no longer grow coca had to be provided with some alternative ways of making a living. The Ministry of Agriculture was given the job of ultimately eradicating coca by gradually introducing new crops (Quiroga 1990a:55).⁷ Yungas campesinos, clearly recognizing the threat to their lifeway, resisted the documentation of their coca fields. No significant new cash crop was introduced, but coffee cultivation, promoted by a British international aid mission in Coroico, Nor Yungas, expanded in areas not optimum for coca. Legislation in 1973 called for the registration and licensing of cultivators (Quiroga 1990a:56) which, like the previous call for a census of cocales, was ignored by the growers and never effectively carried out. This legislation also called for other crops of equal or higher profitability to be substituted for coca cultivation, a requirement that continues to go unmet.

Bilateral agreements between the U.S. and Bolivia providing funds to the National Bureau for the Control of Dangerous Substances in the 1970s included some \$11 million for PRODES (the Chapare-Yungas Development Project), which promoted coca crop substitution with the technical and financial assistance of USAID. The Bolivian Institute for Agricultural and Livestock Technology (IBTA) inherited the agricultural research begun under PRODES, concentrating its research on experimentation with alternative cash crops and yield maximization. Marketing, however, was considered outside its mandate (U.S. Congress Office of Technology Assessment 1993:88). Marketing has always been the weak link in plans to replace coca with other crops. There has been no failure to

identify crops that could grow well in the semi-tropics of the Yungas and the Chapare. The difficulty lies in marketing those crops and getting a good price for them. The linking of coca reduction to broader development goals was incorporated into law in 1981, when legislation maintained that although specific substitute crops might not be as profitable as coca, the associated advantages of an overall development program would approximate it in the long run (Quiroga 1990a:57). This perspective was made explicit during the administration of President Paz Zamora who pushed for the policy of "coca for development" which maintained that the source of employment for those who gave up coca cultivation could come from any sector of the economy, not necessarily in the Chapare or from agriculture, and would involve public works and infrastructure programs (R. Archondo 1991).

In 1988 the Convention Against Illegal Trade in Narcotics and Controlled Substances was ratified in Vienna, Austria, an agreement that has become known as the Vienna Convention. As did the Convención Unica of 1961, it too called for the eradication of coca. However, as a result of influence by the Bolivian delegation, it also called for integrated rural development and economically viable alternatives for the growers of such plants as coca. Bolivia signed the document, indicating willingness to reduce excess coca cultivation in the context of alternative development. Nevertheless, it registered a reserve to the agreement, maintaining that the coca leaf in itself is not a narcotic and causes no psychological or physiological harm when used traditionally (Romero Berríos 1991:2). In the same year, 1988, the Bolivian government, bowing to pressures emanating primarily from the U.S. passed the *Ley del Régimen de la Coca y Sustancias Controladas*, popularly known as Ley (Law) 1008. Title I of the legislation, dealing with coca, committed Bolivia to the eventual eradication of coca throughout most the country. Title II set up the judicial framework for dealing with "controlled substances" in a form so draconian that its application, as Farthing's chapter demonstrates, has drawn accusations of human rights violations.

This legislation delimited three coca production zones. The first, designated as the zone of legal production to satisfy traditional consumers, covered most of the Yungas of La Paz and Vandiola in the Department of Cochabamba, areas where coca had been grown throughout Bolivian history. The second zone, termed transitional, was comprised of colonization areas into which coca cultivation expanded, primarily in response to demand for illicit use. Most of

the coca now grown in Bolivia comes from this zone. Cochabamba's Chapare area is the most prominent of the areas covered, but additional colonization zones in the Yungas provinces of the Department of La Paz were included as well. Since the coca grown there was defined as excess, to be eliminated, the law, in effect, turned the majority of Bolivian coca farmers into social delinquents who had to give up the occupation which supported them (Hargreaves 1992:45). However, the law calls for coca eradication to be "voluntary," and for economic alternatives to be provided. The third zone was designated a zone of illegal production, where coca could be destroyed by force and without compensation. This zone included the newest colonization areas, especially Yapacaní in the Department of Santa Cruz.

Allowing coca cultivation to continue in the Yungas to supply the needs of the indigenous chewers of leaf coca recognized its place in the traditional medicine and ritual of Andean culture. As well, its use as a stimulant used during work, of no more harm than caffeine in coffee, was protected, consistent with the position maintained in Bolivia's reservation to the Vienna Convention. Nevertheless coca growers vigorously oppose the very inclusion of coca in a law designed primarily to deal with drug trafficking and they continue to demand that it be repealed because they feel it justifies their repression for growing a legal crop (Comisión de la Hoja de Coca 1993:150,156).

International Aid and Alternative Development

The weakness of the Bolivian economy, the poorest in South America, and its significantly higher dependence on foreign economic assistance, has not escaped analysts of the drug trade (Tullis 1995, J. Painter 1994). It is no exaggeration to say that Bolivia is currently awash in international "aid" of one form or another, and it is certainly not a paradox to suggest that this gush of capital probably will not result in improving the living standards of most Bolivians, currently the lowest in South America.

The current inflow of capital stems from improved relationships with international creditors by the Bolivian state after the successful implementation of the structural adjustment program of 1985 (the *Nueva Política Económica* or NPE), which resulted in an increase in foreign private investment, and a range of economic assistance programs wedded to the anti-coca and anti-drug

campaigns being waged. Government to government and U.N. sponsored programs have been paralleled by the spread of unofficial assistance by non-governmental organizations (NGO's) which have proliferated throughout Bolivia (Durán 1990), many funding alternative development programs. It is quite difficult to clearly disentangle "economic" from "anti-drug" assistance given the many ways in which Bolivian foreign policy is intertwined with the coca/cocaine issue. In addition, estimates of foreign assistance themselves are not always consistent. The sums involved, however, are quite large. These funds directly or indirectly serve to prop up the Bolivian state. This is reflected in the percent of the Gross National Product (GNP) represented by either capital flight or investment. Whereas in 1983 capital flight represented six percent of the GNP, by 1987 there was a positive flow of capital, primarily from international creditors such as the IMF and the Inter-American Development Bank (IDB) (Morales and Sachs 1990:247–256). International lenders have been particularly generous; the IDB, for example, agreed to almost \$1 billion in loans during the presidency (1989–1993) of Jaime Paz Zamora alone, a period of very difficult negotiations over the coca issue (Gamarra 1994c:114).

Other estimates are instructive. Van Niekerk (1992:46) claims that "official assistance" from all sources to Bolivia in 1988 totaled \$392 million and that "external technical assistance" surpassed \$738 million in 1990 and was expected to reach \$935 million in 1991. Total U.S. government aid also dramatically increased, from \$43 million in 1985 to over \$203 million in 1992 (Gamarra n.d. 27, Wilkie and Haber 1993:992). USAID, whose development efforts are overwhelmingly tied to the drive against coca, has been an especially important source of funds for major alternative development programs, and tens of millions of dollars of its budget are used each year to shore up Bolivia's balance of payments deficits (USAID 1994). Payments from this agency, which totaled \$183 million between 1986 and 1993 (Marconi 1994:17), are directly tied to the success of coca eradication efforts. According to Van Niekerk (1992:49) USAID alone was projected to channel to Bolivia at least \$155 million between 1992 and 1994. According to other estimates U.S. monies supporting anti-drug efforts in Bolivia during 1992 totaled over \$166 million, of which \$9.8 million was earmarked for development assistance, \$99.9 million in "economic support funds" for direct anti-drug efforts, \$25.9 million for the Bolivian military, \$15.7 million for law enforcement to

support the country program of the BINM, and \$15.4 million for the DEA (Congressional Budget Office 1994:19–24). Despite the ever higher levels of funding requested by the Bush administration to support its “Andean Initiative,” Congress did not meet the request in its actual appropriation. The Clinton administration’s requests for assistance to the Andean countries were more modest. The Congressional Budget Office (1994:19) estimated that in 1994 aid to Bolivia would substantially decline to \$25 million for economic support funds, \$2.3 million for development assistance, and \$5.1 million for the military. Only the budget for law enforcement and the DEA were projected to increase slightly. Despite decline in the magnitude of this government to government aid, the amounts involved still make a substantial contribution to Bolivia’s economy. It is easy to understand how difficult it would be for Bolivia to resist pressure to follow Washington’s lead on drug issues.

Developed countries, primarily the U.S. but also the European community, are providing substantial sums in economic assistance to underwrite programs of crop substitution and regional development, often referred to as “alternative development,” intended to provide other income generating opportunities for the coca cultivating peasants whose crop they demand be eradicated. Sandro Calvini, country director for the U.N. International Drug Control Program in Bolivia, claimed that over \$200 million was spent by the U.S. and U.N. in the Chapare to build roads, bring in electricity and drinking water to some communities, and for alternative crops (Sims 1995). Water and electricity may make life a bit more comfortable but by themselves cannot feed a family. Unfortunately no alternative has yet been found that can provide an equivalent return to growing coca, or even a return that can adequately support a household (Painter 1994).

The glaring fact is that technical assistance programs for decades devoted their attention to experimenting with new crops but did not seriously explore the market potential for any of them (U.S. Congress Office of Technology Assessment 1993). Although J. Painter (1994:116) characterizes this as “scarcely credible” in hindsight, it was surely understandable given the real economic conditions of Bolivia. Few policy makers seriously encouraged the expansion of food crops, such as corn, manioc, wheat, or potatoes, that peasants knew how to and did grow for their own subsistence because “cheap food” policies (Malloy and Gamarra 1988:103; Healy 1993:13) kept prices so low that their sale could not provide viable incomes.

However, neither could an internal market of impoverished people absorb the non-traditional, "luxury," commodities that coca growers were encouraged to switch to, such as passion fruit, pineapple and macadamia nuts, and on the international market these non-traditional agricultural exports did not prove to be competitive. More traditional exports, like coffee, widely grown in the Yungas, faced a price collapse on the international market that affected all producer countries (Léons, this volume). More sophisticated research and development has not changed and probably will not substantially alter this situation. The potential success or failure of alternative development is often discussed in economic and technical terms, as though solving the problem of replacing coca with a viable and sustainable alternative were just a matter of patience, judicious investment, and technical expertise. Yet, political considerations permeate the process at all levels. For example, experts and consultants suggested that soybeans and citrus fruits stood an excellent chance of being competitive in the international market and could replace coca, but powerful interests representing large-scale U.S. soybean and citrus growers lobbied against legislation then pending in the U.S. Congress that would have awarded technical and credit assistance to Bolivian farmers to grow these crops (see U.S. General Accounting Office 1991).

On the local level, campesinos are legitimately concerned about the dismantling of an economically and socially viable productive system (Spedding, this volume) only to face uncertainty and impoverishment. Policy makers following a supply side strategy in controlling the cocaine trade push for the eradication of coca and attempt to disarm the opposition with a promise that if cocalers accept alternative development they will not suffer economically. Support for alternative development, we argue, is part of the rhetoric that the U.S. and European countries use to justify their own interest in terms less costly for them: supply reduction rather than demand reduction drug control strategies. Law 1008 calls for coca eradication to be accompanied by alternative development. The fact that Bolivian president Sánchez de Lozada, himself recognized that alternative development has not worked and is "a great disaster" (*un gran desastre*) (Presencia 1994a) did not lead him or his top advisors to conclude that the resistance by cocalers to eradication was justified but, rather, led him to question whether his government should maintain its commitment to voluntary rather than forced eradication.