INTRODUCTION: ILLEGAL DRUG MARKETS, RESEARCH AND POLICY

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INTRODUCTION

Illicit drug use is widespread across most industrialised countries. The prevalence of illicit use is probably measured best in the United States: at least 14 million people, or 6% of the population, use illicit drugs every month (Office of National Drug Control Policy [ONDCP], 1999). Nor is this pattern of use confined to the U.S. In Britain, for example, around 2 million people use illicit drugs each month, representing 6% of the population aged 16 to 59 (Ramsay and Partridge, 1999).

Only the brave would try to make a precise count of global annual production of illicit drugs. There are some "order of magnitude" figures, however. For example the annual global production of heroin has been put at 550 tonnes (metric tons) per year in the 1990s; the corresponding figure for cocaine in 1996 was 1,000 tonnes (United Nations Drug Control Programme [UNDCP], 1997). Some countries have estimated levels of consumption, though these estimates will also be subject to wide margins of error. In the U.S., the figure for expenditure on illicit drugs in 1995 was put at $57 billion (ONDCP, 1997a). The corresponding figure for the U.K. is £3.9 billion to £8.5 million (Office of National Statistics [ONS], 1999). Even allowing for very substantial imprecision, these figures suggest that the illicit

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drugs industry accounts for a sizable slice of the gross national product in industrialised countries.

Despite the size of the illicit drugs market, little is known about the structure of the distribution process in different countries, the way in which markets respond to changes in supply and demand, and the impact of enforcement. Expenditure on research has been limited, whether measured against the scale of the business or against public expenditure designed to curtail illicit drug use. Much of the research that *has* been done has been conducted with the primary aim of developing academic theory, with limited attention to the policy implications; some research has positively distanced itself from the concerns of drug control policy. For whatever reason, public and political debate about drugs has remained largely insulated from the body of research that has actually been carried out to date.

We have put this book together in the hope that it may play a part in drawing researchers a little closer to policy and in encouraging politicians and their advisors to engage more willingly with the research community. We do not wish to see a situation in which research is simply the servant of policy. Policy perspectives and priorities should not dominate the research agenda. However research in the field can and should "speak to" policy concerns more explicitly, without necessarily losing any critical edge to its voice.

The book has its origins in a conference that we organised at John Jay College, New York in April 1999. We invited leading academics and policy advisors in the U.S. and Europe to prepare papers that described their most recent research in this field and drew out the implications for drug control policies. The papers are collected together in this book. The purpose of this introduction is to orient the reader to the various themes that emerge from their work.

Varieties of User

While a large number of people engage in illicit drug use in industrialised Western countries, most do so in a relatively controlled way. Their use is restricted largely to cannabis (cf. ONDCP, 1999; Ramsay and Partridge, 1999; European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 1999; Johnston et al., 1999). A minority engages in heavier use of a wider variety of drugs and a proportion of this minority are chaotic users with serious problems of dependency. Difficulties both of definition and measurement make it hard to estimate what proportion of illicit drug users show dependent or chaotic patterns of use. ONDCP (1997) estimated that in the U.S. in 1995 there were 4 million "hardcore" users of cocaine and 810,000 "hardcore" users of heroin. According to the data by the National

Household Survey of Drug Abuse and DUF (Drug Use Forecasting, now known as ADAM Program for the Arrestees Drug Abuse Monitoring System), the majority of heroin users are hardcore users (ONDCP, 1997a). This estimate defined hardcore users as those who use either drug at least once a week; a significant proportion of these, of course, would maintain nondependent patterns of use. In Britain it has been estimated that between 100,000 and 200,000 people — around 3% of all those who use illicit drugs annually — might be defined as drug-dependent or as having other serious drug-related problems. Problem users may represent a minority of the total, but the sheer quantity of their use means that they will account for a large portion, at least, of expenditures on illicit drugs.

There are wide variations in patterns of drug use both within and among countries. Among drugs of dependence, cocaine (especially as crack) has predominated in the U.S. since the early 1980s even if its use has been declining. In Britain, by contrast, and in most other European countries heroin use easily outstrips that of cocaine (Ramsay and Partridge, 1999; EMCDDA, 1999). However, its use in the U.S. is now increasing. MDMA (methylenedioxymethamphetarnine or ecstasy) has become well-embedded in youth culture in many European countries, but less so in the U.S. until recently. At the time of writing, the use of methamphetamine (ice) was well established on the West Coast of the U.S., but less so on the East coast (ONDCP, 1997a). Despite predictions over a period of years that methamphetamine use would sweep across Europe, it remains comparatively rare there.

As might be expected, different types of users typically use different types of retail markets, and these are supported by different types of distribution or supply systems. Howard Parker's research (this volume) discusses how, for recreational users in Britain, the process of acquiring drugs is rarely seen as a retail transaction. He found that networks of friends and acquaintances help each other out, give and receive drugs without payment, and buy drugs in a consortium. By contrast, regular dependent users are more likely to engage in explicit commercial transactions. For example, Murphy and Arroya's study of women users on the West Coast of the U.S. (this volume) paints a picture of an unequivocal retail market, albeit one characterised by high levels of mistrust between buyers and sellers.

Varieties of Retail Market

As with any other type of commodity, illicit drugs are traded within a market through which buyer and seller have to locate one

another in order to conduct a transaction. Previous research has described various forms of the retail market system. Curtis and Wendel's chapter in this volume sets out a two-dimensional typology that differentiates forms of retail distribution according to:

- Social organisation — freelancers vs. socially-bonded businesses vs. corporation
- Technical organisation — street-level vs. indoor vs. delivery.

Several studies have documented place-specific markets, such as street-level or indoor markets in Curtis and Wendel's typology. These usually involve the sale of cannabis, heroin, crack or other drugs to anyone who looks like a plausible buyer (e.g., Curtis and Wendel, this volume; Edmunds et al., 1996; Lee, 1996; Johnson et al., 1990). Rengert et al. (this volume) describe how retail markets in Delaware were spatially concentrated in ways that facilitated access both to local users and those users using interstate highways.

It is helpful to refer to these as *open markets;* they are open to any buyer, with no need for any prior introduction to the seller, or other similar barriers to access. For licit transactions, an open market has advantages for both buyers and sellers. Buyers know where to go in order to find the goods they want and can trade quality against price. Sellers are able to maximise customer access. In an illicit market, there are complications including the need to balance access with security. Not only must buyer and seller be cautious of police activity — both overt and undercover — they must also be aware of their own personal safety (Eck, 1995).

The main advantage of an illicit open street market — ease of locating buyers and sellers — is also its major drawback for participants: it renders them vulnerable to policing (Eck, 1995). In response to the risks of enforcement, open markets tend to be transformed into *closed markets.* These are ones in which sellers will only do business with buyers whom they know, or for whom another trusted person will vouch. The degree to which markets are closed — the barriers to access put in the way of new buyers — will depend largely on the level of threat posed by the police. Intensive policing can quickly transform open markets into closed ones. Johnson and colleagues (this volume) describe the evolution of New York City crack markets, which moved from open systems to closed ones in response to enforcement. Throughout the decade covered by his research, the distribution system serving the retail market remained fairly structured, with clear task differentiation. Similar patterns of adaptation have been described by Hamid, 1998; Edmunds et al., 1998; and May et al., 1999.

If retail drug markets have always been responsive to policing, their capacity to adapt has been greatly extended by the emergence of mobile phones. The pace of change has been so rapid that ethnographic work conducted before the mid-1990s is only a very partial guide to the way in which retail drug markets now function. Until the mid-1990s, street sellers tended to operate in specific, well-defined places. This was to allow buyers to locate them with ease. Increasingly, contact is now made by the buyer ringing the seller's mobile and making an appointment to meet at an agreed (or prespecified) place (Hamid, 1998, Curtis and Wendel, this volume; Edmunds et al., 1996; Chatterton et al., 1995). A variant on this is for delivery systems where drugs are delivered to the buyer's home or other specified locations. Mobile phones thus minimise the risks associated with illicit transactions by making police surveillance largely impractical (Natarajan et al., 1996; Natarajan et al., 1995).

Other developments in communications technology, both licit and illicit, are likely to pose increasing challenges to enforcement. For example, there is a proliferation in the ways in which telephone air time can be bought, or stolen, in ways that render the buyer untraceable. For example, smart cards can be bought that provide a set amount of phone time, which can be accessed from any phone; there are 1-800 companies that pre-sell airtime for cash, and "pay-as-you-go" cell-phones that cannot be linked to the user's name and address. These systems all make it increasingly difficult to maintain effective surveillance. The "cloning" of stolen cell-phones can make surveillance virtually impossible (cf. Natarajan et al., 1995); stolen credit cards can also readily be used to make local and international calls from pay phones with little prospect of interception.

The role of the Internet is also likely to develop. Already there are documented cases of sales of ecstasy and other illicit drugs being arranged through Internet chat-rooms *(New York Times,* 17 November 1999). Cannabis seeds can be bought over the Internet — legally in some jurisdictions — from suppliers based in the Netherlands. E-mail, especially when sent from Internet cafes, may prove useful to traffickers as a discreet way of communicating. One can foresee a game of cyber-leapfrog between distributors and enforcement agencies, as the former adapt to the preventive measures of the latter. The likelihood is that exploitation of advanced communications technology will be restricted to trafficking, where the number of people involved is relatively small and the risks high. At the retail level the need for sophisticated methods of communication is less pressing and is likely to mirror those used by legitimate businesses (Eck and Gersh, this volume).

It is unclear what proportion of illicit drugs are bought in open street markets and what proportion are bought in phone-based closed markets and delivery systems that are replacing the open street markets. It is even harder to assess the degree of drug distribution that occurs through social networks. Given the choice, most users would buy from friends, or from sellers whom they know and trust, in a private rather than a public space. For example, according to a ONDCP report (1997b) in Trenton /Newark, some suppliers of heroin are most often older students or recent graduates who are users and are familiar faces among the students. Most users do have a degree of choice, as their wish to buy drugs is not fuelled by dependency. As mentioned above, Parker's studies in the North West of England (this volume) found that very few young users had direct face-to-face contact with people whom they regarded as dealers. Rather, they were "sorted" by a friend of a friend, or the brother of a mate, for example, buying in circumstances where they felt that they could invest some trust in the source of supply. These supply networks can be thought of as another form of closed retail market.

Pub- and club-based retail markets are likely to form another significant part of drug distribution systems, in particular for ecstasy and other drugs used by clubbers. These should probably be thought of as semi-open, in that sellers will generally do business in the absence of any prior introduction, provided the buyer looks the part. Ruggiero and South (1995) reckoned that most illicit drug buying in Britain takes place in private or semi-public places such as pubs and clubs. This may well be true in the sense that a majority of buyers use such systems. It is more questionable whether the majority of drug *expenditure* takes place in dealing networks of this sort. While problem users comprise a minority of the total, they consume drugs at such a rate that they account for a significant slice of illicit drug sales. It may well be that problem users' needs for very regular and dependable supplies of drugs locks them into street markets or phone-based markets serviced by sellers who operate on a full-time basis.

Varieties of Distribution System

Behind any system of retailing must lie a distribution system, which imports or manufactures and then distributes drugs. Traditionally, the structure of drug-distribution systems has been viewed as pyramidical, with large-scale importers and traffickers operating at the apex, filtering down to street dealers who operate on the lowest tier (Gilman and Pearson, 1991). Many popular films have portrayed

drug-trafficking organisations as large, highly disciplined, hierarchical organisations. Research has suggested a more complex picture.

Certainly some studies, such as Natarajan's (this volume) have uncovered organisations with clear hierarchies and well-defined job functions. However, distribution systems can take widely differing forms. Building on Johnson et al.'s (1992) typology and that of Curtis (1996), Natarajan and Belanger (1998) derived a two-dimensional typology from their analysis of 39 American drug-trafficking organisations, classifying them according to drug-dealing task and organisational structure. The latter dimension comprised:

- Freelancers — small, non-hierarchical entrepreneurial groups
- Family businesses — cohesive groups with clear structure and authority derived from family ties
- Communal businesses — flexible groups bound by a common tie such as ethnicity
- Corporations — large, formal hierarchies with well-defined divisions of labour

Natarajan and Belanger (1998) found that organisational structure varied according to function or task (manufacturing, import/smuggling, wholesale distribution/regional distribution). Freelance groups tended to restrict themselves to one or at most two stages in the trafficking process and were rarely involved in regional distribution. Corporations, on the other hand, tended to operate at several levels. Not all were concerned with importation or manufacture; however, most tended to get involved in retail as well as wholesale operations. Eck and Gersh (this volume), examining the structure of domestic trafficking organisations within the Washington/Baltimore area, found that the system predominately took the form of a cottage industry.

In Britain, Dom et al. (1992) found that in the late 1980s at least, *domestic* supply systems (as opposed to importers) were not organised as neat, top-down hierarchies controlled by a "Mr Big." This is not quite the same as saying that British supply systems are disorganised. Rather, Dorn and his colleagues painted a picture of a fragmented and fluid system populated by a range of opportunistic entrepreneurs from a variety of backgrounds — licit businesses with an illicit sideline. These entrepreneurs are career criminals who turn from other "project crimes" such as bank robbery or major fraud to trafficking. They are people who may, to some extent, believe in their product; users buying for each other. Akhtar and South (this volume) describe a lower level supply network in which kinship and friend-

ship play a significant role. However, in more recent research on importation into Britain, Dorn and other colleagues (1998) paint a rather different picture, one more in keeping with media images of "organised crime." Perhaps arrangements vary over time and at different levels of the market.

Little research to date has succeeded in mapping the interrelationships between distribution systems above low-level street and retail markets. Nor have any studies shed much light on the intersection between distribution systems and the closed supply networks through which most young people get drugs. It is clear that the typologies of upper level distribution and of retail markets are similar and compatible. However, very little research has been done on whether, for example, freelance or family-based traffickers have links with corporate distributors at the domestic distribution and retail levels.

Supply, Demand and Enforcement

The relationships between the supply of illicit drugs, the demand for them and enforcement activities are poorly conceptualised by politicians and policy officials and are seriously under-researched. Popular debate about drugs tends to take for granted that illicit drug use is supply-led, and that illicit drug use is best controlled by stopping drugs getting into the country and onto the streets. In reality there is a buoyant demand for a commodity whose value is well embedded in youth culture and that simultaneously meets the need for excitement, risk taking, and novelty (cf. Parker et al., 1998a and 1998b). This may suggest that the market for illicit drugs is demand-led — that supply follows demand, and is a response to it. In reality, of course, there is a dynamic and interactive relationship between supply and demand. With no supply of illicit drugs, no demand would ever evolve and, unless drugs offered users some immediate attractions, there would never be enough demand to consolidate sources of supply.

Policy initiatives often make distinctions between supply reduction strategies and demand reduction strategies. The former involve enforcement activity designed to disrupt supply, while the latter may deploy enforcement or other means to reduce demand. The distinction becomes hard to maintain when one recognises that changes in levels of supply are likely to affect prices, and that changes in prices are likely to affect demand. Except in those rare situations where it is genuinely possible to stifle the supply of illicit drugs, the impact of supply-reduction strategies is likely to be mediated through changes in price.

We know very little about the ways in which supply reduction strategies impact prices, and the ways in which prices are related to demand. Economic theory would lead us to think of interdiction and enforcement strategies as methods of increasing prices. There are two ways this could happen. First, the simple process of removing drugs from the distribution system should increase scarcity and thus increase price. Secondly, the increased risks imposed by the police on participants should be translated into higher prices. Either way, the higher prices should encourage consumers to depress their consumption in much the same way that they would respond to added taxation of alcohol and tobacco.

In reality, the prices of most illicit drugs in most developed countries have been stable or falling (ONDCP, 1997a; Institute for the Study of Drug Dependence [ISDD], 1999; EMCDDA, 1999) For example, cannabis prices in the U.S. peaked in the early 1990s and have been falling since. Heroin prices have also been falling (Hamid et al., 1997). Cocaine prices have been fairly stable (Johnson et al., this volume) and quality has fallen. In real terms, therefore, prices may actually have risen. In Britain cannabis prices have been fairly stable in cash terms for many years, representing a fall in real terms. The cash price per gram of both heroin and cocaine has fallen quite steeply in recent years, even if the unit of purchase remains the same — a £10 wrap of heroin and a £20 rock of crack.'

It remains obscure precisely how closely these patterns in price relate to enforcement activity. Is the maintenance (or rise) of cocaine prices in the U.S. a function of enforcement? And can this price maintenance account for the reductions in U.S. cocaine use? Has there been a switch from (crack) cocaine use to cannabis? Does the fall in U.S. heroin prices account for the rise in use or the abundant supply? The short answer is that we do not know. However, it is a reasonable conjecture that other factors, such as changes in youth culture, and the collective learning from experience, may be equally important explanatory factors. It is certainly plausible that young people who directly witness the destructive consequences of high-risk drug use, such as smoking crack or injecting heroin, will themselves be "inoculated* against such forms of drug use (cf. Johnson, this volume; Parker et al., 1998a; Inciardi and Harrison, 1998).

There are several reasons for expecting very complex relationships between enforcement, supply and demand. Some writers (e.g., Rasmussen and Benson, 1994; Kleiman, 1992; Reuter, 1992; Reuter et al., 1990) have focused on the adaptations that distribution systems make to enforcement, and to the perverse effects that apparently effective enforcement may bring. Possibly the main adaptation is the replacement of personnel, where others take over the roles and func-

tions of those who have been arrested. Where there is a buyer's market, it is obvious how this process could undercut the impact of enforcement: removing a few sellers from an oversupplied market will not increase scarcity at all; at best it will stop prices from sliding.

The most likely perverse effect of supply reduction strategies is a complex one. The very act of sustaining prices may actually stimulate the market by drawing new "players" into the system. According to this argument, enforcement can be successful in sustaining or increasing risks of criminal sanctions. These risks are translated into maintained or increased prices, but the result is to attract more people into the highly lucrative — if risky — drug business. If this argument holds up, successful enforcement strategies contain the seeds of their own failure.

Dependency and Elasticity of Demand

Assuming that drug control strategies can have at least a degree of impact on drug prices, it is important to consider how such changes will affect levels of consumption. As we have discussed, most illicit drug use is controlled and involves sales in small amounts. Purchases are often opportunistic, and if a specific drug is in short supply, there is a range of licit and illicit alternatives. There should therefore be considerable elasticity of demand in response to price changes. In principle at least, it should be possible to price controlled drug users out of specific drug markets.

Problem drug users will demonstrate much greater inelasticity (cf. Thomas, 1992; Wagstaff and Maynard, 1988). The extent to which dependency locks people into a state of irresistible demand is open to question (cf. Ditton and Hammersley, 1995; Rasmussen and Benson, 1994). The more it does so, however, the more that levels of demand will be insensitive to changes in price. Dependent users with access to large amounts of money will simply spend more. Criminally involved dependent users will spend more of other people's money.

The implications of this are twofold. First, if it proves possible to maintain or increase prices through supply reduction strategies, the impact will be greater on the large number of moderate users than on the small number of heavy users. Secondly, it is clearly important to find strategies which reduce problem users' demand in additional to any of those which rely directly or indirectly on price control.

Inconvenience Policing

Low-level policing methods strive to disrupt markets, making them less predictable for both buyer and seller (Murji 1998; Lee, 1995; Kleiman, 1992). This strategy is seen to be most effective when

combined with attempts to divert drug offenders away from the criminal justice system and into treatment services (cf. Edmunds et al., 1998), and has been abetted by the introduction of arrest referral schemes (South, 1998). Selective policing aims to target dependent users in an attempt to reduce demand within a market. The argument is that by removing regular customers from the market, consumption will decrease, resulting in a reduction in price, which in turn would lead to a decline in drug related crime (Kleiman and Smith, 1990).

A second principle of low-level enforcement is inconvenience policing that aims to increase the drug search time or to otherwise place obstacles in the way of the buying process. Although such measures will probably do little to deter problematic users, the idea is that casual and novice users will be discouraged from buying, therefore constricting the market (Murji, 1998). Knutsson (this volume) describes how Swedish retail markets appear to have been very responsive to intensive policing.

It is clear that whatever strategies are employed to tackle the distribution of illicit drugs, those responsible for drug policy must be aware of the intended consequences such strategies often bring. The relative inelasticity of demand among dependent users means that the markets will be very lucrative and will adapt and transform rather than disappear.

Demand Reduction and Treatment

Traditionally most jurisdictions have envisaged strategies of both supply reduction and demand reduction in terms of enforcement. In other words, the main levers for reducing supply and demand have been thought of as deterrent threat, incapacitation of offenders, and the seizure of drugs. For supply reduction this is largely correct, although there may be some room for source-country strategies such as crop substitution programmes. For demand reduction, treatment of dependent users represents an increasingly promising avenue. Killias and Aebi (this volume) describe the results of an effective experiment in the maintenance prescription of heroin for long-term dependent users, which not only achieved marked reductions in crime and health benefits for those involved, but also substantially disrupted the illicit heroin market.

The logic of demand reduction through treatment is that dependent users, though a small proportion of the total number of illicit users, actually accounts for a large degree of consumption (cf. Edmunds et al., 1999; ONDCP, 1997a). Thus, effective treatment services targeted on heavily dependent users may have an impact on

overall levels of demand disproportionate to the numbers of people involved. The harder services to put in place are those that effectively encourage typically young, casual or novice users to contain or reduce their use.

Ethnic Minorities and Distribution of Drugs

A consistent feature of drug distribution systems in industrialised countries has been the involvement of ethnic minority groups in some stages of the process (Natarajan, 1998; Akhtar and South, this volume; Hamid, 1998; Pearson and Patel, 1998; ONDCP, 1997b). In part this can be seen as a consequence of the international nature of much drug trafficking: those from source countries will by definition be minorities in the country of import. Ruggiero's discussion (this volume) of Albanian trafficking of cannabis is a case in point. Akhtar and South (this volume) describe a South Asian distribution network whose viability depended to a significant degree on privileged access to suppliers. However, there is also a tendency for minority groups to play a part as dispensable "foot soldiers" both as mules in importing drugs and as runners at retail level. The extent to which ethnic minority involvement is a reflection of social exclusion, and the extent to which it is a function of access and opportunity is clearly a question in need of further research. The likelihood is that those involved in street-level retail markets are drawn into the process mainly because of their disadvantaged social and economic status. By contrast those at higher levels of the distribution system are more likely to have links with the source country even when they occupy fairly dispensable roles in the process.

Drug Markets: From Research to Policy

The final chapter in this book, by Peter Reuter, considers how more policy-relevant research can be motivated, and discusses the sort of research agenda that would make a more significant contribution to policy. Perhaps his most important point is that policy questions have to be built into the design of research studies, not simply grafted on the end. This will require some changes in the way that research on drug markets is funded. To date, there has been an uneasy collusion between government funding agencies anxious to get research off the ground and academic researchers anxious to find money for their studies. They have both proceeded on the questionable assumption that improved academic understanding of problems will lead inevitably to improved policy. The result has been that funding agencies often do not get what they need in terms of policy relevance and the blame tends to fall on the researchers. In fact, as

Reuter points out, policy-oriented research must be attentive to policy questions from the outset. We would not suggest that researchers must accept in an unquestioning way the assumptions that underpin policy thinking. But policy research has to *engage* with the preoccupations of policy, however distorted these may be by the highly politicised nature of discourse on drugs. Dorn (this volume) provides an excellent example of the intelligent deployment of research to help policy address the arcane — even Byzantine — problems of performance measure in an environment in which simple "single figure* measures are at a premium.

Reuter's chapter goes a long way to framing a policing research agenda for the future. At a lower level of specificity we would identify four thematic priorities of our own. First, we believe that the imbalance between research on retail markets and on upper-level trafficking needs to be corrected and in the process more needs to be discovered about the links between traffickers and retailers. Because of the considerable difficulties of undertaking research on trafficking noted by Natarajan in this volume, this will require researchers to develop new methodologies for obtaining the required information. One promising approach involves much more systematic analysis of various kinds of data collected by law enforcement agencies in their efforts to identify and prosecute traffickers. Gaining access to these data has proved difficult to date because of trust and privacy concerns, but this could change if studies were more explicitly tailored to address policy perspectives. As well as new methodologies, perhaps some new disciplinary perspectives would enhance the study of trafficking. In particular, a business perspective on the ways that traffickers identify, supply and exploit new markets could be very illuminating.

Second, the crucial interaction between supply and demand needs to be better understood. This topic seems to have fallen between the cracks in the boundaries between funding agencies. In the United States, for example, speaking very generally, research on supply is the responsibility of the National Institute of Justice, while research on-demand is the province of the National Institute of Drug Abuse (NIDA). Neither agency has been very willing to fund work that may seem to impinge on the territory of the other and researchers may not know how to negotiate the difficult terrain at the boundary. NIDA's support of this book, which goes beyond its traditional research remit, may be one sign that solutions to this funding impasse are being sought.

Third, the growing recognition that prevention is as relevant to drug dealing as to drug use will spur new research agendas. The preventive approaches relevant to dealing and trafficking rely more upon

reducing opportunities for these activities than upon attempting to change the attitudes or beliefs of those involved in these activities. They depend upon detailed studies of the modus operandi of dealers and traffickers, and less upon their personal backgrounds. Consequently, these preventive approaches have more in common with the situational methods that are the subject matter of *Crime Prevention Studies,* than the rehabilitative and therapeutic approaches in the probation, counselling and psychiatric literatures.

Our final conclusion is that, just as dealing and trafficking span international boundaries, so research needs to be international in character. This does not mean that every research study should have an international dimension. It means only that the findings of studies conducted in different countries need to be constantly interpreted in the light of knowledge gained from similar studies conducted elsewhere. This volume, consisting of papers by a distinguished group of international scholars, is intended to contribute to this endeavour.

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REFERENCES

Chatterton, M., G. Gibson, M. Gilman, C. Godfrey, M. Sutton and A. Wright (1995). *Performance Indicators for Local Anti-Drugs Strategies: a Preliminary Analysis.* (Crime Detection and Prevention Series, Paper #62.) London, UK: Home Office Police Research Group.

Curtis, R. (1996). "War on Drugs in Brooklyn: Street-level Drug Markets and the Tactical Narcotic Teams." Doctoral dissertation, Teachers College, Columbia University, New York, NY.

Ditton, J. and R. Hammersley (1995). "The Typical Cocaine User: How Our Blinkered Vision of the Cocaine User Has Created the Myth of Cocaine's Irresistability." *Druglink* 9(6): 11-14.

Dorn, N., L. Oette and S. White (1998). "Drugs Importation and the Bifurcation of Risk: Capitalization, Cut Outs and Organised Crime." *British Journal of Criminology* 38(4):537-560.

—- K. Murji and N. South (1992). *Traffickers: Drug Markets and Law Enforcement* London, UK: Routledge.

Eck, J. (1995). "A General Model of the Geography of Illicit Retail Markets." In: J.E. Eck and D. Weisburd (eds.), *Crime and Place.* (Crime Prevention Studies vol. 4.) Monsey, NY: Criminal Justice Press.

European Monitoring Centre for Drugs and Drug Addiction [EMCDDA} (1999). *Annual Report on the State of Drugs Problems in the European Union 1999.* Lisbon, PORT.

Edmunds, M., M. Hough, P.J. Turnbull and T. May (1999). *Doing Justice to Treatment: Referring Offenders to Drug Services* (Drugs Prevention Advisory Service Paper #2.) London, UK: Home Office, Drugs Prevention Advisory Service.

——T. May, I. Hearden and M. Hough (1998). *Arrest Referral: Emerging Lessons from Research.* (Drugs Prevention Initiative Paper #23.) London, UK: Home Office, Central Drugs Prevention Unit.

——M. Hough and N. Urquia (1996). *Tackling Local Drug Markets.* (Crime Prevention Initiative Paper #80.) London, UK: Home Office, Police Research Group.

Gilman, M. and G. Pearson (1991). "Lifestyles and Law Enforcement." In: D. Whynes and P. Beans (eds.), *Policing and Prescribing.* Basingstoke, UK: Macmillan.

Hamid, A. (1998). *Drugs in America.* Gaithersburg, MD: Aspen.

——R. Curtis, K. McCoy, J. McGuire, A. Conde, W. Bushell, R. Lindenmayer, K. Brimberg, S. Maia, S. Abdur-Rashid and J. Settembrino (1997). "The Heroin Epidemic in New York City: Current Status and Prognoses." *Journal of Psychoactive Drugs* 29(4):375-391.

Inciardi, J.A. and L.D. Harrison (eds.) (1998). *Heroin in the Age of Crack Cocaine.* Beverly Hills, CA: Sage.

Institute for the Study of Drug Dependence (ISDD) (1999). *UK Trends and Updates.* London, UK. [www.isdd.co.uk/trends].

Johnson, B.D., A. Hamid and H. Sanabria (1992). "Emerging Models of Crack Distribution." In: T. Meiczkowski (ed.), *Drugs, Crime, and Social Policy.* Boston, MA: Allyn and Bacon.

——T. Williams, K. Dei, and H. Sanabria (1990). "Drug Abuse and the Inner City: Impact on Hard Drug Users and the Community." In: M. Tonry and J.Q. Wilson (eds.), *Drugs and Crime.* (Crime and Justice Series, vol. 13.) Chicago, IL: University of Chicago Press.

Johnston, L.D., P.M. O'Malley and J.G. Bachman (1999). *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1998.* Rockville, MD: National Institute on Drug Abuse.

Kleiman, M. (1992). *Against Excess: Drug Policy for Results.* New York, NY: Basic Books.

——and K. Smith (1990). "State and Local Drug Enforcement." In: M. Tonry and J.Q. Wilson (eds.), *Drugs and Crime.* Chicago, IL: University of Chicago Press.

Lee, M. (1996). "London: 'Community Damage Limitation' Through Policing?" In: N. Dorn, J. Jepsen, and E. Savona (eds.), *European Drug Policy and Enforcement.* Basingstoke: Macmillan.

May, T., M. Edmunds and M. Hough (1999). *Street Business: The Links between Sex and Drug Markets.* (Police Research Series Paper #118.) London, UK: Home Office, Policing and Reducing Crime Unit.

Murji, K. (1998). *Policing Drugs.* Hampshire, UK: Ashgate.

Natarajan, M. (1998). "Drug Trafficking in New York City." In: A. Karmen (ed.), *Crime and Justice in New York City.* New York, NY: McGraw Hill.

——and M. Belanger (1998). "Varieties of Upper-level Drug Dealing Organisations: A Typology of Cases Prosecuted in New York City." *Journal of Drug Issues* 28(4): 1005-1026.

——R. Clarke and M. Belanger (1996). "Drug Dealing and Payphones: The Scope for Intervention." *Security Journal* 7:245-251.

——R. Clarke and B.D. Johnson (1995). "Telephones as Facilitators of Drug Dealing: a Research Agenda." *European Journal of Criminal Policy and Research* 3(3): 137-154.

New York Times (1999). "13 on Staten Island Accused in Internet Sales of Illicit Drugs." 17 November, p.B5.

Office of National Drug Control Policy (1999). *National Drug Control Strategy: 1999.* Washington, DC.

——(1997a). *What America's Users Spend on Illegal Drugs, 1988-1995.* Washington DC.

——(1997b). *Pulse Check National Trends in Drug Abuse.* Washington DC.

Office of National Statistics (ONS) (1998). *Economic Trends No. 536.* London, UK.

Parker, H., C. Bury and R. Eggington (1998a). *New Heroin Outbreaks among Young People.* (Crime Detection and Prevention Paper #92.) London, UK: Home Office.

——J. Aldridge and F. Measham (1998b). *Illegal Leisure: The Normalisation of Adolescent Recreational Drug Use.* London, UK: Routledge.

Ramsay, M. and S. Partridge (1999). *Drug Misuse Declared in 1998: Results from the British Crime Survey.* (Home Office Research Study #197.) London, UK: Home Office.

Rasmussen, D. and B. Benson (1994J. *The Economic Anatomy of the Drug War: Criminal Justice in the Commons.* Lanham, MD: Rowman and Littlefield Publishers, Inc.

Reuter, P. (1992). "The Limits and Consequences of US Foreign Drug Control Efforts." *The Annals of the American Academy of Political and Social Science* 521:151 -162.

——R. MacCoun and P. Murphy (1990). *Money from Crime: A Study of the Economics of Drug Dealing in Washington D.C.* RAND.

Ruggiero, V. and N. South (1995). *Eurodrugs, Drug Use, Markets and Trafficking in Europe.* London, UK: UCL Press.

Sarno, C, M. Hough and M. Bulos (1999). *Developing A Picture ofCCTV in Southwark Town Centres.* London, UK: Report for London Borough of Southwark [www.sbu.ac.uk/cpra].

South, N. (1998). "Tackling Drug Control in Britain: From Sir Malcolm Delevingne to the New Drugs Strategy." In: R. Coomber (ed.), *The Control of Drug Users, Reason or Reaction.* Harwood, UK: Academic Press.

Thomas, J.J. (1992^. *Informal Economic Activity.* London, UK: Harvester Wheatsheaf.

United Nations Drug Control Program (UNDCP) (1997). *Global Illicit Drug Trends.* Vienna, AUS: United Nations, Office for Drug Control and Crime Prevention.

Wagstaff, A and A. Maynard (1988). *Economic Aspects of the Illicit Drug Market and Drug Enforcement Policies in the United Kingdom.* (Home Office Research Study #95.) London, UK: Home Office.

NOTES

1. The other variable to take into account is purity. If the quality of street drugs has declined, then there are no grounds for arguing that real prices have actually fallen.