

ON THE GENERAL THEORY OF ADDICTION AND THE SPECIAL
COMPLICATIONS OF HEROIN

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The idea of addiction already has a long history in our civilization.¹ Today, it somewhat shakily stands as a scientific concept with strong moral overtones. This is not difficult to understand as so many general scientific concepts (e.g. relativity) emerge from and are imbedded in common sense and everyday morality.² The original meaning of the word addiction referred to a state of being formally bound over or devoted - an essentially ambiguous and moral term. It first came into common usage in the Sixteenth Century where it was associated with something frailly human - "As the spirit of God is bound to no place, even is he not addict to any age or person (1533)". The development of humanism in our civilization in the Seventeenth Century shifted the meaning of the term toward the heroic devotion of humanity to the study of the arts and sciences, - "his genius addicted him to the study of antiquity (1660)". By the progressive Nineteenth Century the term began losing its positive meaning and became commonly associated with immoral conduct. Thus, John Stuart Mill, (1859) used the term in his famous essay. "On Liberty", to refer to a fall from civilization - "A man who causes grief to his family by addiction to bad habits".

In the Nineteenth Century the "bad habits" associated with the term addiction became increasingly focused on the use and abuse of alcohol and drugs. International moral crusades were launched to save humanity from the ravages of alcohol and drug addiction. During this period the medical profession also became interested in this social problem and began clinical investigations of addiction. Nevertheless, there was no clear consensus of medical opinion as to the nature of addiction. Despite international, national and local laws prohibiting the distribution of alcohol and drugs that emerged in the period from 1900 to 1930, the medical profession was far from clear in whether the whole problem fell within its locus of competence.³ In the late Nineteenth Century terms such as alcoholism morphinism and cocaineism began appearing in medical texts, but no such general term as addiction.

Nevertheless strong moral interests pushed for a prohibition against both drugs and alcohol. In the United States, where the political struggle was most intense, anti-drug legislation was most successful, culminating in the Harrison Act of 1914 that paved the way for alcohol prohibition. While alcohol prohibition split the nation, the Harrison Act received almost no opposition outside of the medical profession for the drugs to be prohibited were associated with marginal groups in society - cocaine with wild Negroes, opium with the devious Chinese and morphine with the tramps in the slums.⁴ The great fear was that these drugs would spread to the higher classes of society. The Act itself was built upon the moral meaning of addiction. As one historian writes: "the evolution of the Harrison Act's enforcement policies, after initial setbacks, ended in the triumph of those who believed the law had a moral effect and was designed to prohibit the use of narcotics for the maintenance of "mere" addiction".⁵

In the 1920s there was a stormy period within the medical profession where drug addiction as a medical interest was debated. This was the period of many social experiments and even the prosecution of physicians for supplying drugs to addicts (e.g. Webb, et al. vs US). The American Medical Association appointed a committee that would issue a proposal to the association laying the guidelines for the medical profession vis-a-vis the new law. The committee (as the courts) were split between those who advocated forced withdrawal in prison for addicts to those who felt that the whole addiction discussion was a conspiracy to deprive the medical profession of its legal rights.⁶ Only in 1934, in the United States, did "drug Addiction" become officially accepted as a diagnostic category in "mental illnesses" by the Standard Classified Nomenclature of Diseases.⁷ This marked the migration of the term into scientific discourse.

Without any firm definitional base, although accepted as a diagnostic category, the concept of addiction still had a rather chaotic existence in medical practice. In 1957, the World Health Organization

(WHO) appointed an expert committee to try to bring some precision to the field. The committee composed two definitions, one for "drug addiction", the other for "drug habituation".⁸

Both definitions made use of the four characteristics of desire, tolerance, withdrawal and detrimental effects to the individual and society. Almost from their inscription, even more intense criticism was launched. This resulted in the formation in 1964 of a new WHO committee. The committee turned toward a more descriptive conception focusing on abuse as a type of "dependence", psychic or physical, that arises in a person following administration of a particular drug on a periodic or continued basis.⁹ As one can see, this definition is a result of concentrating interest on one of the four 1954 addiction characteristics, dependence, and by adding on to it a more behavioral science ("administration") accent. This attempt, however, also did not achieve scientific consensus drawing growing criticism as, following 1964, drug use exploded on the world scene as an international social movement now known as the "drug culture or subculture". Thus, Robert Apsler writing in 1978, concluded: "One cannot create precise definitions by relying on amorphous concepts for specifying the definitions. Often the definitions essentially state that something is bad without clarifying what the something is, without specifying the criteria on which the negative judgement is based, and without stating the assumptions from which the value is derived".¹⁰

It seems that a new definition for drug use in society must return to the original proposal of 1957 on addiction, critically and empirically investigating its four premises. The 1964 definition was useful because it emphasized the need for fundamental description and a behavioral science approach. However, its logical flaw is that it is circular. As pointed out by Apsler, the definition of drug dependence "was developed in order to describe a particular form or pattern of drug use. Yet, when the question is asked, why are they using drugs all the time? A common answer is, "Because they are dependent on

drugs".¹¹ The return to the basics of the 1957 definition is not a call for a recapitulation of the research questions of the 1950 and early 1960s, but a recognition that the four analytical characteristics of the 1957 definition provide a much more interesting framework for the situation of widespread use in the 1980s.

Indeed, focusing on dependence as was done in 1964, is the least interesting analytically of the original four premises. It is very difficult to find a criterion for deciding when use is a state of dependency or not. If one must start at a single premise, it is more productive to begin with the first one - desire - always keeping in mind the context provided by the last premise - "detrimental effects to the individual and society". A general theory of drug use must correspond to a general theory of addiction, because addiction represents those forms of use where desire is getting out of control and detrimental effects of the individual and society become an issue. It seems that most research has been oriented toward the second and third characteristics and have educated public opinion to define addiction as simply tolerance and withdrawal. The first and last premises of a theory of addiction have indeed been left to moral and political forces to define. (What are the limits of desire and of detrimental effects?)

The shift of focus on desire provides a firmer ground for developing a general theory of addiction because many problematic drug usage patterns occur without the accompanying appearance of withdrawal syndromes or increasing dosage. In fact, during the formative period of the concept in the 1920s and 1930s, several researchers independently sought to explain addiction as the result of a process of desire-formation. Furthermore, they located this desire in the experience of opiate addicts of craving the drug. This craving was seen to have a dominant cognitive element that was enmeshed in the diffuse painful experiences cognitively associated with withdrawal and a general absence of the drug from the environment. Thus, in 1926, the German researcher A. Erlenmeyer writes;

The morphine originally foreign to the body, becomes an intrinsic part of the body, as the union between it and the brain cells keeps growing stronger; it then acquires the significance and effectiveness of a heart tonic, of an indispensable element of nutrition and subsistence, of a means for carrying on the business of the entire organism.¹²

A "reversal" takes place where what was once "foreign" becomes "intrinsic". The withdrawal of the drug then causes varying degrees of painful experience and a distinct sense of abnormality. In this complex, Erlenmeyer finds the origin of addiction:

In such moments the craving for morphine is born and rapidly becomes insatiable, because the patient has learned that these terrible symptoms are banished as if by magic by a sufficiently large dose of morphine.¹³

At about the same time, the American social psychologist, A. Lindesmith discovered the same process in his field observation of Chicago addicts.¹⁴ Lindesmith, a sociologist of the "Chicago School" researched addicts in and out of medical settings observing their behavior, interviewing them about what he saw and generally talking to them as part of the Chicago project in "urban ecology".¹⁵ He made the

puzzling observation that medical patients who were routinely given large quantities of pure opiates in the course of their treatments rarely became addicted while street junkies, using highly adulterated opiates obtained from criminal sources, frequently became addicted. In his observation of the medical administration of opiates he found the accepted practice of deceiving the patient about the nature of the drug. The withdrawal symptoms were defined as "side-effects" of the medication. This practice was an effective trick in preventing subsequent use. At the same time, he observed that within the junkie population, an opposite "magic" was at work - the addict was himself a member of distinct "underworld" subculture having its own rich argot that defined, in great variation the many effects, situations and relationships that made up his world - a world of dope.¹⁶

Both Erlenmeyer and Lindesmith underlined the magic that lied underneath the craving. Like other forms of magical practice, addiction involved the strong play of symbols which defined to the adept the meaning of strong impulses and elaborated, complex sequences of activity.¹⁷ Lindesmith, like his other Chicago colleagues, became singularly impressed with this play of symbols in human life and developed a particular scientific approach to study it. Called "symbolic interaction", the approach emphasized that much of human behavior is determined by natural processes which are given meaning and reinforcement by primary groups, in face-to-face interaction.¹⁸ Symbols are the mechanisms for regulating these processes and compose the basic content of the self. Thus, to Lindesmith addiction was a gradual process of becoming cognitively involved with a specific symbolic order. Throughout his career, he emphasized (as with other magical practices) the essential significance of initiation and its ceremonies. He saw the existence of the law as essential in defining the symbolic order noting that almost every addict becomes initiated to his addiction to opiates hiding from authority and under the auspices of criminal organizations.¹⁹

Recent research has accepted the general framework of Lindesmith, but

has criticized the fundamental cognitive mechanism whereby craving is rooted in the magical reversal of withdrawal. Focusing on the experiences of the "flash" and "high" valued by many heroin addicts, this research suggests that the craving is a result of a reinforcement of a combination of effects.²⁰ These effects are intensified with heroin as compared to morphine which Lindesmith used as his theoretical standard. The real pharmacological differences between heroin and morphine in terms of their ability to deliver the valued "flash" and "high" might be seen to falsify Lindesmith's inferences.²¹ The pertinent questions are: could patients given heroin still not recognize its effects as they did with morphine and conversely is the symbolic order of the junkie specifically elaborated not by opiates in general, but by the specific effects of heroin. This added complication of heroin effects provides the basis for the claim by many addicts that there is no real substitute for heroin and the reason that this is the opiate that the criminal organizations find the most marketable.

A general theory of addiction must come to terms with the specific pharmacological effects between and within different classes of drugs. At the same time, it must search for the universal mechanisms that underlie all addictive behaviors irrespective of particular substance. It seems plausible at this period of the development of knowledge - a period that has been likened to 20 years after Pasteur's discoveries - that addiction involves some general functioning in the neurotransmitters that is conditioned by social, cultural and other behavioral processes.²² Many studies are needed that bridge the biological and the behavioral levels.

One such bridging field is behavioral pharmacology. Behavioral pharmacology has produced a number of recent studies that show strong functional commonalities between alcohol, tobacco and the opiates.²³ What is surprising in some of this research is that tobacco may be even more addictive than the opiates as measured by the craving criterion. Russell found that 95% of cigarette smokers are compulsive

daily users while, on the other hand, Zinberg, found a substantial portion of the total opioid users were "chippers" - i.e. not compulsive daily users.²⁴ With both drugs, there is a high addictive potential as defined by a likelihood that experimentation with the drug will lead to addiction. But behavioral pharmacological researchers using "second-order schedule" designs have demonstrated the importance of environmental stimuli remotely paired with drug administration in supporting and sustaining addictive behaviors.²⁵ Behaviors which appear to be "counteradaptive" become intelligible through a pairing with key environmental factors and the organisms' past history.

Turning to heroin introduces some special complications for a general theory of addiction. Whereas heroin is indeed highly addictive, it does not, in itself, seem to have the degree of compulsive use as cigarettes. The use of heroin, however, is indeed paired to a highly attractive symbolic order that is constructed out of socio-cultural environmental factors and on social and individual histories. The use of heroin, unlike cigarettes or tobacco, requires involvement in a complicated lifestyle and a "total identity".²⁶ If one looks at cigarettes and alcohol advertisements as representations of these drugs' symbolic environments and histories one can readily see that these drugs are imbedded in the recreational moments of a sophisticated lifestyle. In contrast, if one sees an advertisement "for" heroin, it is always cast in an "anti-lifestyle" form associated with crime, death and destruction. Or, when, it is dramatised, as in the case of the recent German movie and book "Christiane F.: Die Kinder von Bahnhof Zoo", it becomes provocatively ambivalent.²⁷ It is hard to imagine a similar movie about a tobacco addict, because the story of Christiane F. is the story of a total identity in a counter-lifestyle not about a cigarette in the hand of a sophisticated windsurfer.

I want to stay with the Christiane F. example because it relates directly to some of my field research conducted in Berlin several

years ago with some of the "Kinder von Bahnhof Zoo". When the movie first came out in Germany, I was struck at the fascination of young middle class girls with the character of Christiane F. and the inability of their parents to explain this life to them. At the same time, the movie had startling reactions among junkies and ex-junkies who saw it. Recently, I heard the same stories of Dutch ex-users and users on seeing the movie on television. Intense craving for heroin occurred in response to several scenes. For several ex-users this was surprising as they thought that they had finished with their addiction to the extent that they could sit with addict friends, observe a shot and feel no desire for heroin. The craving seemed to emerge as a function of the drama of Christiane F.'s life as told on the screen. The symbols of the toilets, etc. when placed in proper sequence invoked a "counteradaptive", craving response. And this very experience is so familiar with therapists who must deal with the relapse into heroin use after successful graduation of a client from a therapy program.²⁸ The behavioral techniques of ridicule, cross examination and hostile verbal attack of many live-in therapeutic programs which are designed to destroy the symbolic order of the heroin addict seem only effective if a stronger symbolic order can be established that can survive the reversal of an "open" symbolic environment where the drama of heroin is constantly played out.²⁹

Whereas relapse can be seen as the return of the pairing of the addict's life with the old heroin symbols, recovery results in the displacement of the heroin symbols which are subsumed interactively in a new symbolic order. This recovery, also known in alcoholism as spontaneous remission, involves a process of "maturing out" - finding a world other than that of the "Kinder von Bahnhof Zoo".³⁰ This is not all that easy because even in the tobacco and alcohol advertisements, the symbolic ideal is that of "active youth".

The complications of heroin addiction are rooted in three distinct processes of symbolic interaction by which the "magical" reversal of norms takes place and the craving becomes reinforced. These processes

can be termed criminalization, ritualization and alienation.

Criminalization

A complication of heroin is, that it normally is first used (initiation) not in family or medical setting, but in the tight-knit primary peer group.³¹ Christiane F.'s initiation was typical of current European heroin users. She was involved in a tight-knit group of girls at school who were bored with their studies and wanted to experience the "high life" of Berlin which is situated around the Bahnhof Zoo. Hanging around this area led to smoking and drinking as symbols of adult sophistication and openness for experimentation with the youth scene drug of hashish. The glamour of this lifestyle in contrast to the greyness of school, led to the problems of accruing the status symbols necessary to participate - furs, rolex watches, black leathers, etc. Prostitution became a possible source of "big money" as young girls are very much in demand. Out of this initial experience heroin was tried and was both pleasant and helped in the work. But involvement in prostitution and heroin caused conflicts which drove the girls further into the heroin lifestyle. Jail was the eventual result and I myself along with a research psychologist, Jorg Schlender, who originally worked with this group of girls, interviewed them in the Berlin prison and in the "street" for several years.³² It is interesting that Christiane F. could transcend the heroin lifestyle by substituting through money and fame but the other girls are either dead or still in it.

This Berlin case is typical. The tight-knit peer group that first experiments with the drug eventually must become involved with what might be called a "heroin industry" - an organized network of criminal enterprises concluding prostitution, stolen goods, arms, etc. in order to stabilize their supply. This undoubtedly means a conflict with the police. The particular complication of heroin is this historical entanglement of crime and addiction.³³ The existence of a

law and how it will be enforced are powerful symbols in themselves that signal to the potential pool of users that to be involved with heroin is to be involved with the "criminal underworld".³⁴ Research into prevention has shown some indication that the deterrent effect of the law is effective only in interaction with a peer group that has a strong aversion, symbolically, to drugs.³⁵ Such a countervailing set of symbols has yet to appear in Europe within the youth cultures and therefore is a great problem for law enforcement, treatment, and prevention efforts.

Ritualization

The second complication originates in the particular ritualization of heroin use in society.³⁶ Thomas Szasz has written a book on the "ceremonial chemistry" and "ritual persecution of drug addicts and pushers".³⁷ This book, however, ignores the strong ritualized behaviors that are the way addicts themselves organize their lives.³⁸ While it is true that much of addicted life is structured by the ritualized "hide and seek" of dodging the police, there are substantial rituals that make-up heroin addict life that are comparable to the rituals of alcohol.³⁹ A ritual can be conceived as the expression of a complex chain of activities that is to signal to witnesses something of an essential nature.⁴⁰ Both humans and animals have rituals, but humans also have the capacity to "hyper-ritualize" - to make the ritual an end in itself - a symbolic expression of essential experience.⁴¹ There are many examples of ritualization in addict life, but perhaps the strongest are those rituals built around the symbol of the needle. In my research over the years and in different countries, I have been struck how important the needle has been in maintaining addict life.⁴² I have often seen addicts "shoot" anything they could find - more to experience the needle injection ritual than the "flash" of heroin. There is a strong attraction to the needle as a symbol in addict life. I have observed a number of interesting needle rituals from "needle sharing" in San Francisco

which was an expressed attempt to maintain the tight-knit group dynamic against dissolution and reintegration into a criminal dealing enterprise to "needle distribution" by the Dutch Junkiebond as an attempt to express the limitations of both methadone distribution and reliance on criminal sources.⁴³ In fact, in Germany, the term junkie is rarely used and instead, the unique term "fixer" is employed suggesting, that the magic of heroin lies more in the needle than in the drug itself. The origin of the injection and needle route for heroin use is tied to the early days of criminalization in the 1920s and 1930s.⁴⁴ Before that time heroin was not legally controlled and most addicts smoked or sniffed the powder diverted from medical sources. With criminalization came the practice of "cutting" the heroin by the heroin industry in order to increase profits and distribute risks.⁴⁵ At this time addicts began injecting as a means of getting the most for their money. This original functional adaptation became hyper-ritualized over the years to the point that the needle became the symbol of being part of a distinct criminal underworld life. For comparative purposes, one can look toward the extraordinary case of widespread heroin addiction among American soldiers in Vietnam and the also extraordinary cessation of use by these addicts on return to the United States.⁴⁶ In terms of the craving it is not incidental that there were strong taboos in Vietnam by the American soldiers against using the needle. Instead heroin was smoked in a cigarette of marihuana. The needle was symbolic of the "sick criminal junkie" back home, but the smoking of a "joint" (even with heroin inside) was "in" and a way to get symbolically in touch with the youth movements going on back home. On return to the United States, the heroin was "magically" omitted from their smoking patterns for it was strongly and negatively associated with those "bad times" in Vietnam.

Alienation

A final complication that increases the craving for heroin lies in the process of alienation. With perhaps no other drug can this alienation

process be compared. Perhaps only in Islam's prohibition is the alcoholic as alienated as the European junkie.⁴⁷ But even in Islam's society the strong separation of public from "secret" life allows some "normal" alcohol consumption to go on. With heroin the alienation is almost absolute, insofar as it is normless and the heroin addict is the symbol par excellence for powerlessness in the face of an addiction. The attempt to use methadone is an attempt to "normalize" an addiction and overcome its process of alienation.⁴⁸ However, some American studies have shown that methadone is always subsumed under a symbolic order that often contributes to conflicts. To the addict still involved with heroin, methadone is just another "dope", that allows him to manage his heroin addiction while to the therapist it is a "medicine".⁴⁹ In any case, what is clear is that heroin is simply "dope" and therefore by definition difficult to find a norm for use. Often addicts convince themselves into thinking they are in control of their heroin addiction which is, by definition, the "hardest" or "heaviest" drug, only to find themselves fragmenting this fragile norm by injecting "softer" drugs like cocaine and barbituates. The notion that heroin is the top of some folkloristic drug hierarchy finds its official symbolic counterpart in the scheduling of drugs of high and low risk potential for addiction. The only social norm becomes total abstinence. This indeed protects society somewhat from the spread of heroin use, but at the expense of alienating the life of addicts. With no public definition of what is a "normal" pattern of use, addicts are left alone to their own devices to establish such norm.⁵⁰

The consequence of this normlessness can be seen recently in the emergence of a cocaine lifestyle within the heroin scene. "Speedballing" - the practice of mixing cocaine and heroin together in a single injection severely disturbs the "normal" cycle of "simple" heroin addiction. The frequency of injections increases as a function of the emergent cocaine/heroin interactive flash and new behaviors are elicited that even the experienced junkie finds strange, threatening and alien while at the same time pleasurable beyond description. What seems to be occurring is another example of magical deception: heroin

addicts and treatment programs are cognitively oriented on a "heroin problem" while in reality the problem is cocaine and heroin has become a means for smoothing the cocaine flash and not an end in itself.⁵¹

Further complicating this process of alienation are a number of global environmental factors which are very difficult to control. For example, a recent rat experiment in Canada showed that the craving behavior of addicted rats was a function largely of the restrictiveness of the environment. Addicted rats kept isolated in cages developed intense craving behaviors while the experimental group of rats kept in "Rat Park", a paradisaical compound providing all the things that rats could possibly want, gradually lost interest in the opiod solutions. These researchers conclude: "Rats in Rat Park, ghetto dwellers, soldiers home from Vietnam, patients released from the hospital all seem to be telling the same story. Namely that contrary to the "natural affinity" view individuals are vulnerable to opiate drugs under some circumstances, but not others. Solitary confinement puts rats in a state of vulnerability..... Our problem now is to perceive the dimensions of our own cages as clearly as we see those which house rats".⁵²

Future research in a general theory of addiction should try to describe and explain the basic processes which the complications of heroin underline. To start with craving is to start at something universal in addiction that has been preserved in both its moral and scientific meanings. To fully understand how this craving is related to restricted and restrictive forms of symbolic interaction has a great potential for both scientific knowledge and policy initiatives.

My future research plans are to develop an interdisciplinary approach to addiction which not only involves research in the laboratories and clinics, but also in the streets. The cornerstone of my program is the active participation of the drug users themselves.⁵³ A criterion for theoretical adequacy must be the fit of the experience of the scientist with the phenomenological reality of those who are addicted

themselves. This criterion will, of course, be continually debated within the scientific community, but it represents my firm training in the ethnosciences and a basic commitment to enrich the descriptive foundation of our data bases on addiction as well as to build verifiable theory.

Several years ago, Jerome Jaffe, wrote that the existence of treatment, irrespective of its functional results, had a symbolic value in that it expressed society's care for addicts and that "people who have drug problems have not lost their membership in the family of man; nor are they necessarily without the potential for recovery".⁵⁴ My research over the years and here in the Netherlands has always been conducted with the participation and support of heroin addicts who despite great social pressures, felt that their own experiences should be shared so that society and themselves could better understand their problems. Without their trust and support, I would not have been able to develop my theoretical perspective. The same gratitude can be extended to the professionals and civil servants officially responsible for drug addiction who have frequently extended their utmost support for my scientific efforts.

I am greatly indebted to Professor Trimbos and my colleagues at the Institute for Preventive and Social Psychiatry for supporting my initial efforts and of the Tinbergen Chair for providing the time to integrate my research and scholarly experience in comfortable circumstances. I would also like to thank the Stichting Rotterdams Fonds ter Bestrijding van Verslavingsziekten for their trust in supporting the first chair of addictions in Europe. This, in itself is a new and strong symbol - that caring through help is not enough; that there must also be a strong academic and scientific participation if society's wish not to banish people with drug problems is to have substance. The establishment of this Chair definitively signals to the international community that Rotterdam is committed to a pragmatic and active science of addictions.

Notes

- [1] Edward Rose has shown how the consultation of dictionaries is useful for recording the historical development of ideas and, when methodically undertaken, reveals much about the continuity and discontinuity of the "ethno-ontologies" that compose the social referents of our intellectual concepts. The analysis in the first paragraphs was conducted by consulting the Oxford Unabridged Dictionary. For an exposition of this method see Edward Rose, "The English Record of a Natural Sociology", American Sociological Review 25 (2), 1960 and Edward Rose; Two Papers on the Use of Words as Cultural Units. London: Pergamon Press, 1962.

- [2] For an analysis of the relationship between common sense and scientific "behaving" see the chapter "The Rational Properties of Scientific and Common Sense Activities" in Harold Garfinkel, Studies in Ethnomethodology. Englewood Cliffs, N.J.: Prentice-Hall, 1967 and Alfred Schutz, "The Problem of Rationality in the Social World", Economica 10 (May), 1953.

- [3] The standard work documenting this period is Charles E. Terry and Mildred Pellens, The Opium Problem, New York: Bureau of Social Hygiene, 1928 (reprinted, Montclair, N.J. Patterson Smith, 1970). What is becoming the contemporary standard is David Musto, The American Disease: Origins of Narcotic Control. London: Yale University Press, 1973. Other useful sources are Arnold S. Trebach, The Heroin Solution. London: Yale University Press, 1982; Chauncey D. Leake, An Historical Account of Pharmacology to the Twentieth Century. Springfield, Ill.: Charles C. Thomas, 1977; Virginia. Berridge and Griffith Edwards, Opium and the People: Opiate Use in Nineteenth Century England. London: Allen Lane, 1981. Glenn Sonnedecker, "Emergence of the Concept of Opiate Addiction", Journal Mondial Pharmacie, September - December 1962; January - March, 1963.

- [4] See John Belmer, Drugs and Minority Oppression. New York: Seabury, 1975 and Charles D. Kaplan, "The Uneasy Consensus: Prohibitionist and Experimentalist Expectancies behind the International Narcotic Control System", Tijdschrift voor Criminologie March-April, 1984.
- [5] Musto, 1973:68.
- [6] See John C. Kramer, "A Brief History of Heroin Addiction in America", in David E. Smith and George R. Gay (eds) "It's so good, don't even try it once": Heroin in Perspective. Englewood Cliffs, N.J.: Prentice-Hall, 1972; T.S. Blair, "The Doctor, the Law and the Drug Addict", American Medicine 27:581-588, 1921; A.C. Prentice, "The Problem of the Narcotic Drug Addict". Journal of the American Medical Association 76:1551-1554, 1921; Dan Waldorf, Martin Orlick and Craig Reinerman, Morphine Maintenance: The Shreveport Clinic, 1919-1923. Washington D.C.: Drug Abuse Council, 1974.
- [7] See Karl Menninger, The Vital Balance: The Life Process in Mental Health and Illness. New York: Viking, 1963, p.474.
- [8] The following definitions in full are presented in World Health Organization, Expert Committee on Mental Health, Addiction Producing Drugs, seventh Report of the WHO Expert Committee. WHO Technical Report series No. 116. Geneva, Switzerland: World Health Organization: Drug addiction is a state of periodic or chronic intoxication produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include: (i) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means; (ii) a tendency to increase the dose; (iii) a psychic (psychological) and generally a physical dependence on the effects of the drug; and (iv) detrimental effects on the individual and on society.

Drug habituation (habit) is a condition resulting from the repeated consumption of a drug. Its characteristics include: (i) a desire (but not a compulsion) to continue taking the drug for the sense of improved well-being which it engenders; (ii) little or no tendency to increase the dose; (iii) some degree of psychic dependence on the effect of the drug, but absence of physical dependence and hence of an abstinence syndrome (withdrawal); and (iv) detrimental effects, if any, primarily on the individual.

- [9] The 1964 definition is presented in N.B. Eddy, H. Halbach, H. Isbell and M.H. SeEVERS, "Drug Dependence: Its Significance and Characteristics", Bulletin World Health Organization 23:721-722, 1965.

The characteristics of such a state will vary with the agent involved, and these characteristics must always be made clear by designating the particular type of drug dependence in each specific case.... All of these drugs have one effect in common: they are capable of creating, in certain individuals, a particular state of mind that is termed "psychic dependence". In this situation, there is a feeling of satisfaction and psychic drive that requires periodic or continuous administration of the drug to produce pleasure or to avoid discomfort.

Both the 1957 and 1964 definitions are critically discussed in great detail by Norman E. Zinberg, Drug, Set and Setting: The Basis for Controlled Intoxicant Use, London: Yale University Press, 1984, Pp 19-44. Zinberg compares the WHO definitions with both medical/legal definitions of Abuse on the one hand, and user's definitions on the other.

- [10] See Robert Apsler, "Untangling the Conceptual Jungle of "Drug Abuse", Contemporary Drug Problems 7:55-80. This quote is cited in Zinberg, 1984:29.

- [11] Apsler cited in Zinberg, 1984:36.

[12] Erlenmeyer cited in Terry and Pellens, 1928:601-602.

[13] Erlenmeyer cited in Terry and Pellens, 1928: 601-602.

[14] Alfred R. Lindesmith, Opiate Addiction. Evanston, Ill.: Principia Press, 1947; Addiction and Opiates. Chicago: Aldine, 1968.

[15] Another important work of the Chicago School of the 1930s concentrating on the social ecology of opiate addiction is Bingham Dai, Opium Addiction in Chicago. Shanghai: Commercial Press Ltd. 1937. He noticed that addicts frequently choose to live in the immediate areas of drug distribution forming a distinct ecological community. The theme of addiction runs through much of the School's work although it is not often recognized. For example, Nels Anderson's study of the hobo first published in 1923 recognized different patterns of ecological dispersion for cocaine and heroin users. He writes in The Hobo: The Sociology of the Homeless Man. Chicago: University of Chicago Press, 1961: Pp. 67-68: Drug addiction likewise decreases the industrial efficiency of its victims. Drug addicts among homeless men seldom are transient. Those who are transient are often cocaine users who are able to do without the drug for considerable periods of time. Not infrequently "coke heads" or "snow-birds" are found among the hobo workers. When on out-of-town jobs, they are prone to go to town occasionally to indulge in a cocaine spree much as a "boozehoister" indulges in a liquor spree. When their money is gone they return to work and do not touch the "snow" for weeks or months. Users of heroin or morphine are not able to separate themselves from the source of supply for so long a time. Because of the secret nature of the practice, the extent of drug addiction among homeless men is unknown. Men who use drugs are loath to disclose the fact to anyone but drug users. The drug addict employs every scheme to keep his practice a secret whereas the drinking man strives to

share his joy with others. The fear of being discovered drives many addicts from the circle of their family and friends and many of them drift into the homeless man areas where they enjoy the maximum seclusion.

Other classic Chicago studies like Edwin H. Sutherland, The Professional Thief. Chicago: The University of Chicago Press, 1937 touched on addiction, but did not emphasize its place in the research. See for example Jon Snodgrass, "The Criminologist and His Criminal: The Case of Edwin H. Sutherland and Broadway Jones", Issues in Criminology 8(1):1-17, 1973. For a good overview of the Chicago see Albert Hunter, "Why Chicago: The Rise of the Chicago School of Urban Social Science", American Behavioral Science, 24:215-21, 1980. For the importance of the Chicago methodology for addiction studies see Charles D. Kaplan, "Addict Life Stories: An Exploration of the Methodological Grounds for The Study of Social Problems, Part I and Part II International Journal of Oral History 3 (1):3(2), 1982.

- [16] The classic studies of the addict argot were conducted by A. Lindesmith's collaborator in addiction studies in Chicago and Lexington, David W. Maurer, in the 1930s. The most important writings were collected in the volume David W. Maurer, Language of the Underworld Collected and Edited by Allan W. Futrell and Charles B. Wordell. Lexington, Kentucky: University of Kentucky Press, 1981.
- [17] For a structural analysis of magical practice see Warren TenBouten and Charles Kaplan, Science and its Mirror Image: A Theory of Inquiry. New York: Harper and Row, 1973. There is an extensive comparison of drug and magical practices in this Volume.
- [18] See for example, Alfred Lindesmith, Anselm Strauss and Norman Denzin, Social Psychology (4th ed.). Hindsdale: The Dryden Press, 1978.

- [19] Alfred Lindesmith, The Addict and the Law. Bloomington, Ind.: Indiana University Press, 1965: "On Heroin Maintenance" in Marcel Deleken (ed) Critical Concerns in the Field of Drug Abuse, New York, 1978.
- [20] See William McAuliffe and Robert Gordon "A Test of Lindesmith's Theory of Addiction: The Frequency of Euphoria Among Long-Term Addicts", American Journal of Sociology 79: 795-840, 1974 and "Reinforcement and the Combination of Effects: A Social-Psychological Theory of Opiate Addicts" in Dan Lettieri (ed) Theories of Addiction. Washington D.C.: National Institute of Drug Abuse, 1981. See the subsequent commentary and debate between Lindesmith and McAuliffe and Gordon in American Journal of Sociology 81(1):147-163, 1976. Recently Zinberg, 1984: 28-29 takes issue with both Lindesmith and McAuliffe and Gordon, drawing support from Stanton Peele, Love and Addiction. New York: Signet, 1975: My findings, based on information gathered from many compulsive subjects, disagree sharply with both Lindesmith's and McAuliffe and Gordon's conclusions, as do those of Stanton Peele (1975). After prolonged heroin use my subjects did experience a "desirable" consciousness change characterized by increased emotional distance from both external stimuli and internal response, but it fell far short of euphoria. Some subjects described it as follows: "It is as if my skin is very thick but permeable", and "It is like being wrapped in warm cotton batting". Many of them recognized that their preference for this consciousness change had little to do with warding off withdrawal sickness, although they were well aware of their excessive fear of withdrawal. Neither did their preference stem from a wish to feel "normal", because they knew that the ordinary self-aware state was an uncomfortable one for them. They tended to describe themselves in heaven-or-hell terms, not because that is what they felt but because they were incapable of explaining to a "straight" interviewer their complex relationships to the treasured drug.

- [21] See for example, W.R. Martin and H.F. Fraser, "A Comparative Study of Physiological and Subjective Effects of Heroin and Morphine Administered Intravenously in Post-Addicts", Journal of Pharmacology and Experimental Therapeutics 133(3): 388-99, 1961; Louis Lasagna, John M. Felsing and Henry K. Beecher, "Drug-Induced Mood Changes in Man. I. Observations on Healthy Subjects, Chronically Ill Patients, and 'Postaddicts', Journal of the American Medical Association 157(12): 1006-20, 1955; Richard D. Chessick, "The 'Pharmacogenic Orgasm' in the Drug Addict", Archives of General Psychiatry 3 (November):546-56, 1960.
- [22] This comparison with Pasteur was drawn by William Pollin, Director of the National Institute on Drug Abuse in a personal communication on October 2, 1984. Pollin pointed to the major breakthrough of endorphines and the future frontier of the neuro-transmitters. See Solomon H. Snyder and Steven Matthesse, Opiate Receptor Mechanisms. Cambridge, Mass.: MIT Press, 1975 and E.B. Ellinwood and M.M. Kilbey, "Fundamental Mechanisms Underlying Altered Behavior Following Chronic Administration of Psychomotor Stimulants", Biological Psychiatry 15(5): 749-757, 1980; R.A. Wise, "Brain Dopamine and Reward", in S.J. Cooper (ed). Progress in Psychopharmacology. New York: Academic Press, 1981; M.A. Bozarth and R.A. Wise, "Heroin Reward is Dependent on a Dopaminergic Substrate", Life Science, 29: 1881-1886, 1981.
- [23] For example, Jack E. Henningfield, Roland R. Griffiths and Donald R. Jasinski, "Human Dependence on Tobacco and Opioids: Common Factors", in Travis Thompson and Chris E. Johanson (eds). Behavioral Pharmacology of Human Drug Dependence. Washington D.C. : National Institute on Drug Abuse, 1981.
- [24] M.A.E. Russell, "Cigarette Smoking: Natural History of a Dependence Disorder", British Journal of Medical Psychology: 44: 1-16, 1971; Norman E. Zinberg and R.C. Jacobson, "The Natural

- History of Chipping", American Journal of Psychiatry 133:37-40, 1976.
- [25] See Steven R. Goldberg and Michael Gardner, "Second - Order Schedules: Extended Sequences of Behavior Controlled by Brief Environmental Stimuli Associated with Drug Self-Administration", in Thompson and Johanson, 1981.
- [26] Patrick Biernacki: "Junkie Work, 'Hustles' and Social Status Among Heroin Addicts", Journal of Drug Issues 9:535-551, 1979.
- [27] Christiane F., Wir Kinder von Bahnhof Zoo, Kai Hermann and Horst Rieck. Im Verlag Gruner, Jahr AG, 1979.
- [28] A good analysis of the "magic" of the addict lifestyle and the mystery of relapse is undertaken by Seymour Fiddle, Portraits from a Shooting Gallery: Life Styles from the Drug Addict World. New York: Harper and Row, 1967.
- [29] See. D. Droppa, "Behavioral Treatment of Drug Addiction: A Review and Analysis" International Journal of Addictions, 8:143-161, 1973.
- [30] There is a growing literature in "maturing out" or "natural recovery" starting with Charles Winick, "Maturing Out of narcotic Addiction", Bulletin on Narcotics, 14:1-7 1962; Dan Waldorf and Patrick Biernacki, "Natural Recovery from Heroin Addiction: A Review of the Literature". Journal of Drug Issues, 9:281-289, 1979 and Patrick Biernacki's forthcoming book Getting Off Dope: An Analysis of Addict Recovery without Treatment. Chicago: University of Chicago Press.
- [31] In the epidemiology of heroin spread this mechanism has been termed the "peer-contagion" dynamic. See Patrick H. Hughes, Behind the Wall of Respect: Community Experiments in Heroin

Addiction Control. Chicago: University of Chicago Press, 1977. For a Dutch analysis of a similar dynamic see G. Baverkamp, "Carriere - en scenevorming onder autochtone heroïnegebruikers", Tijdschrift voor Criminologie Maart/April: 136-148, 1984.

- [32] J-V. Schlender and C.D.Kaplan, "Die veränderte Heroin-Szene: Wissenschaftliches Konzept und resultierende politische Konsequenzen", Kriminologisches Journal 1:35-45, 1980. J-V. Schlender "Sozialtherapie im Strafvollzug" in Wolfgang Heckmann (ed). Praxis der Drogentherapie: Von der Selbsthilfe zum Verbundsystem. Weinheim: Beltz, 1982; Lena Inowlocki and Jacqueline Mai, "...dass das aber alleine, von uns alleine kommt, und nicht von irgend jemandem, der hinter uns steht und sagt: Du musst". Ein Gespräch über widersprüchliche Erfahrungen, im Knast clean zu werden, "Kriminologisches Journal 4:271-282, 1980.
- [33] There are literally libraries concerning the problematic relationship between crime and addiction. For an overview see Stephanie W. Greenberg and Freda Adler, "Crime and Addiction: An Empirical Analysis of the Literature 1920-1973", Contemporary Drug Problems 3:221-270, 1974. See Charles D. Kaplan, "The Heroin System: A General Economy of Crime and Addiction", Crime and /et Justice, November: 179-196, 1977; the chapters "The Political Economy of Opium and Heroin" and "Organizing the Cocaine Trade" in Alan A. Block and William J. Chambliss Organizing Crime. Oxford: Elsevier, 1981; Biernacki, 1979; for definitive German studies see Arthur Kreuzer, Christoph Gebhardt, Marcel Maassen and Marlene Stein-Hilbers, Drogenabhängigkeit und Kontrolle. Wiesbaden: Bundeskriminalamt, 1981; Sebastian Scheerer, Die Genese der Betäubungsmittelgesetze in der Bundesrepublik Deutschland und in den Niederlanden. Göttingen: Otto Schwartz, 1982. The definitive Dutch works are O.J.A. Janssen and K. Swierstra, Heroïnegebruikers in Nederland Groningen: Criminological Institute, 1982 and L.H. Erkelens, P.D.G. Haas and O.J.A. Janssen, Drugs en Detentie. Groningen:

Criminological Institute, 1969.

- [34] See Howard Becker, "History, Culture and Subjective Experience: An Exploration of the Social Bases of Drug-Induced Experiences", Journal of Health and Social Behavior 8:163-176, 1967 and "Consciousness, Power and Drug Effects", Journal of Psychedelic Drugs 6:67-76, 1974.
- [35] See R.F. Meier and W.T. Johnson, "Deterrence as Social Control: The Legal and Extralegal Production of Conformity", American Sociological Review 42:292-304, 1977; D. Maloff, H.S. Becker, A. Ponaroff and J. Rodin, "Informal Social Controls and their Influence on Substance Use", Journal of Drug Issues 9(2):161-184, 1979; A. McAlister, C. Perry, J. Killen, L.A. Slinkard and N. Maccoy, "Pilot Study of Smoking, Alcohol and Drug Abuse Prevention", American Journal of Public Health 70(7):719-721, 1980.
- [36] For a comparative cross-cultural collection on drug rituals see Brian M. Du Toit (ed) Drugs, Rituals and Altered States of Consciousness. Rotterdam: Balkema, 1977. See also Fiddle, 1967.
- [37] Thomas Szasz Ceremonial Chemistry: The Ritual Persecution of Drugs, Addicts and Pushers. Garden City, N.Y.: Anchor, 1975.
- [38] See for example, Michael H. Agar, "Into that Whole Ritual Thing: Ritualistic Drug Use Among Urban American Heroin Addicts" in Du Toit 1977; Alan Sutter, "The World of the Righteous Dope Fiend", Issues in Criminology 2:177-182, 1966.
- [39] N.E. Zinberg, R.C. Jacobson and W.M. Harding, "Social Sanctions and Rituals as a Basis for Drug Abuse Prevention", American Journal of Drug and Alcohol Abuse 2(2):165-182, 1975. For the ritual of police structuring see Angela Burr, "The

Piccadilly Drug Scene", British Journal of Addiction 78:5-19, 1983.

- [40] See Charles Darwin, The Expression of the Emotions in Man and Animals. Chicago: University of Chicago Press, 1965; Julian Huxley, Philosophical Transactions of the Royal Society of London, Series B, No.772, Vol. 251 (December 29):250, 1966.
- [41] See Erving Goffman, Gender Advertisements. New York: Harper and Row, 1976.
- [42] See Charles D. Kaplan, "Zur Vervielfältigung der Charakterstruktur von Drogenabhängigen: Ein Statistisches Modell aus einer Psychoanalytischen Sichtweise", Neue Praxis, 2:176-188, 1979 for a discussion of the factor of "needle-eroticism". See also C.P. O'Brien, "Experimental Analysis of Conditioning Factors in Human Narcotic Addiction", in R.T. Kelleher, S.R. Goldberg and N.A. Krasnegor (eds). Control of Drug Taking Behavior by Schedules of Reinforcement. Baltimore: Williams and Wilkins, 1976.
- [43] See Jan Howard and Philip Borges, "Needle Sharing in the Haight: Some Social and Psychological Functions" in Smith and Gay, 1972.
- [44] See John A. O'Donnell and Judith P. Jones, "Diffusion of the Intravenous Technique among Narcotic Addicts", Journal of Health and Social Behavior 9(2): 20-30, 1968.
- [45] Of the "cutting" at about the same time of the wide-spread diffusion of the needle route Lindesmith (1976:152) writes in his debate with McAuliffe and Gordon: "I began my work on addiction in 1935 when morphine was still widely available on the black market, and I was told by addict pushers that the switch to heroin was occurring because heroin is more easily diluted than morphine and hence preferred by peddlers". See also Terry and

Pellens, 1970: 85-86 and 143 for how heroin use spread to the underworld because it "seemed to fill a place not easily duplicated by other preparations in the desires of the vicious user. The stimulating effect of heroin is known to be greater than that of morphine and this quality... is a sufficient reason for its preference as a drug of dissipation".

- [46] See Larry H. Ingraham, "'The Nam' and 'The World': Heroin Use by US Enlisted Men Serving in Vietnam". Psychiatry 37:114-123, 1974; Lee N. Robins, The Vietnam Drug User Returns. Washington D.C.: USGPO, 1974; Charles D. Kaplan, "When Soldiers Get High: Scag Calms You Down, So That You Don't Shit In Your Pants", in Dieter Korczak (ed). Die Suchtige Gesellschaft. Frankfurt am Main: Fischer, 1985.
- [47] See Siamak Movahedi, "The Drug Addict and Addiction: Cultural Stereotypes and Clinical Theories", Urban Life 7:45-67, 1978.
- [48] Vincent P. Dole, Marie Nyswander and Alan Warner, "Successful Treatment of 750 Criminal Addicts", Journal of the American Medical Association, 205:2708-2711, 1968; Joyce E. Lowinson and Robert B. Millman, "Clinical Aspects of Methadone Maintenance Treatment" and Mary Jeanne Kreek, "Methadone in Treatment: Physiological and Pharmacological Issues", in Robert L. Dupont, Avram Goldstein, John O'Donnell and Barry Brown (eds). Handbook on Drug Abuse. Washington D.C.: NIDA, 1979. Vincent P. Dole and Marie Nyswander, "Methadone Maintenance Treatment - A Ten Year Perspective". Journal of the American Medical Association 235:19, 1976.
- [49] See Irving R. Soloway, "Methadone and the Culture of Addiction". Journal of Psychedelic Drugs 6:1-99, 1974 and Dorothy Melkin, "Methadone Maintenance: A Technological Fix", New York: George Braziller, 1973.

- [50] See Richard E. Blum, "Normal Drug Use", in Hans Peter Dreitzel (ed.), The Social Organization of Health. New York: Macmillan, 1971.
- [51] See for example, the early account of "speedballing" by William Burroughs, The Naked Lunch. New York: Grove Press, 1966: "It is a standard practice for cocaine users to sit up all night shooting cocaine at one minute intervals, alternating with shots of heroin, or cocaine and heroin mixed in the same injection to form a 'speedball'". See also Joel L. Phillips and Ronald D. Wynne, Cocaine: The Mystique and the Reality, New York: Avon, 1980.
- [52] Bruce Alexander, Patricia Hadaway and Robert Coombs, "Rat Park Chronicle" BC Medical Journal 22(2):56, 1980.
- [53] Rose, Edward, 1962.
- [54] Jerome Jaffe, "The Swinging Pendulum: The Treatment of Drug Users in America", in Dupont et al. 1979:9.

