PART I The Nature of the Opiate Habit
Chapter 4 THE NATURE OF ADDICTION

The nature of the process in which addiction is established may perhaps be most effectively presented by describing a few selected instances which exemplify it in an especially clear-cut manner. The first of these cases is quoted from an article by L. L. Stanley; the second and third are based upon interviews that I conducted.

The assumption underlying the analysis of the nature of the addiction process presented in this chapter is that the special and extraordinary craving of the addict is derived in a learning process from the repetition of a certain kind of experience with the drug which all addicts have. The point of this discussion therefore is to isolate and describe this experience from which the "hook" in addiction is derived. The three accounts that follow should be considered, not as three unique historical accounts of how addiction was established several decades ago, but rather as especially critical instances from which it may be possible to infer what the universal features are in the acquisition of the pattern of behavior that addiction constitutes.

"Case 1. In 1899 I went to the Philippine Islands with the Third Infantry, landing in Manila in March. Along about the end of my service I developed dysentery and as a result became so weak that from 140 pounds I went down to 100 pounds. I would report at the sickline and the doctors would give me C and 0 (camphor and opium) pills. These pills I took for four months until the time of my discharge in 1900. Returning from Manila on the Sherman, I was so weak that I had to go to bed I felt miserable, and the steward accused me of being an opium smoker. At this time I did not know anything about the habit, and did not know what made me so restless and nervous. After my discharge I could not sleep. I met an ex soldier who said, 'I know what's the matter with you. You've been up against the pipe. You'd better start to shoot it.' Before this, though, be bad given me laudanum and yenshee, which relieved my habit. I bought a gun and began to use two one-fourth grain tablets three times a day. I used more and more until I was using thirty grains a day."

Case 2. Before 1910, Mr. R. became acquainted with a number of persons who were using heroin nasally. At this time heroin was cheap and not regarded as habit-forming. He bad once tried cocaine and found it unpleasant but observed that heroin seemed to have different effects, transforming a weak and miserable man into a normally alert one. He tried it once and liked it, and, inasmuch as it was cheap, be bought a dime's worth and kept it in his room. Every now
and then, whenever it occurred to him or when he felt particularly downcast, he used a little. At first he used it only every few weeks or so, but gradually he began to take it more and more frequently, until, after five years of intermittent use, he had gone from once a month use to once a week, to once a day, and finally to several times a day. He did not realize that he was in any danger of acquiring a habit even when he used it every day. In the morning he took a sniff before he went to work, to arouse himself. Then, toward the latter part of the afternoon, when he noticed a let-down feeling, which he attributed to the blazing sun under which he was forced to work, he found that a sniff of heroin, which he now carried about with him, enabled him to finish out the day’s work in a satisfactory state of mind and body. He had no idea that he was hooked.

Somewhat later, while Mr. R. was on his way to Chicago, he made plans to be picked up by a friend in Joliet, but when his friend failed to appear he became worried, since he did not have sufficient funds to pay his fare. Having exhausted his heroin supply, he threw away the empty box and did not think of buying another. Gradually he noticed that he did not feel well; his eyes and nose were running and he yawned incessantly. He began to wonder if he was getting the flu. He walked into a restaurant, for he suddenly realized that he had not eaten for a long time, but the sight of food repelled him and he left without eating.

At the corner drug store he might have purchased all the heroin he needed for only a dime, but it did not occur to him to do so. Instead, he attempted to obtain money from a stranger whom he accosted and to whom he explained his condition, but he was turned down. This affected him so much that he could not accost another prospect.

By catching a ride on a train, he finally got into Chicago that night, and early the next morning, feeling more miserable than ever, he visited a friend, who was still in bed. As he sat talking, he noticed a box of heroin tablets on the dresser. Quite naturally, without altering the tone of his voice or interrupting the conversation, he reached for the familiar box and mechanically broke up a tablet of heroin and sniffed it. In a few minutes the entire aspect of the world changed, and in a flash he realized that this was what "dope fiends" experienced and that he was addicted. All his distress and misery vanished and then, feeling hungry, he went out and ate heartily. Mr. R. attributed great importance to this critical experience, saying that if, instead of coming to Chicago and meeting a heroin user, he had been taken to a farm, he might have suffered a few days and then recovered rapidly and never have been the worse for it. He believes that he would never have become a "dope fiend" under such circumstances.

Case 3. Dr. H., a physician, was given morphine liberally and regularly for months, when he was undergoing an appendectomy and two subsequent operations resulting from complications. For a time he was not expected to live, but as he recovered the dosage of morphine was
gradually reduced and finally withdrawn. He knew that he had received morphine, but during the
gradual withdrawal he attributed those symptoms of distress which he noted to the after-effects
of the operations and to the processes of convalescence. During the next five years he went on
with his practice, without craving the drug, and nothing whatever was amiss with his mental
state. He had seen drug addicts in the course of his medical practice and felt a horror of them.
He believed that he would certainly shoot himself in preference to being one. This attitude
remained absolutely unaltered by the hospital experience just described. Several years later Dr.
H. contracted gallstone trouble and was advised that an operation would probably be
necessary. With his previous operations still fresh in his mind, he wished to avoid another, if at
all possible, and was told that it might conceivably not be required; in this case it would be
necessary for him to take opiates for his attacks. He did not like the idea of using narcotics, but
was more afraid of an operation, so be resorted to them to ease his pain. He now required them
more and more frequently, both because the attacks came oftener and because he gradually,
used the drug for less severe pains. Being permitted to administer the opiates himself, he finally
11 caught himself” taking injections every day, even when he had no pain. During the
process his horror of drug addiction disappeared, and he began to read all the books he could
find on the subject. He still believed be was an exception to the rule and would be able to quit
easily. He realized in retrospect that he had experienced withdrawal symptoms
several years before and had failed to recognize them. His efforts to cure himself soot, ended,
and a year later he acceded to his wife’s request to enter a sanitarium. Upon discharge, after
three years, he did not feel right without the drug. He is still an addict; be has lost his practice,
money, and family, and uses the drug whenever he is out of jail.

In all three of these instances it is striking that there is Do evidence of craving for the drug and
of the other changes in attitude that characterize addiction appearing solely as a consequence
of physical dependence. It is also evident that mere knowledge of the drug is not a critical factor
since the third case involved a doctor who became physically dependent upon morphine on two
separate occasions, knowing in each instance that he was receiving morphine, but not
becoming addicted until the second. Neither can it be said that the transition from merely taking
drugs to becoming addicted occurs when the individual ceases having the drugs given to him
and begins to administer them to himself. Case
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contradicts this idea, since the person involved administered the drug to himself for a
substantial period without developing the craving. It will be pointed out later that addiction is
sometimes established in persons who never administer the drug to themselves.

What these three cases do suggest is that a critical and universal feature of addiction is the
recognition and proper identification of the withdrawal distress, given the fact of physical
dependence. It was inferred that the experience from which the addict learns to crave the drug
is that of the relief or avoidance of withdrawal distress when the latter is understood for what it
is. The “book” in opiates is thus conceived, not as something inherent in the pharmacological
action of the drug or as the consequence of the sheer biological facts of physical dependence
and relief of withdrawal, but as a product of learning in a situation involving biological events as they appear to or are interpreted by the subject. Addiction is not established in an instant of time, as these three cases might suggest, but is acquired over a period of time from the repetition of the relief of withdrawal. Recognition of the nature and significance of the withdrawal symptoms does sometimes occur as a flash of sudden insight, but in other instances it dawns upon the beginner gradually. In any case, the cognitive experience alone is not sufficient by itself to generate addiction and does not do so, for example, if use of the drug is discontinued at once or if recognition comes long after the withdrawal distress has vanished. Both the cognitive and the biological elements in the situation are indispensable features of the total experience, and both must be present as the repetition of the experience establishes the behavioral and attitudinal patterns of opiate addiction.

The above paragraph states the core of the theoretical conclusion of this study. According to it, the hook in addiction arises, not from the euphoria which the drug initially produces, but from the beginner's realization that the discomfort and misery of withdrawal is caused by the absence of the drug and can be dispelled almost magically by another dose of it. The repetition of this experience functions as a conditioning process of the type known to psychologists as "negative reinforcement," which quickly establishes in the beginner the fatal craving for the drug. The beginning phase of the process involves an escape experience, but as addiction progresses and the addict learns to anticipate withdrawal it becomes, to a large extent, an avoidance experience as the user tries to space his shots so as to prevent withdrawal distress rather than to relieve it. The cognitive feature of the experience which is the source of addiction is an essential aspect of it, since addiction evidently does not occur when a person who is physically dependent on opiates fails to understand the withdrawal symptoms.

At first glance, it may seem incomprehensible that the novice who deliberately experiments with drugs, and who knows and associates with addicts, should fail to realize the cause of the distress that accompanies sudden abstention. But the withdrawal symptoms are poorly understood by the layman, and even by doctors and students of the problem, and are often regarded as "imaginary" or purely mental, without any organic or physiological basis. There is, moreover, nothing about the initial use of the drug for very short periods of time that forecasts future developments. The confirmed user ordinarily cannot explain his craving for the drug to the satisfaction of the non-addict; nor can be ordinarily explain it to his own satisfaction, since it is a basically irrational impulse which he himself does not understand. The non-addict finds it hard to imagine himself as an addict. Being inclined to regard addicts as weaklings or abnormal types, he discounts their tales of suffering and regards the withdrawal distress either as insignificant or as nonexistent, a product of the user's imagination. A trial or two of the drug further convinces him that be is right and increases his confidence that he cannot become addicted. This very self-confidence is likely to lead to carelessness in the further use of the
drug, until too many injections are taken too close together, and the person, as the addict says, "wakes up some morning with a yen."

The following cases illustrate both the effects that the withdrawal symptoms have on the beginner and the inability of the non-addict experimenter to appreciate the nature of the danger he is courting.

Case 4. Mr. H. became addicted to opium smoking in about 1909, when he was living in California. Acting as a messenger and in other capacities, he was in a racket that brought him into associations with underworld characters. He also attended parties with pimps and prostitutes at which opium was smoked. He smoked along with the rest and liked it. The pimps told him that he would get hooked and warned him against it. He laughed and told them to mind their own business.

When asked how he finally got hooked, he said, "Well, just the way most of 'em do. I kept using the pipe and one day I woke up gasping and feelin' like hell. My bones ached all over. Naturally, I didn't know what was the matter, and like they all do I told somebody how I felt, and naturally I told an addict. He said, 'Jesus, boy, you've got a habit,' and then I took a pill and smoked it and was all right."

Case 5. (2) I told you that I first got acquainted with narcotics through a woman I was living with on Wabash. She used to go to the Chink joints to fix her yen. She smoked the pipe. She asked me to go with her and I went.... I first learned that I was hooked when I could not satisfy the girl with whom I was living, and she told me that I was just like the rest of the birds. This did not mean much until I got under the weather and could not get the usual dose that I needed. Some of the boys in the honky-tonks told me I was weak under the gills. I went to see a Negro doctor and told him that I was sick. He asked me how I was sick and I told him that the pain I had began in my stomach and went out through my toes. He laughed and told me, "It's got you, kid. What is the usual dose you take?" I went from that doctor feeling that this could not have happened to me. I couldn't be affected the same as the rest of the muff divers that were hanging around the corners, but I soon grew to know that the dinge [Negro] was right. From that time on I knew that the whole world would be against me the same as I had been when I had seen the condition of the other dopes around the South Side. . . . It is not a pleasant feeling to be told that you are a dope. It is something like the doctor telling you that you are suffering from an incurable disease, although at the time I did not think so.
Dr. Schultz observed that the drug user does not intend to become an addict and that he is surprised the first time he notices the withdrawal symptoms. He writes:

A drug user does not expect at first to become addicted, but addiction is impressed upon the individual as soon as the abstinence symptoms are severe enough to frighten him. He then awakens to the fatal knowledge that he is "hooked," which information other addicts are only too glad to give him. When more of the drug is taken and the symptoms are relieved, this idea of the necessity of continuing its use is indelibly impressed on his mind and accepted without much resistance, as there is, besides the pain of withdrawal, considerable pleasure and relief also. (3)

C. E. Sandoz comments upon the same point as follows:

People who have acquired the morphine habit and do not know about withdrawal symptoms sometimes do not realize that the latter are due to the want of the drug when they try to stop its use, but will attribute them to some other cause, and perhaps consult a physician. Occasionally in these cases, the physician himself does not suspect or recognize morphinism, and interprets the symptoms as due to some other diseased condition. (4)

Most or many of the persons who experiment with opiates for the sake of kicks do not know the nature of the danger involved and pay attention to the wrong things. They think that the power of the habit must come from seductive or even uncanny pleasures produced by the drug. From a few injections they discover that these pleasures are overrated, but in their preoccupation with them they are not prepared for the abstinence symptoms which steal upon them and force them to continue the habit. More sophisticated experimenters who know of the significance of withdrawal distress take care never to use heroin or any opiate on two consecutive days. Such a schedule permits the individual to enjoy the euphoric effects of the drug and, if rigidly followed, avoids the possibility of addiction. I have met persons who have adhered to such a program for from ten to twenty years.

The way in which a person may have addiction thrust upon him and be caught in the trap without knowing it, and without ever giving himself a single injection, is illustrated in the following instance:

Case 6. Mr. G. was severely lacerated and internally injured in an accident. He spent thirteen weeks in a hospital, in the course of which he received opiates frequently both by mouth and
hypodermically. He was unconscious part of the time and suffered considerable pain during convalescence despite the intake of opiates. He did not know what he was getting and noticed no effects except that his pain was relieved by the shots. He was discharged from the hospital, but in several hours he began to feel restless and uncomfortable, without recognizing his condition. That night he became nauseated and vomited blood. Fearing that he was going to die, he summoned his family doctor. The physician did not realize what was the matter and administered a mild sedative. During the next day Mr. G.'s condition became steadily worse, and by the second night he was in such misery that, as he said, he began to wish that he would die. He again summoned his family doctor. This time the doctor began to suspect that Mr. G. was suffering from opiate withdrawal and prepared an injection of morphine. Mr. G. remembers nothing after the injection except that the doctor sat down by his bed and asked him how he felt. He replied that he noticed no effect, but the doctor said, "You will in a few minutes," Soon the patient fell asleep and continued in perfect comfort for many hours. When he awoke, he was informed of the true nature of the relieving dose by his wife and by the physician's comment: "Now we're going to have a hell of a time getting you off." The patient remained free of the drug for a few days and then purchased a syringe and began to use it himself.

It will be observed that in most of the descriptions of the onset of the habit presented in this chapter, the drug user was first enlightened concerning his withdrawal symptoms by some other person—usually an addict or a doctor. This, of course, is not always the case and is probably less often true now than it was several decades ago when the general public was not as well informed. The individual who makes his own correct interpretation of the withdrawal symptoms does so by drawing upon information and beliefs that have been transmitted to him as part of the social heritage. If he is a physician or if for any other reason has special advance knowledge of opiates, it is more likely that he will understand his symptoms by himself without the help of others.

A considerable theoretical advantage is obtained if one can show that the power of the opiate habit rests upon the person's reaction to withdrawal distress rather than upon his reaction to a fleeting and often nonexistent euphoria. The reversal of effects and the apparent paradox that the drug user continues his habit only to feel "normal" become intelligible; indeed, they become integral aspects of the habit. In terms of the euphoria theory they are inexplicable paradoxes and contradictions. A similar view was held by Erlenmeyer, who wrote:

Precisely in the difference between the effect produced by a dose of morphine just once to a healthy person and that produced by morphine when habitually incorporated, lies the fatal development of the morphine craving.... If the withdrawal is made after this reversal, there comes into existence a "vacuum" as Legewie says, i.e., the abstinence symptoms; that host of painful sensations, intolerable feelings, oppressive organic disturbances of every sort, combined with an extreme psychic excitement, intense restlessness, and persistent insomnia. In such
moments the craving for morphine is born and rapidly becomes insatiable, because the patient has learned during the period of habituation, when abstinence symptoms set in after the effect of the last morphine dose has passed off, that those terrible symptoms are banished as if by magic by a sufficiently large dose of morphine.

(5)

Dr. L. Guy Brown (6) also corroborates this view, although he does not elaborate upon it.

There is still another sense in which drug addiction is acquired. If a person is given morphine or some other drug in the hospital without his knowledge of the fact, or without any previous information concerning the habit, he will not become an addict even though he suffers all the bodily 'aches' when its administration has been discontinued. Unless his suffering has been defined to him as being caused by a narcotic drug, he will not have a desire for the drug.

The viewpoint stated above also accords with the addict's typical comparison between the opiate habit and the use of cocaine. He says that "there is no habit in cocaine," and that it is a "luxury," whereas morphine is a "necessity." Cocaine does not create a state of bodily tolerance during the early period of use, and there is no reversal of effects as in opiate addiction. Moreover, nobody under the influence of cocaine can be said to be normal, nor is the discontinuance of this drug accompanied by organic or physiological withdrawal symptoms. (7) One addict emphasized the contrast between the two drugs by characterizing the use of cocaine as a matter of "desire," and that of opiates as a "habit." Marihuana, of course, like cocaine is not an addicting drug and provides the same contrast with the opiates. It may be suggested that the essential difference between the habitual use of nonaddicting drugs such as cocaine, marihuana, and LSD in comparison to opiate addiction is that while the latter is established by negative reinforcement the former is motivated by the positive reinforcement involved. Cocaine, marihuana, and LSD are, in other words, used for the sake of their positive effects and in order to obtain a feeling that is extraordinary or other than normal; they are not used to relieve or avoid withdrawal distress, since these drugs do not involve withdrawal symptoms. It is of interest to observe that, probably because of the built-in conditioning mechanism provided by the withdrawal symptoms in the case of the so-called addicting drugs, addiction to them seems more automatic and less influenced by personality factors than is the case with the nonaddicting drugs. There are, of course, some persons who are strongly attached to such drugs as marihuana, LSD, and cocaine and who use them regularly. In general, however, these habits seem to be much less powerful or compulsive than the genuine addictions, and they seem to depend upon special personality attributes which cause some people to obtain extraordinary satisfactions from these drugs. As the terms "addicting" and "non-addicting" themselves suggest, the use of nonaddicting drugs is usually not strongly
The average marihuana smoker, for example, smokes when the drug is at hand and when it is not available simply waits for it to show up again.

Since it is being argued that addiction to opiates is learned or acquired in the process of consciously and knowingly using the drug to alleviate and prevent withdrawal distress, there are a number of questions which may be raised. What happens, for example, if a person who has become physically dependent on an opiate recognizes the withdrawal symptoms at once when they appear but never thereafter uses the drug to relieve them? The desire to escape from pain and discomfort is, of course, easily understood, but why does not the person who discovers that he has become physically dependent at once resolutely stop taking the drug, endure the withdrawal, and free himself from the trap? Two answers may be suggested. In the first place, the individual is not likely to appreciate the significance of the choice that faces him; secondly, even if he does realize it, the persistence and intensity of withdrawal distress may be sufficient to wear down the firmest resolution. Furthermore, the temptation to use the drug to seek relief is strengthened by its availability and the individual's failure to see that any moral issue is involved. He persuades himself that it is logical to take a shot, that there is no danger, and that he will not be trapped thereby. This rationalization becomes still easier since all that is involved is the repetition of an act to which he is already accustomed. He may intend to quit at the first opportune moment, tomorrow, the next day, or next week, but not immediately. I have never heard of a user who, having experienced the full intensity of the withdrawal symptoms in full knowledge of their relation to the absence of opiates, did not become an addict. This fact is easy to understand when one considers the severity of the symptoms and the impression they make on the uninitiated. Note Case 6, in which Mr. G., on the second night of withdrawal, was in such misery that he wished to die. There still remains the problem of explaining those cases in which the person knows exactly what to expect from the very beginning and therefore is aware of the withdrawal symptoms before they become severe. The most illuminating instance of this kind which has come to my attention is that of Louis Faucher, who, as already mentioned, deliberately experimented upon himself, taking one injection every evening for six days in succession, then stopping for fifteen days, and finally repeating the experiment. He describes his experience as follows:

My first series of injections was finished. Well and good, but night was still ahead of me. I took advantage of every opportunity so as to be able to resist more effectively. I dined out; I drank with friends; I amused myself; And I returned home very late. All of this entertainment seemed dull to me, the wine and the food seemed bad. Nevertheless, I had had the necessary diversion, and after coming home early in the morning I went to bed fatigued and slept a little. The following night I was enabled to sleep by a small dose of veronal which took immediate effect. During the following days I invariably thought of and desired the injection, when the time came, but I was able to resist. (8)
In the second series he increased the dose greatly. The euphoria was thus increased, but it lasted a shorter time after each injection:

Needless to say, these seductive hours left behind them a certain regret which caused me to stimulate myself artificially in order to combat the darkness that invaded me. It made it necessary for me to exert myself deliberately for several days in activity so as not to find life stale as an ordinary alcoholic does. In the intellectual sphere I noticed for several days an intense apathy, a remarkable disinclination to work, and a noticeable lack of decision.  

From Faucher's conclusions it is obvious that, in his own case, six days' injection was sufficient to produce a condition bordering on addiction. This suggests that the use of the drug to avoid the abstinence symptoms, even during their incipient stages, quickly leads to attitudes that characterize addiction. Faucher, of course, had advance knowledge and therefore noticed and understood the symptoms at once. He first became aware of them after the third or fourth dose; when the fifth dose was due he began to look forward to it eagerly. This case may be contrasted with that of the patient in a hospital who unknowingly receives the drug for weeks, months, or even years, and is none the worse when it is successfully withdrawn. I described Faucher's experience to an addict, whose comment was that the former was "halfway booked."

Another borderline case, showing how early and rapidly the symptoms of psychological dependence upon the drug are established, is the following:

Case 7. While in his teens, Mr. W. had an affair with the wife of a doctor who was much younger than her husband. She was a drug addict, and gave W. an injection at his own request. He liked the effects, returned for more, and used it regularly for a few weeks until the doctor sent his wife away, presumably for a cure. The doctor then discovered that the boy also had been using the drug, for the usual withdrawal symptoms set in. The doctor took him in hand and reduced the dose gradually. The entire experience, from the first injection of the drug to its complete elimination, lasted six weeks, and the maximum dosage attained was about one grain a day. The boy was not in a position to know how to renew his supply or to make the money necessary to continue his habit. When interviewed, he affirmed that he had not used the drug for nine years. He was using marihuana, however, and said that he felt an attraction to drugs which be compared to the fascination that dizzy heights exercises upon some people: mingled fear and desire. The fact that this man was using marihuana regularly and associated with a drug addict suggests the strong probability of his returning to opiates. Having had only one opportunity of talking to him, I do not place unqualified confidence in his story.
Unfortunately, borderline cases are exceedingly difficult to find, so that definite conclusions cannot be made regarding the length of time it takes to establish addiction. Further research may bring more instances to light and permit a closer examination of the initial stages of addiction. For example, it would be interesting to know what the effects would be if the person who suffers intense withdrawal distress were to be informed of his condition but prevented from obtaining any drug. Two possibilities are suggested by this hypothetical situation: either the experience would serve as a warning and a deterrent, or it would create something like the usual desire, resulting in a tendency to resume the drug at a later time. One might also reason that the individual could not truly be said to know that an opiate would relieve his suffering until he had actually tried it. In the absence of cases illustrating these borderline problems, no definite conclusions are justified.

There still remains for consideration the adequacy of the proposed theory as an explanation of the essential characteristics of addiction. As noted earlier, these characteristics are: a desire for the drug and dependence upon it; a powerful impulse to increase the dosage beyond the point of bodily need; an awareness of addiction and the definition of oneself as a "junkie" or addict; and the tendency to relapse into the habit when the drug has been withdrawn. The first three aspects will be discussed here, the fourth in a later chapter.

**Craving and Psychological Dependence**

In the early stages of drug use before the withdrawal symptoms become a dominant element in the user's motivations, the reasons for using the drug are extremely varied and quite different from what they become when addiction is established. Initial use may be for the purpose of alleviating pain, experiencing kicks, or simply to conform with what others in a specific group are doing. In their long history, opiate drugs have been used for the alleviation or treatment of most of the physical and mental ailments known to mankind and have been recommended by folk cultures as well as by the medical profession. Addiction may follow regardless of the specific nature of the original motivations for use and, as has been indicated, even when the first experience of the drug's effects occur in connection with their being administered by a physician. With continued regular use, initial motivations or their absence become irrelevant.

An addict I interviewed told me that before he himself started to use drugs he regarded addicts with disgust and thought of opium smokers as creatures from another world. The account of how he became addicted was as follows:
Case 8. Mr. A. R. began to mingle with criminals, prostitutes, and gamblers before he was twenty. He was in poor health and had been sporadically spitting blood for more than a year when an older man who smoked opium noticed it and made inquiries. "You'd better smoke hop," was his advice. Mr. R. soon acquiesced and accompanied the man to an opium smoking joint. He liked his first trial very much. I kept myself so full of hop for the next eight months that I didn't have a chance to find out about being sick. I just liked it and used it. I didn't think about whether it was habit-forming or not." On one occasion, when he accidentally happened to omit smoking, he began to yawn and to manifest the usual symptoms; without any great difficulty he realized that opium was the cause, yet he continued its use for about four years without thinking of quitting. He stopped spitting blood shortly after beginning to use the drug but does not pretend that that is why he continued to use it. He says that he liked opium so much at first that he used far too much and got himself into a state of drowsiness and sluggishness which he found unpleasant.

The casual way in which A. R. began using drugs without considering possible consequences might be compared with the way in which a child may eat candy simply because he likes its taste and without regard for unpleasant consequences. The euphoric effects during early use, of course, tend to encourage the user to continue. They may be thought of as the bait on the hook. With continued regular use these effects vanish and the withdrawal symptoms provide a new and different reason for continuing to use the drug. As this happens, the element of compulsion makes its appearance and the drug becomes a matter of necessity rather than of desire. This characteristic feature of addiction behavior is characteristically absent during the initial period.

The above points are further illustrated in the following case:

Case 9. Mr. X, at about the age of eighteen, began to live with a prostitute who smoked opium. After spending his first night with her, he describes his subsequent experiences as follows: "We slept most of the day until late afternoon, and when I woke up she got up and got a tray out of the dresser drawer and brought it over and placed it on the bed. I had seen opium pipes two or three different times since I had been working on the messenger force, so I recognized the contents of the tray as an opium layout. She told me she was a smoker and asked me if I had ever smoked hop. I told her I never bad and she said that I ought to try it once, as she was sure I would like it." He then smoked. "I suddenly became very nauseated and had to leave to vomit. I vomited till there was nothing left on my stomach and I was still sick so I went to bed. She wet some towels with cold water and put them on my forehead and after an hour or so I fell asleep. I slept two hours and when I woke up I felt all right again. I went to work that evening as usual, and every time I would sit down in the messenger office I would feel drowsy and fall asleep and my body would itch all over and when I scratched it would feel awfully good."
The next night the girl again offered him a smoke. "It made me so sick the night before that when she started cooking the opium this morning it seemed to kind of nauseate me again. So I declined, and told her that I didn't feel very well, and I wanted to get some sleep.... As soon as we were awake she again got the tray and lit the lamp and got back into bed and started to cook her opium again. She cooked and smoked six or eight pills as I lay there watching her and then she again offered me some. I told her that I was afraid to smoke again for fear that it would make me as sick as I was the night before. She told me that it wouldn't make me sick this time, and she coaxed and coaxed until I finally gave in and said all right, that I would smoke a couple of pills with her just to be sociable.

After I had lived with her for six or seven months she told me that she had a letter from a sister who was very sick, so she asked me if it would be all right if she went to Helena to see her. I told her to go if she wanted, so I gave her enough money to go with and took her to the train. We had smoked just before she left and she had packed the layout in a small handbag and took it with her. I worked that night as usual and everything went along fine, until I went home in the morning, and then I started to get sick. I went to bed, but I couldn't sleep. I felt very restless and I rolled and I tossed all day. Towards evening I began getting awful cramps in my stomach and was also nauseated and started vomiting. I hadn't eaten any food all that day, so there was nothing on my stomach but a little water, and when I started vomiting nothing came up but green bile and the more I vomited the sicker I got. I finally rang the bell and sent for a messenger, and when he came I told him to tell the boss that I was sick and wouldn't be able to come to work that night. The messenger asked me what was wrong and I told him I didn't know. I told him that I had awful cramps and was vomiting all the time. He asked me if I had been smoking every day with my girl and I told him I had. Then he asked me if I had any opium since she had gone to Helena, and I told him that I hadn't. He told me that was the reason why I was so sick. ... He looked in the drawer and found a jar of opium, so he cooked some and gave me three pills. He went to the restaurant and got me a pitcher of black coffee and told me to swallow the pills and drink some of the coffee. I did as be told me, and laid down on the bed again, and in about ten minutes I began to feel all right again. This was the first time that I had missed smoking in the six months that I lived with this girl.

It is evident that Mr. X was not preoccupied with opium during these six months. His chief interest, naturally, was his first major sex experience. His apparent unconcern about his future supply of the drug is striking and contrasts sharply with the behavior of the confirmed addict. Keeping in mind the casual or episodic character of initial use before withdrawal symptoms have achieved dominance, it is instructive by contrast to observe the addict when his supply is threatened or actually cut off. Light, Torrance, and their colleagues describe the behavior of addicts who voluntarily took the cure under their care:

After a person has become firmly addicted to the use of opium or one of its derivatives, we
have reason to believe that the problem of securing and maintaining an adequate supply of the drug comes to mean the major purpose of his existence. To an extraordinary degree he comes to develop a sagacity and persistence in this direction which may outmatch the abilities of those conducting the investigation. The ingenuity that is displayed in maintaining channels of supply is amazing. He will plead with or threaten those about him who are in a position to supply him with the drug. Whatever method he may use has been previously determined by careful consideration on his part as to which may be the more successful.... When the addict is admitted to the ward and understands that the drug is available and will be given for a time, he is amenable. He is cooperative in anything which does not interfere with his daily dosage.... But when the effect of the drug passes off, all the sagacity and ingenuity on his part are brought into play, as only those who have been associated with this type of person can appreciate.

Not only must the observer forestall the schemes which the addict is devising to obtain the drug, but he must defeat plans, made before the admission, for the restoration of his supply should his craving become unbearable. He may have attempted to bring the drug into the ward concealed in his clothing, jewelry, or in any orifice of the body large enough to hold it. . . . Should his attempts to bring a certain quantity into the ward have failed, he resorts to plans devised to obtain it from friends outside of the hospital, or he schemes with fellow addicts who are about to be discharged, and who have Signified their intentions to him of immediately returning to the drug. He will attempt to bribe anyone who appears open to temptation. Letters will come addressed to him which have been written on paper previously saturated with the drug, dried, ironed out, and then inscribed with some harmless message.... Sometimes the drug is concealed under the stamp of an envelope. The wooden stem of a match changed into a cylinder has been found to contain a drug. He will accuse or betray his best friend in order that he may obtain favor from those in charge. Telegrams and telephone messages will arrive, bringing the news of the death of a member of the family, asking his immediate return home. These are but a few of the methods employed to obtain drugs, and unless forestalled, they will ruin any studies made during the withdrawal period. In addition, there is always danger that the patient may be aided by a fellow addict who may have drugs in his possession, or by a drug peddler who will furnish drugs without charge when it insures him the return of the addict with funds in the near future.

The scopolamine treatment that we have employed has always been stated by the patient, who has been previously treated and who wishes to enter the ward, to be "the best he has undergone, all others being torture." When he is just recovering from the effects of the scopolamine, it is the "worst," all others being excellent. When the time approaches for his discharge, and he is anxious to obtain his liberty, the treatment again becomes the most successful he has ever had; he appears to have fully recovered his normal strength, when he may still be so weak that he may not be able to walk several blocks without collapsing.
The fact that the patients here described volunteered to have the drug gradually eliminated, and then behaved in this manner, suggests the desperate preoccupation of the addict with the maintenance of his supply. This preoccupation arises from the addict's apprehension of the consequences of deprivation; it depends, in other words, upon his anticipation of the withdrawal symptoms. Before realizing that there are withdrawal symptoms, or understanding their true nature, the addict is naturally not interested in the problem of supply. Not comprehending that the drug has become a daily necessity, he supposes that he can stop taking it any time he wishes. The following sentiments of a true addict remain essentially unintelligible to anyone who has not himself been tortured by withdrawal:

To the opium consumer, when deprived of this stimulant, there is nothing that life can bestow, not a blessing that man can receive, which would not come to him unheeded, undesired, and be a curse to him. There is but one all-absorbing want, one engrossing desire, his whole being has but one tongue—that tongue syllables but one word—morphine.

Place before him all that ever dazzled the sons of Adam since the fall, lay sceptres at his feet and all the prizes that vaulting ambition ever sighed and bled for, unfold the treasures of the earth and call them his; wearily, wearily will he turn aside and barter them all for a little white powder. (11)

From his experience in avoiding the withdrawal symptoms which recur after each injection, the addict comes to regard himself as being supported, or as he says, "carried" or "held up" by the drug at all times. Whenever he omits a regular dose, he feels himself slipping into a state of mental and physical depression which seems to him unbearable. This realization of being constantly supported by the drug makes apparent the fact that the addict's normality is self-conscious and introspective and inextricably related to the presence in his body of a sufficient quantity of opiates. If he has had his supply, the addict, when asked how he feels, may answer, "Fine!" and perhaps add, "The shot I had this morning is holding me up well." It is as though an ordinary person, when asked the same question, were to reply, "I am feeling fine. The lunch I had this noon is holding me up well." (13)

The desire for opiates, which begins after the initial period of its use as a relief from physical suffering caused indirectly by the opiate itself, grows rapidly with the continued use of the drug. Every additional dose makes it more difficult and painful to quit. Every fruitless struggle to free himself from the habit only impresses upon the addict his imperious need for the drug. The beginner does not usually have the information that would enable him to fight the habit intelligently and effectively. The expenses and discomforts associated with the habit in its early
stages are not sufficiently pronounced to furnish him with a powerful enough motive for combating the desire to be relieved of withdrawal distress. Consequently, by the time the beginner has fully awakened to the seriousness of the situation, the habit is likely to be irrevocably fastened upon him.

The most substantial pleasures associated with addiction are probably actual relief and exaggerated anticipation of this relief. To a considerable extent, the addict's life is one of anticipation: of withdrawal, of a loss of supply, and of the relief which is sometimes glorified as pleasurable in itself. When he does suffer, he exaggerates his distress. (14) During the initial stages of withdrawal, every slight stomach cramp, which De Quincey described as "the gnawing of some imprisoned reptile," is endowed with some of the significance and painful attributes of all the stomach cramps the user knows there are to follow. The suffering becomes all the more unendurable because the means of relief are so simple.

*The Increase of the Dosage*

Although not every addict increases his dosage greatly beyond the point of bodily need, the vast majority of them probably have the impulse to do so, and success in controlling this tendency comes only through resolute and calculated self-control. Dosage may be divided into two parts: first, the daily quantity necessary for comfort, and second, the additional amount which the user uses and believes to be necessary. This "deluxe" dose, (15) as the latter has been called, represents for the most part just so much more expense and trouble. Its physical effects are detrimental, yet it is usually regarded as a necessity, and the addict will often move heaven and earth to maintain a daily consumption far exceeding that which would result in maximum physical efficiency. The deluxe dose may thus be said to represent a psychological rather than a physiological need. Its psychological character is evident from the fact that an addict using large quantities daily may have the amount cut to a fraction of its former level and be none the wiser, providing he is unaware of the reduction. His condition tends to improve when that is done, but when he attempts to reduce his own dosage, even though he is fully aware of the resulting benefits, he finds it difficult or impossible.

This irrational tendency to increase the dosage may be interpreted, according to the theory, as the result of an increased sensitivity to the withdrawal symptoms. (16) As the user becomes familiar with these symptoms, he learns to detect the very first signs; these warn him of future distress, and as a result he is inclined to magnify their extent and importance. He feels sicker than he really is, and, since he regulates the time of each injection by the way he feels, he is
impelled to use the drug sooner than otherwise. Then, having taken the dose prematurely, he finds that he does not "feel the shot" as he did the last time. The effects of an injection are noticed in proportion to the contrast between the states before and after the dose takes effect; it follows, then, that in order to "feel his shot" the addict must now increase the size of the dose. The impact of the drug has become a symbol of security from withdrawal; if, however, he takes his injections a little sooner than before, the symbol is blurred, and in order to restore it he must use a greater quantity. The process is further promoted by the tendency of the organism to adapt itself to doses of any size. Caught in this vicious circle, the addict's consumption often is limited only by the tremendous expense involved.

A further incentive for increasing dosage is often found in the addict's realization that he is trapped. Since he must, in any case, continue the shots, he throws caution to the winds and seeks the greatest possible satisfaction. Having learned to value the physical impact of the drug for its symbolic significance, he may strive to enhance this symbol quantitatively. As a result, he creates the illusion that he feels well even at the expense of greater financial outlay and actual physical discomfort.

The addict's intense preoccupation with and craving for the drug, and his tendency to increase the dosage, are probably connected with scarcity of supply and the difficulties and dangers of obtaining it. The insecurity created by these factors intensifies the addict's psychological attachment to the drug much as the scarcity of food intensifies the desire for it and leads persons who are chronically undernourished to overeat when the opportunity presents itself. In situations in which the drug user feels assured of adequate supply his concern with the drug would probably be much more comparable to the average American's concern with food than it now is. Reports from an experiment in New York City in which Drs. Vincent Dole and Marie Nyswander provided addicts with regular maintenance doses of methadone, a synthetic equivalent of the opiates, support this idea. Drs. Dole and Nyswander have told me that the addicts in their experiment reported that they quickly stopped thinking and talking about drugs, exclusively at least, shortly after they entered the program. There was also no difficulty in stabilizing the dosage of these users.

Awareness of Addiction

The user of a drug does not think of himself as addicted to it as long as he is convinced that he
can stop taking it any time he wishes to. In the case of the opiate addict, this confidence begins to dissolve when he first realizes that the withdrawal distress bars the way to prompt and easy abstinence. Repeated experiences further reduce confidence in the ability to quit. A relatively full realization is reached when the user who has succeeded in staying off drugs voluntarily for a time relapses and resumes his habit. The first experience with withdrawal may suggest to the beginner that it may be difficult to break the habit, but he is likely to underestimate the difficulties and to think that he will succeed. The withdrawal symptoms provide the user with his first inkling that he may have fallen into a trap, and this realization frequently leads to voluntary attempts to break the habit. When these fail, the user becomes relatively fully aware that he is an addict, and he is then ready for assimilation into the addict subculture. From other addicts he learns what to do to obtain supplies and to avoid arrest. In the course of time, under the pressure of the habit, more and more of his daily associations and activities become focused on matters connected with his habit.

The beginning of this process of assimilation and the motives for it are illustrated in the following case:

Case 10. Mr. Q., a professional criminal, began to use drugs about 1925, when his wife died. He drowned his sorrows in liquor, and one night, as he was coming home after considerable indulgence, he was accosted by an addict who bad often begged money from him before. Knowing that the man was an addict because he had been pointed out as such, Mr. Q. decided to play a joke on the beggar by pretending to arrest him. Then, dropping this pose, he decided on the spur of the moment to try some morphine. They went to the beggar's regular agent, and the purchase was made.

Mr. Q. took a very small injection and gave the rest to the addict. He greatly enjoyed the sensation produced by the drug. Several weeks later, the addict looked up Mr. Q. in order to get help in obtaining a supply, offering to share the returns fifty-fifty. Mr. Q. had had no intention of using the drug, but agreed to help, so the addict insisted that Mr. Q. accept his share. He first refused, then accepted the drug and took it home, forgetting about it for quite a while. He had no means of administering it at this time. One day a friend who ran a small business establishment moved into new quarters where he found an all-metal syringe concealed behind the molding. Mr. Q. took it home and, finding that it worked, began to use his little supply of morphine. When it was exhausted, he noticed that he wasn't feeling entirely right, and, remembering that morphine had helped him before when be felt depressed, he decided to buy some more. He went to the place where he and the beggar had first purchased some, and there, by sheer accident, met a man who bad a large bottle of the stuff which he was willing to sell cheap. Mr. Q. commented, "Well, I took it home and really got hooked on that stuff. Before it ran out I knew that I would have to have more, so I went out and made connections."
When asked how he knew that he was addicted, he explained, "I used to take a couple of shots a day of the stuff, and then I noticed that I was beginning to depend on it, so I thought I'd do without it one day and didn't take my morning shot. Well, along in the afternoon I was with some of the fellows in a saloon somewhere, and I was feeling rotten and yawning all the time. One of the fellows was an addict and asked me if I had a yen.

"What the hell's a yen?" I asked, and he said it came from having the drug habit. He asked me if I was taking morphine at home, and I said I was, about two times a day.

"When did you have your last shot?"

"Yesterday afternoon."

"And you didn't have anything this morning?"
"'No.' He asked me if my legs hurt, and they did.

"'Why, Jesus Christ!' the man said, 'You've got a habit and don't know it.'

"I went home and on the way I thought I could hardly make it because my legs were so wobbly. Well, when I got home, naturally I was feeling bad and wanted to feel better, so I fixed up a shot and thought I would see if the fellow was right. In a few minutes I was all right, feeling as lively as a spring chicken. Naturally, I began to find out what I could do about this habit by talking to addicts and by reading."

The following case, by way of contrast, offers an instance in which physical dependence on drugs existed, in which mild withdrawal distress occurred and was understood, but in which the drug was not subsequently used. As would be expected from the proposed theory, this person continued to have the feeling of confidence with regard to becoming addicted which is characteristic of most non-addicts and there were no changes of attitude or behavior which could have motivated her to join the addict subculture:

Case 11. Mrs. D. received morphine for about a month because of an illness. A relative, who was a doctor, was free and easy with morphine, leaving it at her bedside. She does not recall how much she used or how often and noticed only that after a dose she would feel stimulated and would want to talk and play cards. She noticed no letdown when the effects of the tablets wore off, and, after approximately a month, her condition was improved and use of the drug was to be discontinued. Withdrawal symptoms appeared and were reasonably severe though they were not accompanied by nausea or vomiting. She realized fully that these were due to not using the drug, noting chiefly restlessness, nervousness, and aching joints. A number of times it occurred to her to try morphine, but inasmuch as it was no longer called for, and because she recalled that it was not supposed to be good practice to go on using it when the illness was gone, she did not do so. In two days the symptoms disappeared.
She asserts that if the distress had been severe, or if her original ailment had returned, she would unhesitatingly have taken more of the drug, yet she is quite sure that she could not have become an addict.

According to the viewpoint outlined above, addiction to opiates is determined by the individual's reaction to the withdrawal symptoms which occur when the drug's effects are beginning to wear off, rather than upon positive euphoric effects often erroneously attributed to its continued use. More specifically, the complex of attitudes which constitute addiction is built up in the process of conscious use of the drug to alleviate or avoid withdrawal distress.

This theory may be stated in another form. If we suppose that an individual uses drugs regularly at four-hour intervals, it proposes that the experience from which the patterns of thought and behavior that constitute addiction are learned is encompassed in the approximately ten minute time interval immediately following injection, not in the other 230 minutes between injections. The craving for drugs, it is argued, is fixed by negative rather than by positive reinforcement, by relief and avoidance of discomfort and pain rather than by positive pleasure. Response at the voluntary level to events and situations generally depends upon how these events are perceived and interpreted. It is therefore not surprising that the behavioral consequences of the withdrawal experience do not produce addiction except when the experience is cognitively grasped in a particular way; that is, when it is understood by the subject.

This theory seems to provide simple and plausible lines of explanation for varied and seemingly paradoxical aspects of addiction such as the addict's claim that he merely feels normal under the drug's influence, the fact that addicts can be deceived about whether they are under the drug's influence, and of the common tendency of users to increase the dosage. The theory also makes the addict's constant preoccupation with the drug intelligible and indicates how he is compelled by his experiences to recognize and admit to himself that he is a drug addict, junkie, or "dope fiend."

According to the hypothesis that has been developed here, the sheer physiological or biological effects of drugs are not sufficient to produce addiction although they are indispensable preconditions. The effect which the biological events associated with using drugs has on human behavior is seen as one that is mediated by the manner in which such events are perceived or conceptualized by the person who experiences them. Persons who interpret withdrawal distress as evidence of the onset of an unknown disease act accordingly, and, if they are not
enlightened, do not become addicted. Persons who interpret the symptoms of opiate withdrawal as evidence of a need for the drug also act accordingly and, from using the drug after they have understood, become addicted. As the user applies to his own experiences and behavior the attitudes, symbols, and sentiments current in his society, he is faced with a problem of adjusting himself to the unpleasant implications of being an addict in a society that defines him as an outcast, pariah, and virtual outlaw. In his efforts to rationalize his own conduct, which he cannot really understand or justify, and to make it more tolerable to himself, he is drawn to others like himself.

The process of becoming addicted, as it has been described, presupposes membership in social groups and linguistic intercommunication. Understanding withdrawal distress means to conceptualize it, to name and categorize it, to describe and grasp it intellectually through the use of linguistic symbols. Addiction is therefore a uniquely human form of behavior which differs from the superficially comparable responses of lower animals much as human cognitive capacities differ from those of lower forms.


2. Interview by Steven Orskey.


Criminal

Law
and Criminology
(1922), 13:
16.


Chapter 4 THE NATURE OF ADDICTION

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12. See Glossary.

13. See also Chapter 6 for a discussion of the differences between the normality" of the addict and that of the non-addict. Scarcity of food results in preoccupation with the means of obtaining it, and one might perhaps argue that there is a parallel between addiction to drugs and addiction to food.

14. T. D. Crothers states, "The addict's conceptions of pain are very largely anticipatory and imaginative, and associated with mimicry." The implication that the withdrawal distress is unreal or slight is incorrect, but the author evidently perceived the importance of the imaginative and anticipatory aspects of the habit. It is only fair to repeat that the withdrawal distress is not trivial. Its severity accounts for and enhances its influence on the imagination of the addict. (Morphinism and Narcomanias from Other Drugs [Philadelphia: W. B. Saunders, 19021, P. 222).

15. Terry and Pellens, op. cit., P. 553. Roger-Dupouy, following Joffrey, called this part of the daily dose "the proportion of luxury."