DEFINING "ADDICTION"

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ABSTRACT

For centuries, the word "addiction" meant being "given over" or devoted to something. However, the 19th century temperance and anti-opium movements used it in a more restrictive way, linking "addiction" to drugs, to illness or vice, and to withdrawal symptoms and tolerance. Both the traditional and restrictive meanings survived into the present. In the ensuing uncertainty about its meaning, some authorities now wish to replace "addiction" with substitute terms like "drug dependence", "substance abuse", etc.

We hope to show that the term "addiction" is too valuable to discard. Its traditional sense designates the profoundly important, albeit sometimes harmful, capacity of people to become "given over." On the other hand, the restrictive meaning refers only to a special case, which is defined arbitrarily and inconsistently. It is outmoded because of these problems. The traditional meaning remains useful, but can be improved by clarifying the distinction between "positive" and "negative" addictions originally proposed by Glasser (1976).

The word "addiction" has too many meanings. This is partly because it contains a fundamental ambiguity. For centuries, "addiction" referred to the state of being "given over" or intensely involved with any activity. The ambiguity lay in the value attached to this state; addiction could be either tragic or enviable, or somewhere in between. As well, a second meaning emerged in the 19th century, and now coexists with the earlier one. The new meaning is more restrictive than the traditional one in three ways; it links addiction to *harmful* involvements with *drugs* that produce *withdrawal symptoms or tolerance.*

Ambiguity in such a basic term confuses the study of psychology, and of drug issues in particular. We believe the confusion can be dispelled by abandoning the restrictive meaning, which does not fit with the realities of addiction, and by clarifying the ambiguity in the traditional meaning.

In the first section of this article, historical studies are used to show that the restrictive meaning did not grow from scientific or medical discoveries, but from the rhetoric of the temperance and anti-opium movements of the 19th century. In the second section, contemporary research is used to show that the traditional concept describes the clinical realities of addiction far better than the restrictive concept does. In the third section, new interview data on university students are used to show how the traditional concept also describes the dependent and addictive patterns of non-diagnosed people better than the restrictive concept does.

The conclusion of this article argues that the restrictive meaning should be discarded because it artificially limits addiction to a special case. Although fixation on this special case reflects social concern, the restrictive definition has proven not to consistently identify the types of addiction that are harmful. Glasser's distinction between "positive" and "negative" addiction, with some refinement, adds a socially critical distinction to the traditional definition of addiction. Finally, the potential for increased understanding that grows from critically examining the meanings of "addiction" is explored.

History of The Word "Addiction"

The Latin verb *addico* signifies "giving over" either in a negative or a positive sense. In Roman law, for example, an *addictus* was a person given over as a bond slave to a creditor. In its positive uses, *addico* suggested devotion, as in *senatus, cui me semper addixi* ("the senate, to which I am always devoted") or *agros omnes addixit*

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deae ("he dedicated the fields entirely to the goddess") (Lewis & Short, 1879).

The traditional English meaning of "addiction" is similar. The 1933 *Oxford English Dictionary* defines addiction as: " . . . a formal giving over or delivery by sentence of court. Hence, a surrender or dedication of any one to a master . . . The state of being (self-) addicted or given to a habit or pursuit; devotion" (Murray, Bradley, Cragie, & Onions, 1933, p. 104). A similar definition appears in Webster's original American dictionary (Webster, 1828/1970).

Uses of "addiction" over several centuries compiled in the *Oxford English Dictionary* show that, as in Latin, "addiction" could be used in a favorable sense ("His own proper Industry and Addiction to Books") and an unfavourable sense ("A man who causes grief to his family by his addiction to bad habits"). Our reading of the uses of "addiction" in Shakespeare, Hobbes, and Gibbon suggests that the unfavourable sense was less common than favourable or neutral usage.

Prior to the nineteenth century, "addiction" was rarely associated with drugs. Although opium had been well known from earliest recorded history, references connecting it to addiction, or any synonym for addiction, were unusual prior to the 19th century (Parssinen & Kerner, 1980). In pre-19th century Europe, opium was usually referred to as a medicine (Sonnedecker, 1962). The word was generally not applied to alcohol use either. Sometimes, though rarely, habitual drunkards were said to be "addicted to intemperance" (Levine, 1978).

The restrictive usage of "addiction" emerged in language of the 19th century temperance and anti-opium movements (Berridge & Edwards, 1981, chap. 13; Levine, 1978; 1984; Sonnedecker, 1963, pp. 30–31). "Addiction" came to replace terms like "intemperance" or "inebriety" for excessive alcohol and opium use. In the process, the traditional meaning of "addiction" was narrowed in at least three ways. The new usage linked "addiction" tightly to drugs, especially alcohol and opium, gave addiction an invariably harmful connotation as an illness or vice, and identified addiction with the presence of withdrawal symptoms and tolerance.

The 19th century use of "addiction" is sometimes seen as a medical or scientific achievement — an enlightened replacement for an earlier moralistic view of drunkenness. However, it was not scientific, it was only incidentally medical, and, in the end, it was harsher than the view of addiction it replaced (Alexander, in 1987).

Prior to the 19th century, at least in the United States, habitual alcohol use was not generally viewed as a sin but as a matter of choice, with relatively little ultimate significance (Levine, 1978). The restrictive definition first appeared in the doctrine of the Temperance Movement where it was part of the rhetoric used to change the image of chronic heavy drinking from an indulgence that might be laughed at, ignored, or possibly punished, to something necessarily sick or evil (Levine, 1978; Shaffer, 1985, p. 67). The application of "addiction," in its restrictive sense, to habitual alcohol use was *not* " . . . an independent medical or scientific discovery, but . . . part of a transformation in social thought grounded in fundamental changes in social life — in the structure of society" (Levine, 1978, pp. 165–166).

The restrictive use of "addiction" served diverse motives. It was used by anti-opium reformers in the U.S. apparently to frighten people into abstinence by linking opium with horrifying (and greatly exaggerated) descriptions of withdrawal symptoms (Musto, 1973, chap. 4). Later in the 19th century, the Chinese Empress mounted an anti-opium drive and Theodore Roosevelt seized the opportunity to attack opium, partly to curry favour in the "China Market." The American government supported Chinese opium prohibition at international conferences, pressured other nations to prohibit opium use, and pushed the American Congress to lead the way with national opium prohibition laws. Part of this effort to win public support for opium prohibition entailed dramatizing the concept of addiction (see Musto, 1973, p. 33).

In 19th century England, public health concerns over excessive opium use were inflamed by health professionals who wished to construe opium-eating as an addictive disease that fell within their professional domains (Berridge & Edwards, 1981). This was part of a process of medicalizing various forms of deviance that eventually expanded the domain of the medical profession (Parssinen & Kerner, 1980).

This was also a period of class tension and the English middle classes apparently needed conceptually simple bases for condemning restive segments of the lower class. One basis was created by exaggerating the evils associated with widespread lower class opium use, labelling

users as addicts and addiction as something evil or sick (Berridge & Edwards 1981).

The interplay of motives in England has been summarized this way:

> Addiction is now defined as an illness because doctors have categorized it thus . . . It was a process which had its origins in the last quarter of the nineteenth century . . . but such views were never, however, scientifically autonomous. Their putative objectivity disguised class and moral concerns which precluded an understanding of the social and cultural roots of opium use (Berridge & Edwards, 1981, p. 150).

Manipulating the meaning of "addiction" has continued into the present, with still other motivations:

> Images of addiction are in fact consistently and relentlessly marketed — in the nineteenth century to make opium the property of the medical profession. In the twentieth century to justify the position of enforcement agencies or the international control apparatus, or to win tomorrow's research budget. Images compete, and in the process the marketing becomes even more aggressive. The medical and scientific images feed and change the public, administrative and political view, and in return these perceptions give the doctors and scientists the needed support . . . (Berridge & Edwards, 1981, p. 250).

Although the restrictive definition of addiction flourished, the traditional definition was deeply rooted and never entirely displaced. The consequent co-existence of two dissonant meanings, each with its variations (plus a trivial usage, meaning an ordinary habit), became so confusing that some authorities began to urge abandoning the word altogether (LeDain, 1973; Paton, 1969; Zinberg & Robertson, 1972). In fact, some major scholars have adroitly managed to excise the term entirely from discussions of compulsive drug use (American Psychiatric Association, 1980; Edwards, Arif, & Hodgson, 1982; Vaillant, 1983).

But the word "addiction" has refused to be expunged from the language. The traditional meaning is still widely applied, both in its positive sense (Glasser, 1976; Land, 1971) and its negative sense (Hatterer, 1980; Peele, 1985). Likewise, the restricted meaning can be found in popular literature (Kline, 1985; Gold, 1984) and scientific contexts (Dole & Nyswander, 1980; Smart, 1983). Modern dictionaries generally give both meanings or try to combine them.

Why has this fractured, embattled word survived? Perhaps because it designates, however imperfectly, an important human state that requires a name. Perhaps because proposed substitutes, like "psychological dependence," "physical dependence," "drug abuse," and "substance abuse" introduce new ambiguities (Blackwell, 1985; Peele, 1977; Zinberg, Harding, & Apsler, 1978).

Although the word "addiction" has proved hardy, its ambiguity has almost destroyed its usefulness. The confusion can best be cleared by abandoning the restrictive meaning and addressing the ambiguity in the traditional meaning.

In the next section, a brief literature review will introduce the evidence that the restrictive definition does not fit well with the reality of addiction. In the subsequent section, new interview data will show that addiction in a non-diagnosed population fits with the traditional sense of "addiction" better than with the restrictive sense. The interview data also document the ambiguity in the traditional definition.

Recent Addiction Research

Recent research on addiction will be used to evaluate the three major ways that the restrictive usage narrowed the traditional meaning of "addiction", i.e., linking it to drugs, to harmfulness, and to withdrawal symptoms.

Is Addiction Limited to Drug Use?

Contrary to the restrictive definition, there is no basis for linking the word "addiction" primarily or exclusively to drug habits. Nor is there a basis for assuming that the most severe addictions necessarily involve drugs.

This has been demonstrated in many ways. For example, severely compulsive love relationships have been found to be as intense, irrational, and ultimately self-destructive as intense heroin addiction. A review of "crimes of passion" in the news might suggest that the potential for tragedy is at least as severe among "love addicts" as among drug addicts. Differences that popular wisdom might assert between the two kinds of addiction disappear once the distorted media view of heroin addiction is discounted and the two addictions are compared on the same basis (Peele & Brodsky, 1975).

Other authors have likewise shown that severe drug addictions closely resemble destructive involvements with: gambling (Orford, 1985), exercise (Morgan, 1979), accumulating money (Slater, 1980), childish fantasy (Alexander, 1982), television-viewing (Winn, 1977), working (Oates, 1971), pentecostal religion (Womack, 1980), and numerous other activities and substances (Hodgson & Miller, 1982; Orford, 1985; Peele, 1985). Compulsive involvements with any of these can consume a person's entire existence and can have tragic consequences. Therefore, linking the term "addiction" solely to drugs creates an artificial distinction that strips the language of a term for the same condition when drugs are not involved.

Those who have not actually had clinical experience with patients addicted to activities other than using drugs, or who have not read a number of case studies, may not fully believe that severe addictions to activities can *really* be as serious as addictions to heroin or cocaine. However, the observations of numerous professionals who have had the opportunity to observe people addicted to both drugs and other activities cannot be easily dismissed.

The similarity between severe addictions to drugs and other activities may be partly obscured by everyday experience. Whereas it is easy to observe people with non-harmful involvements in everyday activities, most of the available information on illicit drugs comes from dramatic presentations of severe addictions. In addition, the criminality associated with the use of illicit drugs exacerbates the harm done by addiction to these substances. However, more systematic observations have now shown that the potential for tragically destructive addiction is not peculiar to drugs.

Is Addiction Always Harmful?

Addiction can be a devastating, ultimately fatal condition, but it can also be harmless or even beneficial. The distinguished scientist Edwin Land (1971) provided a personal account of beneficial addiction in a *Science* article entitled "Addiction as a necessity and opportunity." Land described his own life as an alternation between a state in which he was in touch with people and the environment and one in which he was given over to his work. Land correctly identified this second state as addiction and described it as temporary and beneficial. In his words:

> You want to be undisturbed. You want to be free to think not for an hour at a time, or three hours at a time, but for two days or two weeks, if possible, without interruption. You don't want to drive the family car or go to parties. You wish people would just go away and leave you alone while you get something straight. Then, you get it straight and you embody it, and during that period of embodiment you have a feeling of almost divine guidance. Then it is done, and, suddenly, you are alone, and you have a need to go back to your friends and the world around you, and to all history, to be refreshed, to feel alive and human once again (Land, 1971, pp. 151–152).

It may be harder to acknowledge addiction as sometimes beneficial for people who use drugs, rather than engage in scientific contemplation. However, the evidence is just as clear. Khantzian, Mack, and Schatzberg (1974) presented five brief case studies of male American heroin addicts who would fit both the traditional or the restrictive definitions. Several vital functions that heroin addiction may serve were identified, including: calming the user; controlling premature ejaculation; "keeping him going"; helping the user feel better when angry, nervous, or depressed; eliminating migraine headaches; reducing fear; providing a feeling of belonging to the society of drug takers; controlling homesickness; and creating detachment from bad news.

It seems quite likely from this account that there were extended periods for each man during which the benefits of addictive heroin use outweighed the costs. In the researchers' words:

> Addicts' use of opiates represents a unique and characteristic way of dealing with a range of human problems involving emotional pain, stress, and dysphoria . . . addicts take advantage of the powerful action of the drug to mute and extinguish their emotions and to solve, at least in the short run, problems associated with interpersonal relationships. In addition. . . the transaction and practices of the pseudoculture in which the addict immerses himself also play a part in filling his social vacuum. . . (Khantzian et al., 1974, p. 110).

Extensive contact with current and former heroin addicts in Vancouver over several years have convinced us that this unexpectedly favourable cost/benefit ratio is not uncommon.

This is not to say that addiction cannot be disastrous. But particular people in particular

circumstances may conscientiously find addiction, even to drugs, to be the most adaptive way they can live, at least for a time. In extreme cases, addiction may save them from debilitation or suicide. Similar observations have been elaborated by many scholars (e.g., Chein, Gerard, Lee, & Rosenfeld, 1964; Kaplan & Wieder, 1974; Marlatt, 1985; Peele, 1985; Shaffer & Burglass, 1981; Wishnie, 1977; Wurmser, 1978). Others, who do not grant that addiction can be actually beneficial nevertheless note that it is not always harmful, contrary to the restrictive meaning (Edwards, Arif, & Hodgson, 1982, p. 10; Westermeyer, 1982).

Are Withdrawal Symptoms and Tolerance Linked to Addiction?

There is extensive evidence and growing recognition that withdrawal symptoms and tolerance only sometimes accompany addiction and are rarely its cause (Alexander, 1984; Edwards, Arif, & Hodgson, 1982; Goldstein, 1983; Jaffe, 1980). For example, by carefully interviewing addicts, Cummings, Gordon, and Marlatt (1980) found that "relapses involving opiates do *not* occur primarily in response to somatic discomfort" (p. 305). Chaney, Roszell, and Cummings (1982) found that only 16% of the relapses of methadone patients "involved coping with physiological states associated with prior substances use" (p. 294).

Another strong indication that withdrawal symptoms and addiction are not always linked is that profound addictions often occur without withdrawal symptoms. For example, many researchers have found that a significant proportion of people who live the devastating lives of street junkies do not have withdrawal symptoms when heroin supplies are interrupted or when they are pharmacologically deprived by a "naloxone challenge" (e.g., Glasser, 1974; O'Brien, 1976; Peachy & Franklin, 1985).

In contrast, some drugs that produce withdrawal symptoms are not used compulsively, for example imipramine, a drug prescribed for depression (Jaffe, Peterson, & Hodgson, 1980, p. 1). Finally, tolerance develops to the sedative effects of the phenothiazenes (chlorpromazine, etc.) and to other drugs that are not addicting by either the traditional or restrictive definition (Rech & Moore, 1971, pp. 299–301). Although withdrawal symptoms and tolerance are frequently associated with addiction to the opiates, they are neither necessary nor sufficient to cause compulsive drug use, nor invariably concomitant with it.

Self-Report Data from University Students

For several years we have interviewed university students about their drug use, dependencies, and addictions. The students' self-descriptions conform more closely to the traditional definition than to the restrictive definition on the key differences between the two. The methods and findings are summarized here.

Methods

Sampling. Three sets of students at Simon Fraser University were chosen arbitrarily and an attempt was made to interview all the students in each set. The three sets comprised 60 students who worked in the University Center Building, 49 students enrolled in fourth year psychology courses, and 30 students enrolled in the campus karate club. Every potential subject but one was eventually interviewed in each set (total $N=136$). For our purposes the advantages of the minimal self-selection obtained in this manner outweighed the loss of a random sample of the entire student body (See Schachter, 1982).

The interviewers were student members of the sub-population they interviewed. Prior to actual collection of data they received extensive training and supervised practice on the interview. We also observed some actual data collection by each interviewer, to maintain standardization.

Interview terminology. The interview was based on drug-use categories (see Table 1) derived from Jaffe's (1980) concept of a *continuum of involvement* with drugs, from "experimental use" to "addiction". Jaffe's definition of "addiction" is very close to the traditional meaning; it is an "overwhelming involvement" neither intrinsically linked to illness and vice, nor to withdrawal symptoms and tolerance.

In pilot interviews, hundreds of students were asked if they could apply Jaffe's definitions to their own behaviour. In the process, the definitions gradually reached their forms in Table 1, which retain Jaffe's original conceptions but are more readily comprehensible to students. Two categories were added to accommodate distinctions that many students felt important. Jaffe's "casual or recreational use" was divided into "casual use" (category 4) and "regular use"

(category 5). Jaffe's "addiction" was supplemented with "negative addiction" (category 8) to separate out the subset of addictions that were intensely aversive to the students from those that were not.

TABLE 1
Involvement Definitions

1. (Abstention). Did not use at all.
2. (Experimental Use). Used on no more than a few occasions out of curiosity, or to conform to a group.
3. (Circumstantial Use). Used only in specific circumstances when effects were helpful, e.g., unusual fatigue, illness, pain, etc.
4. (Casual Use). Used infrequently for its pleasurable effects.
5. (Regular Use). Used regularly for pleasurable effects.
6. (Dependence). Used regularly, without medical necessity; effects felt as needed for continued well being; probably would continue use in spite of adverse medical or social effect.
7. (Positive and Neutral Addiction). Overwhelmingly involved with using and/or obtaining it; pervades total life activity and controls behaviour in a wide range of circumstances; high tendency to resume use after stopping.
8. (Negative Addiction). (This category was scored if the subject chose category 7 *and* gave a negative response to both follow-up questions: "Did you like being that involved with _____ ?" "Did you feel good about yourself when you were that involved with _____ ?")
9. (Withdrawal Symptoms). Continued use is necessary to prevent a syndrome which could include headaches, nausea, diarrhea, chill, cramps, mental imbalance, etc. (At least one physical manifestation, i.e., other than "mental imbalance" must be mentioned.)

Notes.
Subjects were recorded as "Quitting" if they reported that they were involved in trying to terminate their use of a drug or activity.
Subjects were scored as fitting the *Traditional Definition* if they chose category 7 or 8.
Subjects were scored as fitting the *Restrictive Definition* if they chose category 9.
Category 9 could be double scored with categories 3, 5, 6, 7, or 8.
Subjects were not shown the material in parentheses.

Responses that fit Jaffe's definition of addiction (category 7) were re-classified as "negative addiction" (category 8) if students reported unequivocally *both* that they did not enjoy being overwhelmingly involved with the drug or activity and that they did not like themselves at the time of the involvement. When students described themselves in this way it was often with visible emotion or concern. Because instances of negative addiction were put into category 8, category 7 is referred to as "positive and neutral addiction."

Categories 7 and 8 combined served as a definition of addiction in the traditional sense.

Jaffe's (1980) description of withdrawal symptoms was adapted to serve as an operational definition of addiction in the restrictive sense (category 9). Withdrawal symptoms were not part of Jaffe's continuum of involvement, but rather an effect of past use. Therefore, students who reported withdrawal symptoms were asked to choose one of the involvement categories as well, and students who indicated any kind of regular use (categories 3, 5, 6, 7, 8) were asked if they also had withdrawal symptoms. All students were able to understand the logic of double-scoring category 9.

A comprehensive list of types of psychoactive drugs was taken from a drug physiology text (Julien, 1981) and modified by adding locally popular drugs and drug names. A list of non-drug activities popular with students was accumulated during the pilot interviews and expanded once as the actual study progressed. The students were asked the same questions about the drugs and non-drug activities.

Interview Procedure. Students were invited to participate in an interview on "their involvement with drugs and other activities." Interviewers did not use the words "addiction" or "dependence," but referred by number to the definitions in Table 1 (without the parenthesized labels), which the students had before them throughout the interview. Subjects were informed that their confidentiality would be scrupulously respected. Interviews lasted 45 to 90 minutes.

The subjects were encouraged to actively help in accurately translating their complex life experiences into numbers. They responded comfortably in that collaborative atmosphere. In fact, many spontaneously commented that they enjoyed the interview because it gave them the opportunity to evaluate themselves in new terms.

To maximize accuracy and consistency, the interviewers offered to review the categories' meanings before the interview. They also queried the subjects from time to time about each category to be sure the subjects had understood

it correctly, had considered all parts of it, and were applying it uniformly to their use of various drugs and activities. When this was not the case, subjects were asked to reconsider their choices, but the final choice was always theirs.

The interviewer first asked subjects to "describe their level of current involvement" with each drug and activity by indicating an involvement category. Next, they asked subjects to report the number of days they had used each drug or activity in the previous thirty. They next asked the category of the subjects' "highest ever" involvement with each drug or activity.

After responding to all the drugs and activities on the list, subjects were asked if there were other drugs or activities that they used, and to categorize these in the same ways. Finally, subjects were asked if they were attempting to terminate their involvement with any drug or activity. If they were, "quitting" was recorded.

Subjects were encouraged not to select an involvement category unless one really fit. When none did, verbal descriptions were transcribed, but for quantitative purposes the code "can't answer" was recorded. There were few "can't answer" responses in the involvement categories: less than 3% for all drugs and activities except nicotine, sex, and love, where there were between % and 6% "can't answers."

Since the involvement categories were originally taken from a pharmacology text, their wording is more suitable for drugs than for other activities. In particular, the verb "use" was awkward for many subjects when categorizing their involvement with non-drug activities. For example, it is awkward to say that one "uses" love or children. Therefore subjects were asked to mentally substitute an appropriate verb, but to otherwise apply the definitions literally, as they had with the drug items.

Since addiction is a sensitive topic some underreporting seemed inevitable. On the other hand, a number of investigators have found that interview subjects accurately describe their own addictions, if the interviews are carefully conceived and conducted (See Vaillant, 1983, pp. 31–32; Westermeyer, 1982, p. 83; Zinberg, 1984, pp. 64–68). Zinberg (1984) has described the positive results of an elaborate cross-checking scheme on the self-reports of heroin users.

Results and Discussion

On the key issues of whether addiction is linked to drugs, to harm, and to withdrawal symptoms, the data supported the traditional definition. However, these data describe only a subset of a university student population. Further research is obviously required to determine their generality.

Is Addiction Restricted to Drug Habits? As Table 2 shows, addiction is not restricted to drugs, *by any definition*. By the traditional definition (i.e., categories 7 and 8 combined), only 7.3% of the students' addictions, were to drugs (See Table 2). The most common addictions were to love, sports, work, sex, school, self-reflection, etc. The most common *drug* addiction, by the traditional definition, was to nicotine, which was 13th on the list with 12 students reporting addiction to it at some time in their lives. The next most frequent drugs of addiction were cannabis (16th), alcohol (21st), and caffeine (22nd). Drug addictions were also a minority of all addictions when positive and neutral addiction (category 7) and negative addiction (category 8) were considered separately (Table 2 is based on current and past addictions combined. Data on current addictions show a similar pattern of results, although the totals in all categories are lower).

TABLE 2
Drug Involvements = Percentage of Total Involvements

Type of Involvement	Percentage of Type That Involved Drugs
Addiction: Traditional Definition (Categories 7+8)	7.3
Positive and Neutral Addiction (7)	4.5
Negative Definition (8)	19.3
Restrictive Definition (9)	54.8
Dependence (6)	23.1
Regular Use (5)	29.2
"Quitting"	60.5

Note: The numbers following each definition refer to the involvement definitions from Table 1.

Less than 20% of the reported instances of negative addiction — the addictions that the students found intensely aversive — involved drugs. The most frequently reported negative addictions were to love and food, reported by 15 and 7 of the students respectively. The most commonly reported negative addiction to a drug was to nicotine, reported by 6 of the students. The most commonly mentioned illicit drug was cannabis, reported by 4 students.

By the restrictive definition (category 9), the

most frequent addictions were to nicotine, caffeine, love, and sports, in that order. About 45% of the addictions were to activities, rather than drugs, even though withdrawal symptoms were not recorded unless the subject reported a definite physical symptom, not merely "mental imbalance" (Table 2).

Three other categories could be interpreted as suggesting addiction in weaker senses of the term: "dependence," "regular use," and "negative involvement." For each category, drugs are involved less often than non-drug activities (Table 2).

The highest ratio of drug addictions to total addictions was for "quitting." Sixty per cent of the habits that students reported having tried to quit were drug habits. The most frequently mentioned habits were nicotine, food, alcohol, and an "other activites" category. But even if "quitting" were taken as the definition of addiction, 40% of the reported addictions were to non-drug activities.

Obviously, the percentage of addictions that involve drugs depends on how the term is defined. But addictions were not limited to drugs by any definition. By the most severe definition of addiction, negative addiction, drug habits comprised less than 20% of total addictions.

Is Addiction Necessarily Harmful? The students were not specifically asked about the harmfulness of their involvements, but their interviews did provide relevant information. If it is fair to assume that people eventually develop a strong aversion toward habits that harm them, even when they cannot quit, then the ratio of negative addiction to positive and neutral addiction approximates the ratio of harmful addiction to harmless or beneficial addictions. These data appear in Table 3.

definition in that all eight of the *current* drug addictions were categorized as negative addictions. However, only 17 of the 34 "highest ever" drug addictions (which includes both current and past addictions) were categorized as negative addictions. Some of the drug addictions that were not categorized as negative addictions were addictions of short duration, usually occurring in summers during which students and their friends had been overwhelmingly involved with marijuana, alcohol, or LSD and had enjoyed the experience, both at the time and looking back.

Of course, it may be that the students' temporary periods of drug addiction were harmful, regardless of how they remembered them, but this is a risky assumption. Adventurous or rebellious adolescents often develop extravagant passions for dangerous sports, forbidden loves, drug sub-cultures, etc. Although such youthful involvements may offend the larger society, they may serve important functions, as rites of passage or first tries at adult autonomy (Erikson, 1950). They might also serve to teach young people that they cannot long escape adult responsibilities with addictive pursuits. These hypothetical beneficial functions seem to us as plausible as the assumption that all drug addictions are inevitably harmful, even when the formerly addicted person says they were not.

Are Withdrawal Symptoms Linked to Addiction? This question was explored by determining the number of addictions that were accompanied by withdrawal symptoms. The three most compulsive forms of drug involvement included in the interview were "dependence," "positive and neutral addiction" and "negative addiction." Whenever students chose one of these descriptions they were asked if category 9 (withdrawal symptoms) also applied. Table 4 presents these data.

TABLE 3
"Negative Addictions" and "Positive or Neutral Addictions" to Drugs and Activities

		Current	Highest Ever
Drugs	Positive or Neutral Addiction (7)	0	17
	Negative Addiction (8)	8	17
Activities	Positive or Neutral Addiction (7)	174	361
	Negative Addiction (8)	6	62

For non-drug activities, only a small minority of the reported addictions were negative addictions. For drugs, the proportion was higher. In fact, there was some support for the restrictive

Contrary to the restrictive definition, Table 4 shows that withdrawal symptoms were not typi-

cally concomitant with compulsive use, either for drugs or non-drug involvements, even in the case of negative addiction. The majority of reported dependencies, addictions, and negative addictions, did not involve withdrawal symptoms.

TABLE 4
Withdrawal Symptoms Accompanying Dependence, Positive and Neutral Addiction, and Negative Addiction

	Drugs		Activities	
	No	Yes	No	Yes
Dependence (6)	93	9	377	2
Positive and Neutral Addiction (7)	11	6	346	15
Negative Addiction (8)	13	4	61	1

Even though a clear somatic manifestation was required for withdrawal symptoms to be recorded, withdrawal symptoms followed the cessation of some non-drug habits, e.g., love and sports, as well as some drug habits. This fact suggests that withdrawal symptoms are not a purely pharmacological phenomenon although they were associated with a higher percentage of drug habits than of other involvements.

Conclusions and Hypotheses

The restrictive concept of addiction is a relic of 19th century temperance doctrine that penetrated the 20th century dressed up as medical or scientific knowledge. Its origins are neither medical nor scientific and it does not mesh well with contemporary knowledge. The restrictive usage reduces the complex phenomenon of addiction to nothing more than a disease of excessive drug consumption accompanied by withdrawal symptoms and tolerance. By implication, it denies other manifestations of addiction, such as harmful addictions to non-drug activities and positive or neutral addictions.

Discarding the restrictive definition should make it possible to think more precisely about addiction and drug problems. Moreover, scholars can stop seeking substitutes for a useful term that designates an important aspect of human existence.

Obviously, restoring the traditional definition does not, in itself, answer the difficult questions. Instead it eliminates pseudo-answers, so real understanding can be sought. Why, for example, is addiction sometimes miserable and destructive but sometimes beneficial and enjoyable? The restrictive definition suggests a facile, but spurious answer — addiction is harmful only when it involves drugs. Abandoning this spurious answer reveals the need to identify the real differences in the dynamics of the two kinds of addiction.

We hypothesize that the difference between positive and negative addiction lies in the effect of the addiction on the *organization* of a person's life. In beneficial addictions, people may become "given over" or "overwhelmingly involved" in a way that integrates the vital components of their lives. For many people, addiction to religious ideals, scientific inquiry, physical exercise or even a drug may serve such a purpose. Their life is not narrowed by addiction, but organized. Family, friends, work, entertainment, etc. are all centered by the addiction. Such an addiction can be thought of as "centripetal" or integrative — it organizes the elements of life by drawing them to a center.

Many harmful addictions may be thought of as "centrifugal" — addictions that force most of the normal components of life to the periphery. However, even centrifugal addictions may be beneficial *if they are temporary.* In the quotation cited earlier, Edwin Land described a way of giving himself over to his work in a centrifugal sense. His life was not impoverished by this practice because he interspersed periods of centrifugal addiction with long periods of non-addiction. Students who told our interviewers of summers given over to a drug-using circle of friends and drug-centered social events may have been describing another type of beneficial, centrifugal addiction, one that may occur only once in a lifetime.

The genuinely destructive addictions may be those that are both *prolonged and centrifugal.* For example, not everyone who is addicted to religious, scientific, or physical ideals can be described in the positive terms used above. When these addictions are prolonged and centrifugal,

they can devastate the addicted person's life and alienate their family and community.

In a sense, this formulation of the difference between beneficial and destructive addictions merely moves the essential issue back one step. *Why* do some people develop and maintain addictive involvements that rule out most of what makes life satisfying to others? The complex issue of causation has been taken up in another article (Alexander, in press).

There is also the question of what habits have the greatest addictive potential. Obviously the most publicized and feared addictions are to illicit drugs like heroin and cocaine, and the restrictive meaning of addiction would imply that drugs pose the major danger of negative addiction. However, our student data suggest that more negative addictions may be associated with non-drug activities than with drugs, and more with legal drugs than with illegal ones. Of course, such conclusions cannot be generalized from a small student population without further research. But if this conclusion turns out to be true even of students in general, it would suggest that helpful information for this group should be directed more at avoiding negative addictions than at avoiding illicit drugs.

What are the drawbacks of choosing the traditional definition over the restrictive one? The traditional definition might be criticized because it is not a useful diagnostic category, but this is not a weighty criticism. We suspect the traditional definition is not a diagnostic category because addiction *is simply not a disease.* Moreover, the restrictive definition is not a useful diagnostic category either. Many people with serious problems of compulsive drug use do not fit the restrictive definition, e.g., heroin or cocaine addicts who do not have withdrawal symptoms. On the other hand, many people who do fit the traditional definition, such as heavy coffee drinkers with tolerance to caffeine and painful withdrawal symptoms, do not appear to warrant treatment or incarceration.

If the restrictive meaning of addiction is to be abandoned, a term is needed for the subset of addictions that are seriously harmful to the individual and to society. The DSM-III definitions (American Psychiatric Association, 1980) of "substance abuse" and "substance dependence" do not serve well, because they are burdened with logic carried over from the restrictive definition. For example, to be classified as "substance dependent," the most severe "substance use disorder," a patient must show withdrawal symptoms or tolerance, although this is pointless in view of the evidence reviewed above. Moreover, the DSM-III definitions are different for different drugs, so no overriding concept is generated. The term "negative addiction" as originally popularized by Glasser (1976) has a similar limitation; like the restrictive definition it is tied to the object of the addiction, drugs and alcohol, more than the nature of the addiction.

However, if Glasser's analysis is revised and negative addiction is defined simply as those addictions that individuals and society eventually recognize as harmful, regardless of what drug or activity is involved, then the term becomes useful. Moreover, such a simple concept invites the development of more definite criteria such as, perhaps, the concept of "prolonged, centrifugal addictions" suggested above.

An objection to discarding the restrictive meaning might be that the two views can somehow be combined. The desire to compromise seems to be manifested in the early definitions of the World Health Organization and many other formal definitions or in the acceptance of the disease concept of addiction as a "metaphor" recently proposed by Shaffer (1985). Shaffer provides an important reminder that the disease concept of addiction, which is intertwined with the restrictive meaning, is used in the life-saving work of Alcoholics Anonymous and in other therapeutic relationships.

Nevertheless, we think combining the two views is neither helpful nor necessary. Fortunately, people who are busy saving lives do not need academic approbation for their definitions. They will not, and should not, be distracted from their way of using the term addiction unless more effective therapeutic techniques emerge from new thinking. On the other hand, the fact that a doctrine is a useful way to think in some therapeutic contexts does not prove that it must be integrated into scholarly theory outside of those milieux. Useful theory and social policy require unambiguous concepts, not diplomatic accommodations between ideas. We believe this is partially recognized in the current World Health Association definition of "drug dependence" which moves quite far toward the traditional meaning. "Drug dependence" is defined as follows: "a syndrome manifested by a behavioral pattern in which the use of a given psychoactive drug, or class of drugs, is given a

much higher priority than other behaviors that once had higher value." (Edwards, Arif & Hodgson, 1982, p. 10). The outmoded criteria of withdrawal symptoms and tolerance are left behind, as they should be.

Can rigorous scholarship be satisfied with the ordinary language definitions for "addiction" and "negative addiction" that are proposed in this article? Are concepts like "given over", "overwhelmingly involved", "higher priority" and "harmful to the individual and society" precise enough? For the present, the ordinary English language seems superior to the medicalized restrictive definition, and far superior to the continued confusion of conflicting definitions. This is not a case where a scientific definition clarified ordinary language, but one where a concept from a social movement confused ordinary language and should now be withdrawn. Once the restrictive definition is abandoned, research can deepen the understanding of addiction to the point that definitions that improve traditional language can emerge.

In the end, addiction is too important to be oversimplified by the restrictive definition. Addiction is one of the proclivities that gives human existence its intensity and mystery. Addiction has to do with the triumph of devotion and the horrors of compulsion. It is something that must be faced in its fullest sense, if we are to know ourselves.

RÉSUMÉ

Pour des siècles, le mot «addiction» (dépendance) s'est rapporté à l'état d'attachement ou de dévotion extrême à l'égard de quelque chose. Toutefois, les mouvements de tempérance et anti-opium du 19e siècle ont donné une toute autre connotation à ce mot, le rattachant aux drogues, à la maladie ou au vice et aux symptômes d'abstinence et de tolérance. Par la suite, «dépendance» prit des significations discordantes qui se multiplièrent au fur et à mesure que le sujet prenait de l'ampleur. Dans la confusion qui s'ensuivit, quelques représentants de l'Autorité désirent maintenant remplacer «dépendance» par des termes tels que «toxicomanie», «intoxication», etc.

Nous alléguons que le terme «dépendance» est trop important pour être ainsi rejeté. Selon sa signification traditionnelle, le terme décrit la capacité extrêmement profonde, bien que parfois nuisible, de l'individu à s'attacher et à se donner. D'un autre côté, la signification qu'on lui donne au 19e siècle réfère uniquement à une forme spéciale et nocive de dépendance. Cette dernière signification ne décrit pas adéquatement le concept de dépendance. Tout en conservant le sens traditionel du mot «addiction» (dépendance), nous pouvons l'améliorer en établissant une distinction entre «l'addiction positive» et «l'addiction négative» (dysdépendance) qui fut proposée à l'origine par Glasser (1976).

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