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Part I: The Study of Drug Taking Rituals

The Behavioral Sequences Around the Use of Heroin and Cocaine

The present study confirmed the existence of two main heroin administration rituals with an uneven distribution --injecting, which was the main route for a minority of 23%, and smoking, almost exclusively chasing, which was generally applied by 77% of the research participants. There was a large overlap with cocaine administration rituals. Generally, heroin injectors inject cocaine (hydrochloride) as well, while most heroin smokers inhale vaporized cocaine (base), by way of chasing. However, during the course of the fieldwork a growing tendency towards smoking cocaine in a pipe (basing) was observed. In particular many smokers have adopted this practice, while they continue to chase heroin. A number of IDUs also applied this smoking technique.

Chapter four showed that the ingestion of heroin by both chasers and IDUs is subject to a fixed, stylized and predictable behavioral sequence, which a user must master through practice, observation of, and instruction from more experienced users. Therefore it fulfills the first condition for ritualization, a prescribed psychomotor sequence. Chapter four also provided the first documentation of the instrumental functionality of the observed drug taking rituals. All elements in the behavioral sequence and the employed paraphernalia have a defined purpose, which can be derived from observing the ritual as well as from the exegetic explanations offered by its performers.

A similar conclusion can be drawn regarding the ingestion of cocaine, whether it is used purely or in combination with heroin. In the late 1970s and early 1980s cocaine became widely available and used in the circles of regular heroin users. At the end of the 1980s cocaine use has become rather endemic in this population --in the present study sample of active drug users 96% used both cocaine and heroin, while the prevalence of cocaine use among clients of the Rotterdam drug treatment agencies is almost 70%. The results presented in chapter five illustrate the powerful appeal cocaine has for the study participants, as they often went through great sacrifices to continue the use of this drug. Cocaine has thus 'nested' in ritual procedures developed around heroin use, which were initially less geared to the consumption of often large quantities cocaine. High level cocaine use brought about a large number of problems in the study population, such as craving escalation, resulting in 'binging' and increasing 'pill' use, which disturbed rather balanced heroin (-methadone) use patterns. Impaired judgment and outbreaks of violence, social withdrawal, paranoid thinking and depression could also be associated with high levels of cocaine use.

To counter these problems, existing heroin rituals were gradually adapted to integrate cocaine use. At first glance these adaptations may seem minor and rather insignificant. For example, little changed in the sequence of preparing a dose, especially for IDUs. Smokers smoothly extended their preparatory activities to include the cooking of base cocaine, using ammonia and, to a lesser degree, bicarbonate. These ritualized preparatory behaviors are generally highly standardized and instrumentally functional, whereas sometimes they are colored by idiosyncratic interpretations. Nevertheless, careful scrutiny shows that cocaine changed both the chasing and the injecting ritual significantly in several ways. Cocaine introduced a second, more potent, smoking ritual --basing-- and induced a variable daily ingestion pattern at an increased use frequency, in which cocaine and heroin are alternated, mixed or both. The latter change was directed at maintaining cocaine use, while simultaneously encountering the drug's adverse side effects. A major feature of this change is the altered position of heroin. It is an expression of the main instrumental function of drug use rituals --self-regulation.
Transitions between Administration Rituals

Chapter six investigated the transitions between smoking and injecting observed among the research participants. While variations of different cocaine/heroin combinations were common within the ritual of preference, transitions between administration rituals were only infrequently observed. Besides a few rather idiosyncratic reasons, most of the observed transitions from smoking to injecting could be traced to economic pressure, the increased rush experience delivered by the injection and loss of control. The observations and several comments of respondents imply a strong association with cocaine use, for economic (smoking cocaine becomes too expensive) as well as for hedonistic (the better rush) reasons. Transitions in the opposite direction were often associated with attempts to regain control, especially over cocaine use or social pressure, for example when socializing with non-injectors or when working in a dealing collective of exclusively smokers. For some older long time injectors, smoking their drugs was the only option left open, as they literally ran out of accessible veins. Chapter six also documented some evidence for cultural/religious barriers to injecting among Moroccan and especially Surinamese users. The prevalence of injecting drug use among these minority users is far lower than average. However, in spite of such protective cultural barriers, injecting has increased, in particular among Moroccans. Again cocaine is implicated as a possible 'facilitator'.

Function and Meaning of Drug Use Rituals

The expressions of ritual observed around the administration of heroin and cocaine have important instrumental functions in the day-to-day management of drug use --both in solitary and in social ritual situations-- and are significant in defining the social relationships between the drug users in their social networks. For this reason these behaviors have gained symbolic merit. The instrumental functions described in chapter seven center around maximizing the profits from a given dose of drugs, managing the level of drug use and balancing the positive and negative effects of the ingested drugs, and preventing secondary problems. Behavior directed at maximizing the drug effect can be observed in the preparation of the drug, in the actual administration and shortly thereafter. Through standardization of the behavioral sequence, which may contain behaviors that do and/or do not fit a means to an end scheme, users try to control the yield of the drug administration.

Standardization is also applied in controlling the level of intake and minimizing adverse effects. This is especially apparent in the ritual patterns that have been developed around cocaine use, which besides giving intense euphoria has some well known negative consequences. Heroin plays a crucial role in controlling cocaine. Both drugs are used in patterns that optimize the desired effects while simultaneously curbing the undesired side effects of cocaine. The nesting of cocaine in heroin rituals has altered the function of heroin to a great extent. The drug has become intertwined and subservient to cocaine --it is used to modulate the effects of cocaine, which has taken over its function of primary source of pleasure. Maintaining these cocaine/heroin patterns requires a steady availability of money and/or drugs, which many users cannot sustain on a permanent basis. Then they resort to control strategies that include periodical abstinence (mostly of cocaine) and averting situations that can induce ritual interactions resulting in using. In contrast with stereotypical portrayals, it is concluded that the study participants put much effort in trying to control their drug use.

Chapter eight investigated instances of symbolic elaboration developed around drug taking behavior at the level of the individual drug user. Examples were found of ritual objects (e.g. drug paraphernalia) of which the construction or use enhances or symbolizes a positive outcome of the ritual sequence and reduces anxiety. Likewise, parts of the ritual sequence can become just as important as the complete process, as for the user they are indicative for the results of the whole procedure. Indications of 'special meaning' were further found in, what may be called obsessive performance of the ritual, or continued performance after the rationale was no longer present. This kind of behavior was particularly apparent in IDUs, who, for example, were observed to inject solutions containing drug quantities too minuscule to sort an effect. One may call such behavior 'hyper ritualization'.
Just as in any other social group, rituals are very important instruments in defining the social context of the drug subculture. They display and communicate the subcultural norms regarding social relationships and socially appropriate behavior. Chapter nine analyzed the social implications of the rituals and rules that have evolved around group drug use. An important function is the maintenance of the social structures that are essential for the satisfaction of the needs of drug users --the places and channels which secure the relatively undisturbed purchase and use of drugs. The so called 'house address', where drugs are sold and used, and where users socialize, plays a crucial role in these structures. Within certain limits house addresses are tolerated by the police and this is communicated to the user community. Thus, house addresses are not under a constant threat of police busts and this resulted in a rather relaxed atmosphere at these places. The relative absence of ambiguity and anxiety over police interventions induced a clear set of rules, which are primarily aimed at securing dealing activities and use of purchased drugs. Whereas there is little fear of, for example undercover operations, only limited ritual interactions surround the actual drug transactions. The most successful house addresses are thus those with clear and strictly enforced house rules.

The most explicit social ritual has developed around the sharing of drugs, which is a very frequent activity. The drug sharing ritual can take a rather formal shape, as was observed in 'dyads' of IDUs, or be more casual, for example when drugs are shared in a 'pub-like' atmosphere among visitors of a house address. The sharing ritual is subject to several rules, e.g. regarding reciprocity and helping sick users. While some instrumental functions are apparent, for example preventing withdrawal, the drug sharing ritual symbolizes a broader pattern of social interaction in the drug subculture. Drug sharing expresses the almost universal subcultural rule of "share what you have" and is an important way to socialize and (re)establish relationships. In the latter sense it matches the cup of coffee (indeed, a drug) offered to a visitor. Drug sharing plays a crucial role in the social organization of drug users. It smothers conflicts and creates a special bond. It provides a feeling of identity and a support system, which satisfies basic human desires for intimacy, social solidarity and harmony. Therefore, the main social function of the drug sharing ritual is the maintenance of the drug using network and, ultimately, the drug subculture. These 'tribal' characteristics are shared with all other forms of human organization. Drug sharing is thus merely an expression of fundamental and normal human interaction.

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**Part II: Drug Use Rituals, Health Problems and Drug Policy**

Part II of the dissertation reports on seven substudies concerning the relationship between drug use rituals, drug policy and health problems, in particular the spread of HIV among IDUs. The literature study reported in chapter ten compares the (physical) health consequences of the two main administration rituals. It centers around the risk of (fatal) overdose and physical harm related to regular use. While under legal and controlled conditions injecting may perhaps be preferable, it is concluded that, given the current condition of prohibition, smoking is a less harmful drug administration ritual.

Chapter eleven offers a comprehensive investigation of the HIV transmission risks associated with drug sharing among IDUs. The drug sharing techniques frontloading and backloading were not only observed in Rotterdam, but in several places in Europe and the USA. Recent American research confirmed the hypothesis of the presented study --a strong statistical association with HIV infection was found. As the prevalence of needle sharing is rather low in the Netherlands, frontloading is probably a main route of HIV spread in this country.

The subject of the study reported in chapter twelve is the sharing of needles, syringes and other injection paraphernalia. It was first of all concluded that needle sharing did not serve ritual purposes among the observed IDUs. This 'high-risk' activity appeared to be mainly determined by three factors: (i) (un)availability of sterile injection equipment, (ii) experience with the injecting ritual and its protective skills and (iii) drug craving, in particular for cocaine. While most IDUs in the study were relatively careful with syringes and needles, such caution was not extended to other injection attributes and materials. Spoons, filters and water
containers were more than once casually shared, which indicates a serious lack of knowledge. The analysis further suggested that sharing of injecting paraphernalia may often be reinforced by deteriorated venous condition. Finally, the drug injection interactions discussed in the chapter were plotted to expose the hypothetical HIV transmission routes. This demonstrated the complexity of risk behavior associated with drug injecting in groups.

The question whether needle sharing can be considered a ritual interaction is the central issue of chapter thirteen. First, this chapter reviewed the literature on this issue. Several authors make bold statements regarding the ritual properties of needle sharing, but all fail to support these with data or relevant references. A questionable practice of chain-referencing was found leading back to a study published in 1970. It was concluded that none of the reviewed papers offered substantial evidence for the thesis that needle sharing is a ritual. Ensuing, this chapter examined needle sharing in light of the relevant definitions of ritual and ritual object. It was demonstrated that the attachment of symbolic elaboration to the instrumental act of needle sharing is principally subject to the 'perceived availability' of drug injection equipment. Furthermore, injection equipment can only obtain 'secondary' ritual value, while drugs have 'intrinsic' or 'primary' ritual value, because of their direct relationship to the effect of the execution of the ritual. These two factors, the absence of standardized needle sharing patterns and the diminished functionality of needle sharing, due to (knowledge of) the HIV epidemic make the addition of special meaning to the instrumental act of needle sharing not likely. Even in the USA, where needle availability is severely restricted, there is no substantial evidence in support of ritual needle sharing. On the contrary, a growing number of scientific publications show significant behavior change towards safer injection practices. Finally, the chapter investigated the sources of some of the boldest statements on this issue and concluded that 'the needle sharing ritual' better qualifies as a deceptive political soundbite, used by high rank US officials in the 'war on drugs', than as a valid scientific concept.

From these studies and the international literature it has become clear that needle availability is an important factor underlying needle sharing. Not only structural scarcity but also situational --on-the-spot-- shortages can result in unsafe injecting practices. Therefore, the Rotterdam outreach program HADON cooperated with known IDUs to target unknown IDUs and significant places (e.g. house addresses) for delivery of clean needles. Chapter fourteen reports on a pilot evaluation study of this collective needle exchange program. The needle exchange patterns of the IDUs participating in this collective scheme are compared to those of users, who exchanged needles on an individual basis. It was found that this approach extended the reach of the program to a great degree and that it was well received in the IDU community. The results were, however, negatively influenced by police activities aimed at closing down places where drugs were used and sold. It is concluded that engaging IDUs in peer group directed prevention efforts is both feasible and promising.

The following two chapters discuss some aspects of the relationship between drug policy and drug use rituals. Chapter fifteen focusses on the micro-ecology of the street based drug market at the central railway station zone in Rotterdam, where the more marginalized segment of the city's drug using population congregates. In contrast with elsewhere in Rotterdam one can purchase pre-processed smokable cocaine in this area. As has been explained in preceding chapters, most users prefer to prepare their own cocaine base from the cocaine hydrochloride bought at the house addresses. The marketing of 'cooked cocaine', which basically is crack, is an exception to this rule and can be explained by the specific ecological conditions characteristic for the Central Station zone. Because of the high concentration of passing travellers and the constant surveillance of the railroad police, there is neither time nor space to cook cocaine hydrochloride. This made the availability of a ready for use product functional to this group of drug users. It is furthermore a clear indication of the flexibility of the drug taking rituals in this population.

Chapter sixteen took a rather opposite approach and compared the drug use contexts in two very different cities. It described and explored certain patterns of drug use, sharing, and natural support systems found among IDUs in Rotterdam, the Netherlands and the Bronx, New York, USA. By specifying details of the micro-settings of everyday drug use in both locales, it became possible to identify certain common elements and consequences of personal and social behavior driven by drug use per se (e.g. drug preference), and to
differentiate these from behaviors and consequences determined by drug policy and the social context in which drug use actually occurs. These policies and the social context they create could in turn be shown to relate to risks for HIV transmission, e.g. the increased likelihood of sharing injection equipment.

Part III: Self-regulation, Drug Culture and Drug Policy

The analysis of the drug taking rituals (and the rules they represent) presented in this dissertation demonstrated that rituals and rules are important regulatory agents in the lives of regular drug users. Furthermore, they are regulatory agents in more than one aspect. These social controls regulate the individual drug taking experience, but are equally important in determining social relations and socially appropriate conduct. In other words, rituals and rules help to make sense of the drug experience as well as of the social world in which these drugs are used. The latter feature is believed to be a basic function of ritual, both in traditional and (post) modern societies. In this perspective, the rituals of the study participants diverge thus little of those in other social groups. Only the object around which the ritual is organized (the ritual object) differs. Furthermore, economic (e.g. scarcity) and socio-cultural factors (e.g. subculture) play a crucial role in the formation, nature and maintenance of the observed rituals and rules. This relationship and its impact on the drug user's ability to regulate her/is drug using behavior is of great importance, in particular for public health and harm reduction considerations. Whereas several examples of non-compliance with these subcultural social controls were recorded in the present study, such infringements could generally be associated with certain specific conditions, which are best described as reduced 'drug availability' and/or limited 'life structure'.

Therefore, chapter seventeen explored the nature of, and interactions between Drug Availability, Life Structure, and Rituals and Rules. Based on this exploration it presented a hypothetical model of self-regulation based on these three clusters. The presented model builds on and elaborates the theory of the late Norman Zinberg. The results of the present study suggest that cocaine/heroin users, who are successfully involved in dealing experience considerably less drug related problems and are more capable in regulating their use, although they generally use more cocaine. This can be explained as follows. Successful user/dealers are in a position of sufficient drug availability. This prevents fixation on (obtaining) the drug and allows for the formation and maintenance of regulating rituals and rules, which, in turn, support the degree of life structure required for maintaining dealing activities that generate the necessary resources to maintain drug availability. Generalization of this reasoning lead to the formulation of the following hypothetical model: Drug Availability, Rituals and Rules, and Life Structure are a trinity -- interactive factors in an internally coherent circular process, in which these factors are themselves modulated (modified, corrected, strengthened, etc.) by their outcomes. It is thus a 'feedback circuit' that determines the strength of self-regulation processes controlling drug use. The chapter further discussed the impact of certain external factors on the model, in particular drug policy. Exploring and comparing certain aspects of prohibition and legalization, the chapter concluded that prohibition interferes with the natural processes underlying self-regulation. Legalization, at the other hand, is not an instant remedy for this interference, but merely paves the way for alternative drug control policies, outside of criminal law, which are expected to facilitate natural processes of self-regulation.

Whereas ritual is the basic element of culture, chapter eighteen addressed the drug phenomenon on the level of the compound -- the drug using culture itself. It discussed the cultural developments around heroin, cannabis and MDMA in the Netherlands and their relationship with Dutch drug policy. The chapter furthermore explored new directions for drug policy and practice, building on the successes of the Dutch 'normalization' policy.
1. The ingestion of heroin and/or cocaine by way of smoking (primarily chasing and to a lesser extent basing) and injecting fulfill the conditions for ritualization. The behavioral sequences are highly standardized and stylized, and of special meaning to the performers. They are highly functional in the process of getting high. (Ch. 4 and 5; R.Q. 1.1)

2. The drug administration rituals of the observed drug users are, in general, rather stable. Transitions between smoking (primarily chasing) and injecting rituals were only infrequently observed. When occurring, these were associated with availability, (loosing or regaining) control over drug use, social pressure, or hedonistic motives. (Ch. 6; R.Q. 1.2)

3. Cocaine has become the engine of the former heroin scene. It is used in varying combinations with heroin. The addition of cocaine has resulted in a large number of (psycho-social) problems in the study population, and is associated with initiation into injecting. Basing may be a precursor for cocaine injecting. These problems are for a large part related to the low 'subjective' availability of the drug. Cocaine has disturbed rather controlled heroin/methadone use patterns. Its use has been nested in rituals developed for heroin use and taken over its function of primary source of pleasure. As a result, a functional relationship between heroin and cocaine has been established. Heroin use has become almost completely intertwined with and subservient to cocaine use. It is mainly used to modulate the effects of cocaine, in particular to ameliorate cocaine's disturbing side effects. (Ch. 5 and 7; R.Q. 1.1, 1.2, 1.5 and 1.7)

4. Both the smoking and the injecting ritual fulfill important instrumental functions, such as maximizing the yield of a given dose of drugs; controlling the level of drug use and managing positive and negative effects of the drugs; and preventing secondary problems. These instrumental functions are represented in the construction of the paraphernalia, as well as by the behavioral sequences themselves. (Ch. 4, 5 and 7; R.Q. 1.5 and 1.7)

5. Both administration rituals contain elements of symbolic elaboration. The construction and use of certain paraphernalia, certain ritual cues, parts of the sequence, and the order of the sequence can obtain a power beyond the instrumental functionality -- they can for example invoke the start of a ritual sequence (getting high), enhance the experience of the drug effect, and reduce anxiety. The data suggests that symbolic elaboration is stronger among IDUs. (Ch. 8; R.Q. 1.5 and 1.6)

6. The social functions of the drug administration rituals are most obvious in the recurrent sharing of drugs. Drug sharing includes instrumental functions, e.g. preventing withdrawal, but is also an important means to socialize, establish and reinforce relationships and is ultimately aimed at maintaining the social network/subculture. The sharing ritual is subjected to several rules, e.g. regarding reciprocity. Drug sharing is not unique for illegal drug users, but resembles a fundamental and normal human behavior. (Ch. 9; R.Q. 1.3, 1.4, 1.5, 1.6 and 1.7)

7. In terms of the risks of overdose, physical harm, and communicable diseases it is clear that, given the current conditions of prohibition, the smoking ritual entails less health risks than injecting. (Ch. 10; R.Q. 2.1)

8. Syringe mediated drug sharing techniques, such as frontloading and backloading can transmit HIV and other microbiological infections when unsterile syringes are used. In the Netherlands frontloading may well be a major route of HIV infection. Drug sharing situations often entail multiple possibilities of transmission. (Ch. 11, 12; R.Q. 2.2)

9. Needle sharing is primarily determined by the structural or situational availability of needles, while drug craving and inexperience with the injecting ritual are important additional factors. Because of a lack of knowledge, other injection paraphernalia are often casually shared. (Ch. 12; R.Q. 2.3)

10. The thesis that needle sharing is a ritual cannot be supported by substantial evidence in the scientific literature. In general, needle sharing cannot be considered a ritualized behavior pattern, as the behavioral sequence does not fulfill the requirements of the relevant definitions. (Ch. 13; R.Q. 2.4)

11. Engaging active IDU's in HIV prevention activities is an necessary and feasible approach. They have access to places and populations which are not accessible for traditional service providers and can utilize their natural information and exchange networks. (Ch. 14; R.Q. 3.2)
12. As a general rule, crack is not available in the Netherlands. Dutch cocaine (and heroin) smokers prefer to prepare the cocaine base themselves, and economic pressure towards preprocessed cocaine base is absent. Only under the specific ecological and socio-political conditions of the Rotterdam Central Railway Station a preprocessed product, 'cooked cocaine' has emerged. Currently, this phenomenon is well contained. However, (local) policy changes affecting the availability of cocaine as well as the time and space allocations of drug users -- that is, when they are pressured into the streets--, may result in entrepreneurial adaptations towards middle market level distribution of base cocaine (a.k.a. crack). (Ch. 15; R.Q. 3.1)

13. Cross cultural comparisons of patterns of drug use produce interesting data about the influence of the social context of use and drug policy, on the construction of drug problems, and about the extent to which these factors impact on the risk for HIV transmission. (Ch. 16; R.Q. 3.1)

14. Whether drug use is controlled or uncontrolled depends on the application of rituals and rules, which constrain and regulate use patterns. The nature of these rituals and rules is determined by the availability of drugs. A sufficient availability allows for the formation of a set of rituals and rules aimed at safe and controlled use. A high life structure provides the incentive and the structure to maintain a 'controlled' availability and apply regulating rituals and rules. Strict enforcement of drug prohibition has a negative impact on all three factors, hampers effective self-regulation processes and induces a survival oriented subculture. (Ch. 17 and 18; R.Q. 1.7, 1.8, 1.9 and 3.1)

15. The Dutch normalization policy is in need of revitalization. The leading policy incentive should be shifted from containment of problematic drug use and management of drug related problems, towards actively influencing the nature of drug use and directing drug using cultures towards less harmful patterns of use. This new policy must allow for a controlled availability of drugs through a wider application of the expediency principle; by way of culturally sensitive intervention studies stimulate the formation of safe use norms; and adapt the existing service system to make it more responsive to the needs of consumers, change the belief systems of current problematic drug users so as to instill a sense of entitlement and belonging to the community at large, and, by so doing, induce the concrete quality of life improvements by which they can improve their own life structure. (Ch. 18; R.Q. 3.2 and 3.3)

16. Future drug use research in the Netherlands should concentrate on the factors that determine self-regulation processes. Developing and evaluating effective community based interventions to curb the spread of HIV constitutes an equally important research priority. (Ch. 18; R.Q. 3.3)

17. The preponderant influence (drug) availability plays in the daily lives of the study participants is perhaps the most conspicuous and consistent finding of this study. (all chapters; R.Q. 1.2, 1.3, 1.8, 1.9, 2.3, 2.4 and 3.1)