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Family-History Perspective on Opiate Addiction. Focusing on Pre- and Perinatal Events

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Abstract: After discussing the observations of pschodynamic and object-relations theory in regard to drug addiction, the author presents two experiments. The first, examining the interpersonal relationships (Leary 1957) in the drug addict's family, presents the family dynamics and their role in the onset and maintenance of opiate addiction. The second experiment, using in-depth interviews, seeks the antecedents of drug use in the family history, focusing on the childhood of the mother, mate selection, pregnancy, method of delivery and the early mother-child relationship. Specific emphasis is placed on pre- and perinatal events. Detailed findings and clinical vignettes are presented. Findings show that the roots of opiate addiction can be found in the early stage of life. In opposition to the linearistic, mechanistic concept of the perinatal imprinting hypothesis, it seems that the feto-maternal communication has a stronger explanatory force. In connection with this, both psychological and physiological processes, especially the development of endogenous opioid system regulation, are emphasized. It is highlighted that findings can be understood only in the historical conceptualization of the development of drug-using behavior.

Zusammenfassung: *Familiengeschichtliche Betrachtung von Drogensucht mit Schwerpunkt auf vorgeburtlichen Ereignissen.* Nach der Besprechung der Beobachtungen der psychodynamischen und Objekt-Beziehungstheorien mit Bezug auf Drogensucht stellt der Autor zwei Untersuchungen dar. Die erste untersucht interpersonale Beziehungen (Leary 1957) in der Familie des Drogensüchtigen, und präsentiert die Familiendynamik und deren Rolle in der Entfaltung und Fortdauer der Drogensucht. Die zweite Untersuchung erforscht durch familiengeschichtliche Tiefen-Interviews die Vorgeschichte des Drogenkonsums, mit den Schwerpunkten wie Kindheit der Mutter, Partnerwahl, Schwangerschaft, Geburtsvorgang und die Charakteristika der frühen Mutter-Kind-Beziehung. Während der detaillierten Darstellung der Ergebnisse und Fallstudien werden prä- und perinatale Ereignisse speziell betont. Diese zeigen, daß die Wurzeln der Drogensucht bereits in der perinatalen Lebensphase erfaßt werden können. Gegenüber der linear-mechanistischen Konzeption der perinatalen Imprinting Hypothese scheint die foeto-maternale Kommunikation größere Aussagekraft zu haben. In dieser Hinsicht werden psychische und physiologische

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Prozesse, vorwiegend die Entwicklung der Regulierung des endogenen Opiat-Systems hervorgehoben. Es ist zu betonen, daß die Entwicklung des Drogenkonsum-Verhaltens nur in der familiengeschichtlichen Konzeption verstanden werden kann.

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Introduction

There are numerous theories to explain opiate addiction. The sociological perspective views drug use as a deviance, placing it in the realm of deviant behavior. Thus, the theory of anomie sees deviant behavior, and therefore the development of drug use, as the discrepancy between conventional internalized goals and the opportunities available on the basis of one's social class (Merton 1968). The micro-sociological, socio-psychological, and socio-anthropological perspectives look at the more immediate social sphere, with the primary focus on drug-using subcultures and relationships with non-drug-using peers and the family (Rácz 1992, 1995; Demetrovics 1996). These theoretical views see the development of drug-using behavior as being connected to the socializing influence of the social environment (social learning theory), its insufficient or not properly internalized social controls (social control theory), or the presence or absence of protective and risk factors therein (Gerevich and Bácskai 1996a,b; Hawkins et al. 1992). The advantage of these theories lies in the fact that they can deal – at least in a limited way – with the structural and relational characteristics of the family, as factors conducive to or protecting against drug use (Hoffman 1995; Marcos and Bahr 1995).

The biological theories primarily focus on the notions of positive and negative reinforcers, and along these lines they emphasize the strengthening role of the mesocortico-limbic dopamine system (Koob 1992). In the incentive-sensitization theory, secondary incentives are given increasing emphasis, thereby offering the possibility of returning to the social aspects. Further areas of research examine the personality viewpoint and psychodynamic perspectives.

Co-Morbidity

Until now, the personality dimensions underlying drug use have not been identified, and such exclusive, valid factors might not exist. Competent research approaches therefore point to drug preference studies (see Kern et al. 1986). Co-morbidity studies – similarly to personality-trait studies – have isolated numerous disorders associated with drug use. In the case of opiate users, these primarily include depressive anxiety problems (Rounsaville et al. 1982; Calsyn et al. 1989) and narcissistic, antisocial personality disorders (Calsyn and Saxon 1990), but often also noticeable compulsive, schizoid, borderline, and paranoid symptoms (Craig 1988). The cause-effect relationships of these studies are, however, questionable. We know little of the specific background mechanisms behind these relationships (Luthar et al. 1992). It is therefore difficult to know whether drug use emerges as a result of these psychiatric disorders or as a secondary symptom or whether the drug use itself produces such disorders.

Psychodynamic Theories and Self-Medication

Psychoanalytic and psychodynamic theories claim to be able to provide unambiguous answers to the question. The majority of the early analytical approaches, based on Freud, stress the role in drug use of regressive wish-fulfillment, orality, masturbation, or self-destructive tendencies. Another early analytical viewpoint maintains that it is the impossibility of confronting, overcoming, or escaping unbearable circumstances that brings about drug use (Wurmser 1989). In a modern perspective, but one still based on traditional analysis, Hopper (1995) sees latent homosexual fantasies as playing a significant underlying role in drug use. These theories already imply the thesis that became explicit after the Second World War, namely that drug use is always secondary and covers some other personality disorder. In this regard, it seems to be a significant argument that, under the influence of withdrawal from drugs, some other symptom will practically always emerge, such as aggression, autoaggression (suicidal fantasies or attempts), severe anxiety, depression, borderline, or psychotic disturbances; and the state of withdrawal is often experienced by the individual as a fragmentation of the personality (Wurmser 1989).

Khantzian (1985) asserts that the use of a given drug is never an accidental choice, but rather the individual chooses the drug whose psychopharmaceutical properties interact to alleviate the specific dominant pain that the person is mainly experiencing. In this context, drug use is a form of coping, however maladaptive it may be. Drug use can therefore be seen as the individual's own attempt at self-medication. The goal of the opiate user is to treat painful affective states, to handle stress and dysphoria, to check unconscious aggressive impulses and to make outside aggression bearable. Clinical data show that the above-mentioned withdrawal syndrome already exists before opiate usage and that the opiate usage helps to alleviate these symptoms.

Object-Relations Theory

The field of object-relations theory, which emerged in the last half of the twentieth century, though it does not specifically deal with the problems of addiction, nevertheless has been of considerable help in understanding the problems of drug use. One of the most important achievements of this approach, with respect to our subject, is that it allows what was previously situated in the intrapsychic context to be brought into the interpersonal sphere.

Clinical case studies highlight early mother-child relationship disturbances and the lack of primary maternal preoccupation (Cserne 1992). On the basis of therapeutic work with the parents of drug users, Kati Varga (1993) emphasizes the mother's narcissistic personality development and the fact that she has not worked through the separation-individuation trauma in her own development. Thus, even if the mother is quite capable of functioning in other areas her mothering is inadequate during the phase of separation-individuation (Mahler 1963). The borderline and narcissistic features observed in opiate users, and their preferred mechanisms of splitting and projection, highlight the importance of the separation-individuation phase of development in the etiology of drug use. This assertion has

been corroborated by clinical observations concerning drug users' mothers (Varga 1993).

On this point, it is worth abandoning the psychodynamic approach and studying the above from a broader perspective of family dynamics.

Drugs and the Family

Research has identified three characteristics of the families of drug users (Clerici et al. 1988). The first is the broken home, in which the absent father is mainly defined in the literature (Stanton 1979; Bekir et al. 1993). The second characteristic is the presence of an overprotective mother, which often coexists with a neglectful father (Textor 1987), reinforcing the overprotectiveness of the mother. This latter situation means the father's emotional or symbolic absence. The third characteristic is that certain family changes resulting from substance abuse reinforce and perpetuate the drug habit. As Stanton et al. (1978) maintained, the family structure is capable of reinforcing the individual's drug use.

Stanton (1979) describes the heroin addict's father as a mainly rough and inconsistent discipliner, full of negative emotions. However, he also notes that many studies show the opposite, that the father plays a secondary, submissive role next to the mother. Schwartzman (1975) refers to the former aggressive, autocratic father, who is nevertheless easily controlled by the mother, as the 'strawman' type, while the latter, who fills an openly secondary role he, calls the 'distant' type. Studies show that drug users' mothers have significantly higher symbiotic needs than the mothers of schizophrenics or normal individuals (Stanton 1979). Thus a child who later uses drugs often becomes the favorite child (Stanton et al. 1978) and is treated as the weaker, helpless one. The atmosphere is therefore characterized by lenience, or even encouragement that the child should chose to escape from, rather than overcome, frustrating situations (Stanton 1979). In the case of the absent father, the child is often required to fill a parental role very early on (Vukov and Eljdupovic 1991; Bekir et al. 1993).

Along with the above, many studies call attention to the strength of family ties, primarily in the mother-child relationship of drug-using youths (Stanton 1978; Textor 1987; Vukov and Eljdupovic 1991). According to the results obtained by Cervantes et al. (1988), 58% of sponsors of heroin users in methadone programs tend to be a family member, and in the majority, 23%, one of the parents. A total of 26% of drug users live with one or both parents and 76% of young people acknowledged a close relationship with their mother, while, according to the data, close relationships with the father are less common. Often, even if the drug user moves away from home, he or she remains in the neighborhood, and even in the case of street drug use this close relationship is not readily given up (Stanton 1978).

In summary, the most common picture that emerges is that of an aggressive, autocratic, hostile father, and rarely a submissive father, and an overprotective mother who has a symbiotic relationship with her child.

Interpersonal Directions in the Opiate User's Family

In the model of Schaefer (1959), who described parental behavior as two-dimensional, love-hate and lenient-controlling, we can place drug users' parents in the upper two quarters. While the fathers are dominated by negative emotions, the mothers are characterized by an overprotective, warmly controlling attitude (Fig. 1).

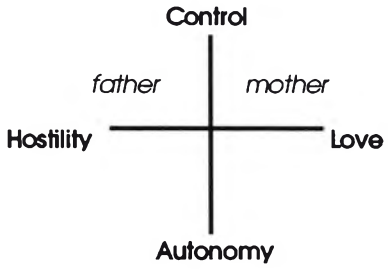

Fig. 1. Parents of drug users in Schaefer's model (1959).

I examined this supposition using the Hungarian version of Leary's Interpersonal Check List (Leary 1957; Kulcsár 1973, 1981) (Fig. 2).

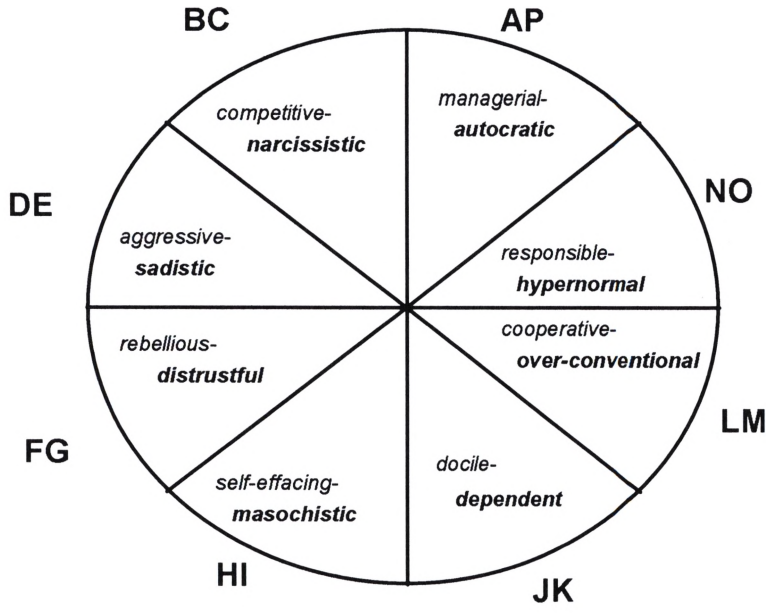

Fig. 2. Leary's interpersonal circle.

In the present report, I will only summarize the most important results of this study. (For a detailed report and discussion of the results, see Demetrovics 1995.) On most points, the acquired data supported the hypothesized interpersonal directions. Thus opiate users showed a significantly higher value in the JK (docile-dependent) dimension, and a significantly lower value on the dominance

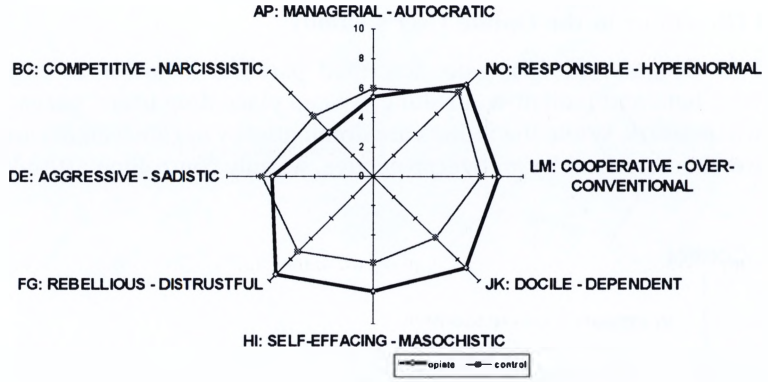

Fig. 3. The self-conception of opiate addicts (n = 13) and controls (n = 19).

axis, than the control individuals. The opiate users showed especially high maladaptive values primarily in the LM, NO, and FG dimensions, and lowered values in the AP (autocratic) and BC (competitive) dimensions.

In terms of the mothers, though no significant differences were found, the opiate users tended to see their mothers as more responsible, dependent, and narcissistic than those in the control group. With regard to the picture they had of their fathers, the opiate users saw them as significantly more autocratic (AP), competitive (BC) and aggressive-sadistic (DE) than the control individuals. A difference was also found on the lovingness dimension, where the opiate users felt more negative emotions from their fathers than the members of the control group.

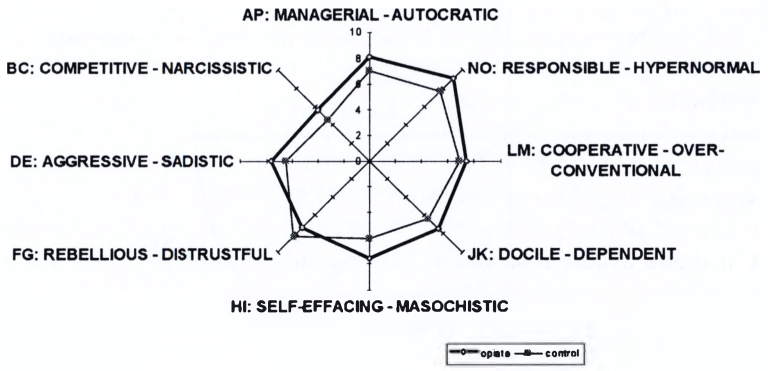

Fig. 4. The mothers of opiate addicts and controls.

These results significantly coincide with the above-mentioned clinical observations, and in terms of the dynamics of the phenomena, an obvious picture unfolds. The close mother-child relationship, the infantile symbiosis in adolescence, in the period of the "second separation-individuation phase" becomes a burden for the family. The adaptive nature of the child's drug use becomes clear in light of the overall family system. While the teenager's opiate use is a symbol of the separation, in reality it assures the maintenance and strengthening of the symbiosis. The drug

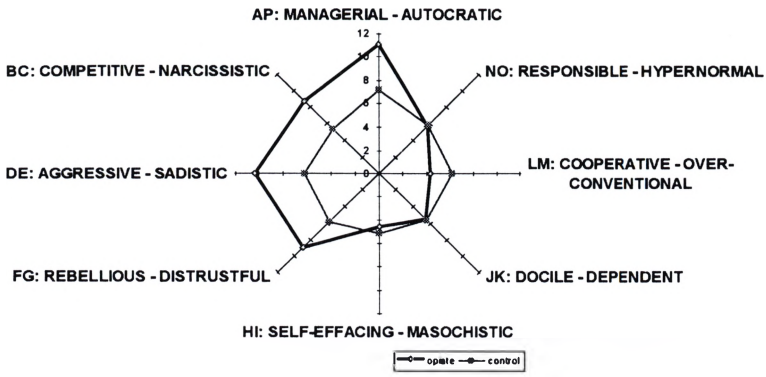

Fig. 5. The fathers of opiate addicts and controls.

use symbolizes a breaking away from the family, rebellion, and independence, and yet, in reality, it simultaneously represents the festering of symbiosis. The endeavors emerge as mere pseudo-endeavors. While teenagers who enter the drug scene uphold the illusion of 'financial independence,' after the onset of addiction, they rely even more on their mother for money and to help them through periods of withdrawal. The mother apparently does everything possible to save her child from the drug use and achieve abstinence; yet the desire to maintain dependence is always discernible in the background. The father's aggression can also gain a freer rein, since the child does not work, uses drugs, and renounces a conventional lifestyle. In the course of the problem, the mother and father find each other again, and their relationship, which had often been crumbling, gains new meaning in the face of this challenge. It is no accident that the greatest obstacle in the achievement of abstinence is the constellation of family relations.

In contrast to the linear approaches, Stanton sees the feedback mechanism's complex system as being significant in the perpetuation of the family interactional pattern. In his opinion, the drug user's symptomatic behavior becomes necessary when the parent's relationship is threatened by separation and in this way the balance of the family structure seems to be in danger. The youth then becomes active and ensures that the parents' attention is turned away from the quality of their marriage toward the responsibilities of parenthood. The effect is "movement from an unstable dyadic interaction (e.g. parents alone) to a more stable triadic interaction (parents and addict)" (Stanton et al. 1978, p. 138). As soon as the balance returns, the youth begins to act less provocatively and leads a more competent life. Once the drug user begins to show truly competent adjustments, starts to use less drugs, gets a job, and in this way pronounces his or her independence, the tensions in the marriage reassert themselves. The youth responds by drawing attention to the drug habit and acting out self-destructively again, thus creating a vicious circle. The cycle may vary in intensity, dictated by the level of tension in the marriage. In this connection, therefore, the young drug user acts as an important protective factor, helping to uphold the sensitive family balance.

Table 1. Characteristics of the mother's family of origin.

	case 1	case 2	case 3	case 4	case 5	case 6	case 7	case 8	case 9	case 10	total
well-balanced childhood				until age 10	X			X	X	X	4
continuous quarrelling, conflicts	X	X	X	X							4
escape from the family	X		X	X		X	X				5
father works too much	X		X	X	X		X	X			6
mother works too much			X					X	X		3
mother plays an emotional role in the family				until age 10							0
father plays an emotional role in the family (presence of oedipal situation)				X					X		2
mother plays an instrumental role in the family		X						X	X		3
father plays an instrumental role in the family								X			1
cold, rejecting father	X	X									2
aggressive, autocratic father			X	X	X	X					4
absent mother			X	from age 10		X	from age 1.5			from age 1	5
absent father			X				X			X	3
grandmother included in the family (maternal emotional functions)			X				X			X	3
loss of the mother				at age 10							1
parentified child	X			X		X			X	X	5
strict expectations toward the child	X		X	X	X	X	X	X	X	X	9

Study of Perinatal Precursors

Our question in this report is primarily where can we find the starting point of the above system. I studied this question through in-depth interviews of family history with ten mothers of opiate users. The interviews covered the entire family history from the mother's birth through to the child's addiction to opiates. Specific emphasis was placed in the interviews on mate selection, pregnancy, method of delivery and the early mother-child relationship. The tables presented belob describe the main characteristics of some of the families, while in the analysis and interpretation I will summarize the common characteristics in order to present a unified picture of the historical conceptualization of the development of drug-using behavior.

As is evident from the table above, the mothers almost always had to take on a parental role in early childhood or at least were the objects of strict expectations and had to take on extensive responsibilities. At the same, none of the mothers had a close emotional relationship with their own mother, and the fathers were not very present in the family's emotional life either. In the dichotomy of insufficient emotional care and high expectations the mothers were characterized by the ambivalence of simultaneously wanting to fulfill the responsibilities expected of them and of wanting to escape from the family. Despite the unfavorable constellation, most of the mothers managed to cope with their situation seemingly adequately, without any serious pathology, and as a solution to the ambivalence, they chose earlier independence for themselves. In the emergence of this solution, and the avoidance of pathological disturbances, two factors can be found to be of importance. First of all, a grandparent or other relative or in some instances a neighbor family often afforded the possibility of experiencing a more ideal emotional environment. Second, it can be observed in several of the mothers that their

Table 2. Characteristics of the family.

	case 1	case 2	case 3		case 4	case 5	case 6		case 7	case 8	case 9	case 10	total
			father	2nd husb			father	2nd husb					
divorce before the child's 5th year	x		x		x								3
father's death before the child's 1st year							x						1
husband works too much		x	x		x	x			x	x	x	x	8
emotionally absent father	x	x	x		x	x		x	x		x	x	9
husband is against having the child	x	x											2
autocratic husband		x		x		x		x		x	x		6
irritable, aggressive husband						x			x			x	3
depressive, dependent husband			x		x								2
mother as the "rescuer" of the husband			x		x							x	3
mother plays instrumental role in the family	x		x		x			x			x	x	6
mother supports, protects the child against the father		x		x		x		x	x	x			6
maternal overprotectiveness	x	x		x	x	x		x	x	x		x	9

choice of partner, whether dependent and passive or irritable and aggressive, but always constantly in need of care and attention, meant that they were assured that they would avoid weakness and pathological escape in their adult life. In most instances, the mother's career choice also reflects these tendencies[1]. The suppression of these tendencies may appear later on with the onset of hypochondria or depression in situations where a serious stressful experience has a regressive effect and can topple the mother's defense mechanisms.

In their choice of partner, the mothers tended to reconstruct their original family structure, and in part they took on the family's instrumental leadership, as well as all of the tasks of emotional leadership. Simultaneously, almost all of them lacked an emotionally supportive maternal role model and most explicitly stressed during the interview their feelings of incompetence as mothers. In spite of this, building upon earlier coping experiences, they gave birth to and reared children and managed their own lives adequately.

Out of the ten, nine mothers said that they did not need, i.e., did not expect, outside help, and attempted instead to solve the problems on their own. This was mainly the time when it became clear that the husband would not play a part in helping to 'solve' her childhood conflicts. This is the point at which, for the mother, the child becomes the last possibility to correct the unsolved dependence-separation or separation-individuation conflict through attempted correctional repetition. The mother, who until now has performed perfectly in the 'masculine' role, cannot solve the emotional conflicts of her own childhood. She needed to escape from her family of origin; however, her dependent, at times aggressive and irritable husband maintains a child's role, thus forcing his wife into a parental role. For the woman, even though this relationship has rewarding aspects by assuring the feeling of control, competence, and adulthood experience, it nevertheless is lacking on two points. On the one hand, the husband distances himself in everyday life, is always working, is not present, and in this way constantly threatens his wife

[1] With three exceptions the mothers had completed higher education; four of them work in the business sector, three as teachers, one as a pediatrician, one as a child care officer, and one as a designer. Five work or have worked in executive jobs.

Table 3. Circumstances of pregnancy and delivery, method of delivery, and breast-feeding among later drug-using and non-drug-using children (xD = drug-using child; x = non-drug-using child)

	case 1	case 2	case 3	case 4	case 5	case 6	case 7	case 8	case 9	case 10	drug-using child	non-drug-using child
father physically absent during pregnancy						xD					1	0
father emotionally absent during pregnancy	x, xD	x, xD	x, xD	x, xD	x, x, xD	x	xD	x, xD	xD	x, xD	9	9
instrumentally supportive father	x, xD	x, xD	x, xD	x, xD	x, x, xD	x	xD	x, xD	x, xD	xD	9	9
mother's excessive worry during pregnancy				xD	xD			x, xD		xD	4	1
the mother doesn't require/receive emotional support	x, xD	x, xD	x, xD		x, xD	xD	xD	x, xD	x, xD	x, xD	9	7
child born earlier than 38 week					x				xD	x	1	2
child born between 39-41st week	x	x		x, xD	x, xD	x, xD	xD	x, xD	x		5	7
child born between 41-42nd week			xD								1	0
child born after 43rd week	xD	xD								xD	3	0
no intervention during delivery	x	x, xD			x, x			x			1	6
delivery induced by oxitocin	xD			x	xD	x			xD	xD	4	2
caesarean section						xD					1	0
other forms of intervention (perineotomia, amniotomia, etc.)			xD	xD	xD	x, xD	xD	xD	x, xD	x, xD	8	2
no breast-feeding				x			xD				1	1
breast-feeding for 2-3 months	x, xD		xD	xD		xD			xD	xD	6	1
breast-feeding for 3-8 months		x, xD			x, x, xD	x		x, xD	x	x	3	7

with separation and with breaking the dependent, symbiotic relationship. On the other hand, he is not a partner in exchanging the parent-child roles, which would be especially important during pregnancy when the mother needs help in fulfilling her regressive needs. In my view, these are two experiences in which the mother realizes that, in terms of the husband, the relationship merely abets a neurotic repetition, and in this way the marriage is leading to a divorce, either emotionally or in reality.

The rejective attitude of the husband brings back memories of old patterns for the mother, and again she feels that she has only herself to count on, and that the child can give her an opportunity for emotional correction, hoping that this relationship will be easily kept under control. The goal becomes clear: she cannot let the child go.

The mothers experience pregnancy in a 'happy regression,' perhaps the first time in their lives when they feel total symbiosis, and in this merging, which is a new feeling for them, the other partner of the relationship, in this case the child, is also happy and satisfied, and they want to maintain this for as long as possible. In this connection, it is not surprising that four of the mothers carried their child 1–3 weeks longer, and there was only one premature birth (an unknown indication resulted in induced labor!). In four cases, labor was induced by oxytocin, and in several cases labor stopped once they reached the hospital.

The postnatal period is happy for the mothers, the most typical feelings being pride, possessiveness (!), and sometimes disappointment. The mother's behavior has two aspects. The first is the managerial or *instrumental role*, in which her own mother's model is repeated through the repetition mechanism. The other aspect is activated by the mother's own child ego state. The overprotective and

dependent direction that these mothers show toward their children helps them to experience the loving mother-daughter relationship they missed as children. In the course of the interview, these two conflicting attitudes became manifest, and the ensuing ambivalence makes it impossible for either the mother or the child to take on an adult role. The mother would have to give up symbiosis, in the interest of achieving an adult attitude, which would cut her off from the experience of the unlived emotional relationships in her own childhood through identification. On the other hand, the parental role she learned from her own mother would need to be changed into an adult position, for which she has no role model. In this conflict, it is the latter, the one that upholds the symbiotic relationship, which becomes dominant.

The symbiotic attachment is therefore present throughout childhood, though the child is traumatized in several ways by the mother. The mother nevertheless often prefers her responsibilities, work, and the desire for competence, and the child then takes second place. The child therefore learns quickly that if he or she reacts 'appropriately' to the mother's indications of separation, awakening in the mother her own childhood feelings of abandonment and emotional neglect, she will attempt to strengthen the symbiosis once again. The basic difference between the mother's and the child's development is that while the former had no other choice than to become independent and grow up quickly, her child, by pressing the right buttons, can 'demand' care and attention.

The crisis, as we also saw in Stanton's theory, occurs in adolescence, when the mother's conflicting attitudes towards her child become manifest. While on the one side she wishes her child to grow up and become independent, something which is also supported by social expectations, she still cannot let go of the symbiotic attachment which gave her so much happiness. The maintenance of the symbiotic attachment is strengthened by the father's aggression, since the mother's balancing, protective role must be filled in the interests of maintaining the family's homeostasis. The child's drug use appears at the point when the balance cannot be upheld in any other way. Although the drug use appears to be a symbol of breaking away and independence, it nevertheless serves to maintain and even strengthen the reciprocal dependence with the mother. The drug user's mother is the person he or she turns to in times of sickness, withdrawal, and attempts to quit. The mother helps in every instance, since the drug use simultaneously represents the inability of the child to break away, separate, and acquire independence. In those families where the father is present, the balancing role that the drug use plays is understandable from his perspective as well, since it gives justification to the father's aggression towards the ne'er-do-well child. The father's role is emphasized in one other aspect. In these families, though the father works and takes on serious outside responsibilities, he does not, or only partially assumes responsibilities within the family. He still plays a pseudo-individual role, and in reality he is completely dependent on the mother's caregiving. This is a significant example for the child, who takes from this the message that 'if I act as if I'm independent, then I will be taken care of and everyone will be satisfied.'

In becoming familiar with the above developmental trend, perinatal incidents can be easily placed. The symbiotic mother-child attachment is a perfect symbol of the earlier, truely symbiotic attachment, which was prolonged as long as possible

at the time of pregnancy. Similarly, it is not surprising that the mother does not recognize the onset of labor or, even if she does, action from an outside source, such as medical intervention (mostly oxytocin induction), is necessary to break up the symbiosis. In this report, it is important to stress that the subjective effect of opiates, a dream-like world and entry into an unknown world, is analogous to life inside the womb. For the child, the information communicated during pregnancy is that *'you are not allowed to be born, to come into the world, since then we will lose each other and our happiness will end.'*

The question once again is to what extent pre- and perinatal events determine the child's later fate, and *how deterministic the correlation is that exists between the events during pregnancy and the later adolescent drug use.*

Perinatal Medical Treatment and Adolescent Drug Use

To the best of my knowledge, the perinatal precursors of adult drug use have only been studied by one group, Bertil Jacobson and his co-workers at the Karolinska Institute (Jacobson et al. 1987, 1988, 1990; Nyberg et al. 1992, 1993). Their results show a significant relationship between the circumstances of labor and the interventions applied (breech presentation, twin birth, forceps delivery, asphyxia and opiate, barbiturate, nitrous oxide, or chloroform administration) and the emergence of deviance in adulthood. Those individuals in whom asphyxia happened during birth were more than four times likely to end their lives through asphyxiation (hanging, drowning, poisoning by gas) than those in the control group. Similarly, this type of suicide was significantly more likely among those with an asphyxiated childbirth than the rest of the individuals who committed suicide. The same correlation was found between suicide by mechanical means (hanging, jumping from heights, firearms, etc.) and mechanical trauma during birth (breech presentation, forceps delivery, etc.) (Jacobson et al. 1987). Salk et al. (1985) found similar results. Jacobson and his co-workers further showed that the mothers of those who later become opiate addicts or alcoholics were twice as likely to have received opiates, and three times as likely to have received barbiturates, than the mothers of those in the control group (Jacobson et al. 1987). They also found a significant correlation (Jacobson et al. 1988) between nitrous oxide administration during birth and the likelihood of later amphetamine use, indicating the similarity between the subjective effects (euphoria) of nitrous oxide and amphetamines.

In researching the perinatal precedents of opiate use (Jacobson et al. 1990), they showed that opiates (morphine or pethidine hydrochloride), barbiturates (phenobarbitone), and nitrous oxide – though to a lesser degree – contribute to a higher risk of later opiate use.

Although this study has some methodological problems (see Demetrovics 1997), on the basis of a later analysis of the data, Nyberg and co-workers (1992, 1993) showed that the *obstetric care hypothesis* has greater explanatory power for the later development of drug use than even the *socioeconomic hypothesis* or the explanation which builds on 'contagious' transmission during adolescence (peer pressure, curiosity, etc.). Although they do not argue against the important roles of the latter two, they conclude that the obstetric medication hypothesis cannot be rejected in favor of alternative explanations (Nyberg et al. 1993).

Perinatal Imprinting Hypothesis

The above results are interpreted in the context of Jacobson's imprinting hypothesis, which draws a correlation between medical treatment or intervention during labor and later suicidal behaviors. The authors postulate that during the birth trauma, an unconscious imprint occurs in the newborn which manifests itself in continual repetition during adult life, and the individual has to create similar situations and behaviors in which this pattern can be perpetuated.

Though others have not studied the relationship between drug use and perinatal incidents, the hypothesis of the perinatal imprinting processes (in view of the newborn's cognitive capabilities and of the study of early imprinting mechanisms) have been confirmed by other authors.

The Newborn's Cognitive Capabilities

Studies beginning at the middle of the twentieth century to understand the capabilities of newborns changed our perceptions of newborns from the earlier Jamesian perspective (Andrek 1997). Research showed that newborns perceive their surroundings, are capable of habituation, dishabituation, and discrimination of stimuli, and thus contain the basic ability to learn. It turned out that newborns can distinguish between human voices and other sounds, between their own mother's voice and the voices of others, even other women (DeCasper and Fifer 1980), and even at 1–5 months are able to distinguish between very similar voices (Bridger 1961). Light has been shed on the newborn's imitative capacity (Meltzoff and Moore 1977), and there is proof that it can change certain perceptive modalities into other modalities (Meltzoff and Moore 1977). In terms of learning and memory, the studies after the classic Siqueland and Lipsitt experiments indicate that not only does the infant's learning capacity correspond to the after-birth experiences, but the infant also remembers the incidents which happened within the womb and can use these memories through the nervous system to his or her benefit (Bridger 1961; Zigler and Finn-Stevenson 1987; Andrek 1997).

Inborn Socializing and Imprinting Mechanisms

The other direction of research – following Konrad Lorenz and the Harlows – studied the importance of post-birth imprinting (Salk 1966). Here, for example, Klaus and co-workers (1972) show that when mothers and infants are united immediately after birth and are able to have close physical contact in the first two hours, the mother shows significantly more care and more soothing behavior and engages in significantly more eye-to-eye contact and fondling than mothers in the control group, who, in accordance with standard hospital procedure, see their children only 6–8 hours after delivery. These differences remain even when the child is one year old. In a summary study, Kennel et al. (1975) emphasize that those infants who were able to suckle shortly after birth grow much faster and breastfeed longer. In the case of premature babies, IQ at age 42 months is 14 points higher if the infants and mothers had early and continual contact, as opposed to those in the control group, who were only allowed to be with their mothers after 3 weeks (Kennel et al. 1975).

These results are further supported by Lagercrantz and Slotkin's observations (1986). They emphasize that the catecholamine level of babies born vaginally – as an effect of the stress emerging in the aftermath of hypoxia – rises to extreme levels and only reverts to normal two hours after birth. Thus the known influence of epinephrine, such as dilated pupils and a heightened state of awareness, can also play a facilitative role in the relations between mother and child. Kovach (1964) showed a similar development of the catecholamine imprinting facility in chickens. Further studies also noted that if the mother is given her child directly after birth, there is eye contact between the two of them in the first three minutes 10% of the time and by the ninth minute 23% of the time, whereas if they do not meet until the first 1–3 months, eye contact occurs only 1% of the entire time and only increases to 4% of the time at the third meeting (Klaus et al. 1975).

The above two lines of research, the study of newborn and fetal cognitive capacities (Chamberlain 1987; Andrek 1997) and of the development of the early imprinting mechanism and the newborn's inborn socialization abilities (Molnár and Nagy 1997) both contributed to the progress of perinatal psychology.

The perinatal imprinting hypothesis[2](see Jacobson et al. 1987, 1988; Cheek 1975, 1986; Share 1996) implicates the above results, according to which certain cognitive capacities already function in the womb, during the intrauterine life, this is where early attachment patterns arise, and the influences that reach the fetus are capable of having long-term, lasting effects on its life (see e.g. Freud 1987; Carter-Jessop and Keller 1987; Raffai 1995; Verny 1996).

Using age-regression hypnosis, David Cheek (1974) demonstrated that under hypnosis and re-experiencing the labor process, people who were obstetrically completely naive could reconstruct exactly the precise sequential head and shoulder movements that happen during labor.

[2] It should be noted that it might not be accurate to use the expression imprinting for this mechanism. Though the Lorenzian imprinting mechanism analogy is justified, I believe that in the above, e.g. in Jacobson's theory, the discussed concept refers to a completely different mechanism than what would traditionally be understood by this expression (see Demetrovics 1997). The above concept relates not to the formation of the mother-child relationship, but to the later self-destructive behavior or the repetition of other unconscious determinants. Though the relationship between the two phenomena is obvious, this by no means proves that imprinting is the source of self-destructive behavior. Nor is it proof of an implicit condition that a person tends to act in a certain self-destructive way which is personalized on the basis of a sensitive genetic period during his or her birth. If we had real proof of the existence of such a mechanism, it would place psychological research in a completely different light, especially as regards the Freudian death instinct concept, given this theory's neurobehavioral background. On the basis of our present knowledge, however, where the perspective of the imprinting mechanism is connected with the postnatal period and coincides with the perspective of self and race perpetuation behaviors, it is much more useful to talk of one form of trauma or, to avoiding the expression 'birth trauma,' of a *specific memory pattern*. (It should be noted that, despite the fact that most authors use the term imprinting, only Cheek (1986) devotes a sentence to terminological differences.) Nevertheless, the differentiation between the two occurrences does not mean that they are not closely related. It is obvious that intervention during labor has an effect on the development of the imprinting mechanism, at both the psychological and the physiological level.

Considering the neurophysiological development of memory (see Kulcsár 1996), it seems possible that children at a certain age can remember their experiences at birth even when not under hypnosis. Inasmuch as it is possible to grasp the period when the restructuring[3] of memory has not yet completely developed, and – as result of the development of the left hemisphere – the child can already speak, it is probable that through the growing dominance of the left hemisphere, these memories – stored under the dominant experience-level right hemisphere – can be reached and episodical memory reconstructed.

Lenore Terr (1988, 1991), in her study of children under the age of five who had suffered traumatic experiences (plane crashes, accidents, sexual abuse), found that the majority of children older than 24–36 months were capable of verbally recounting what had happened to them. Simultaneously, the desire to recreate the event of the trauma was present in almost all of the children, even if the trauma had happened before they were one year old. Share (1996) shows in her three case studies that the childhood trauma appears over and over again in the dream state, and can thus be worked through. Her study shows that early trauma is not only capable of being stored away in the newborn's primitive memory system, but the schema which develop from this are capable of becoming the basic organizing force of the individual's personality, his or her lifestyle, and thought patterns.

Cheek (1986), similarly to Jacobson, speaks of a type of imprinting mechanism different from causal memory: "I have tried repeatedly without success to alter the subverbally stored convictions of hypnotized subjects when an experience was associated with great emotional stress or physical injury. I think of these memories as 'imprinted' rather than stored in a causal way. The imprinted memories do not fade with the passage of time as do those which are not associated with outpouring of adrenal hormones" (Cheek 1986, p. 101). The concept of imprinting is further reinforced by the fact that in cases of cesarean section, when no stress events happen to the babies, it was practically impossible to retrieve any birth memories. If surgical intervention happened after the onset of labor, it was possible to retrieve vague memories (Cheek 1986).

In conclusion, there is a large body of data that confirms, as an analogy of the competent newborn, that even in the earlier stages of development, during intrauterine life, humans are equipped with a certain competence; memory of childbirth can be stored, and under adequate hormonal circumstances (presence of catecholamines), it becomes stored and these memories can be later retrieved. Furthermore, the trauma of childbirth can not only be recalled, but can become a dominant springboard of life with a 'directional' tendency, forcing the individual

[3] With regard to the neurobiological and development physiology background to the phenomenon, Kulcsár points to the fact that, in the early stage of life, as regards the immaturity of the hippocampus, the contextual memory has not yet developed, and thus the ordering of the events in a time-space continuum lacks an autobiographical registration. In this stage, the experiences are closely tied to the internal state, and thus memory in this early form is tied to the dominance of the right hemisphere. The autobiographical left hemisphere-led, episodical memory, which is tied to outside anchor points, arises through the development of the hippocampus. It has rightly been proposed that the loss of early memories, i.e., the inability to articulate them, is a result of the consequences of these functional changes (Kulcsár 1996).

into repetitions in a continuously unconscious fashion. Underlying this repetition, it is not a Freudian mechanism of resurfacing after repression (Freud 1916/1917) that is assumed (with the exception of Terr 1988, 1991) but some kind of imprinting mechanism.

In the following, I would like to shed some light on a few problems with this approach. I would like to state it in the preamble that it is not the phenomenon that is called into question, but rather the simplifying pattern of this mechanism.

Questions of Linearity and Determinism

It seems therefore that when we distance ourselves from the field of drug use, we nevertheless meet with a Jacobson-type perspective. According to this, the influence childbirth has on the newborn can be so decisive that it determines the newborn's later life. On the basis of the data presented above, I will attempt to show that it is more difficult to establish the above relationship.

We must not forget that the human imprinting mechanism requires two players. Thus, the characteristics of maternal behavior are as much a decisive factor in the development of imprinting behavior as the inborn tendency of the child. Accordingly, in contrast to the reasoning of simplified neurophysiological reduction (high catecholamine levels), it appears more expedient to include as many variables as possible which determine the behavior of the mother.

Family-history Interpretation of Perinatal Events

I believe it would be problematic to interpret adult behaviors in a linear model as solely the consequence of pre- and perinatal events. Whether we consider the effect of medicines used during delivery or the prolonged carrying of the child, we assume that there may be countless ways in which these preceding events can have a later effect. Likewise, the process of pregnancy and labor, and the specific interventions, can be influenced by countless factors, such as the mother's own birth and childhood, parental relationships, social conditions, relations with the husband, the presence or absence of other individuals in the environment, and the anticipation of having a child (Demcsákné 1997).

These factors, however, do not only affect the mother and, through her, the child, the pregnancy, and labor, but they also affect the relationship with the doctor, the doctor's attitude, and even the doctor's actual decision in terms of the course of the pregnancy and labor.

On the other hand, among the countless influences that affect a person, it is not likely that one separate factor can be responsible, even if the relationship is statistically shown to have specific correlation. At the same time, it is an impossible task to take into account all the separate factors and study the ways in which they all affect each other. It is, however, possible to study the factors whose effects point toward drug use and to interpret these in the framework of a complex approach.

I assume that the barbiturates and opiates administered during labor or when carrying a child past expectancy do not simply lead to drug use. Similarly, those children who do not become opiate addicts do not remain non-users simply be-

cause other factors are working against drug use, but because in their case the effect aroused by opiate administration during their birth or prolonged carrying is not congruent with other social and family circumstances, or the child's biological characteristics, and this way the effects of drugs become *excluded* from the factors which determine the course of development. What I am trying to say is that, on the basis of environmental factors (family history, mother's history, etc.) and biological determinants (which are by no means strict determinants), the family and child will seek and promote those stimuli and find those influences which are congruent with their own processes of development, while the dissonant influences are eliminated. It is therefore not so much the accumulation of effects that we regard as being decisive, but rather the way in which the family structure promotes a certain kind of developmental trend, supporting those influences that are congruent with this, strengthening their function, while weeding out the opposing influences. The child's role in the family is to some extent predetermined, from a structural and functional perspective. From the very beginning, the family probably does everything to urge the child in this specific developmental direction. These endeavors obviously cannot be taken as strictly pushing him or her toward drug use; however, it is likely that, in the long run, the maintenance of that child's specific role in the family will nevertheless become such that addiction is the consequent result.

This idea is very similar to the stimulus-filtration paradigm of general psychology or to the cognitive dissonance theory in social psychology. The difference is mainly that (1) here we are not only talking about the stimulus-filtration that occurs on the level of the individual, but the entire family or the immediate social sphere plays a part in this, and that (2) the process not only affects an isolated perceptive unit, but the entire course of life.

A very similar idea is Eric Berne's script theory (Berne 1972). The script is none other than an unconscious life plan, which, according to Berne, is created in early childhood and in which the parental influences prevail and in which the later events are realized. The script is decisive, i.e. the child decides upon a certain course of life in which the parents' verbal and nonverbal messages are lived out. The decision is obviously not a conscious one, and the earliest decisions – which according to Berne are actually built into the individual from birth onward – are based on emotions.

It is indisputable that the parents' development and the formation of the family is included when expecting the child. These characteristics are thus decisive influences in the formation of the child's development, and in this way the child's place in the family is determined before birth, i.e. even before conception. This determinism, and the expectations placed upon the child, are already being communicated to the fetus during pregnancy. While Berne regards the period after birth as the beginning of the script, however, in the light of the body of research findings concerning the capacities of the fetus and intrauterine communication that have been accumulated during the past decades, it is possible that the events inside the womb and during childbirth are just as much included in the infant's script as the ones after birth.

Summary and Further Critical Comments

As we saw in the earlier detailed research, the study of the development of drug use in the family context gave us much more complex theoretical possibilities than the isolated study of the consequences of perinatal events in adult life. In those studies (and unfortunately many of the perinatal psychological research is like this), where no attempt is made to avoid this isolation, we find *a gap* which divides the perinatal events from the later consequences. It seems that researchers often do not pay enough attention to the fact that this gap should be filled out, and their interpretations made more graspable, more well founded. We can find two reasons for this phenomenon.

On the one hand, methodologically it would be difficult to follow the consequences of perinatal events over the course of decades and to follow the factors strengthening or altering these effects. On the other hand, in the struggle to gain acceptance, perinatal psychology might seek to avoid the altering and strengthening factors in order to place more significance on and highlight early influences. The effort is logical, and yet its advantage is ambiguous, considering that even existing results can be questioned due to methodological considerations.

Conclusion

To summarize the results of the above study, we believe that the mother's unresolved separation-individuation conflict, combined with a very strong need for independence and control and the struggle toward correction, leads to pathology in the second generation, namely the appearance of drug use. The mother can overcome her own crisis in a more or less adequate way, but one of her children becomes the victim of this coping process. The unusually strong symbiotic relationship helps the mother – through regressive and identification mechanisms – to experience the dependence she missed in her own childhood, but there is no model of how to resolve dependence and achieve separation. On the other hand, the pattern is obviously not one-sided. The child's qualities and temperament and the mother's actual needs and later environmental conditions naturally all interact.

Although the mother's need for dependence is definitely a starting point for the child's later drug use, it cannot in itself explain the phenomenon; the reciprocal effects of countless factors are what ultimately leads to drug use. This also explains why in the same family, one child will become a drug user, while the other will not. According to the interviews, the non-drug-using child may be more extroverted and may receive less aggression and more understanding from the father from the beginning, and the mother already has a developing relationship with a first child. All this can work against the development of drug use.

As can be seen in the Table 4, the temperament of the drug-addicted child is as different from his or her non-drug-using siblings as are the mother's expectations for him or her. The drug-using children cry less and are less open to outside stimuli than their siblings, and instead they are more withdrawn. In this context, we are reminded of the analogous effects of opiates. In many cases, the child's early sickness may become the addictive factor, which also leads to the pathological strengthening of the symbiotic relationship. Similarly, in many cases the mother's

Table 4. The temperament and process of development of children according to certain crucial factors (xD = drug-using child; x = non-drug-using child)

	case 1	case 2	case 3	case 4	case 5	case 6	case 7	case 8	case 9	case 10	drug-using child	non-drug using child
relaxed, well balanced child, "average child"				x	x	x			x		0	**4**
doesn't need outside stimuli, self-contained	xD					xD	xD				3	0
active, alert infant	x		xD		x	x		x			1	4
child cries very rarely	xD	xD		x	x	xD	xD	xD		xD	**6**	2
child seems to bare everything	xD				xD	xD		xD			**4**	0
child cries often				xD	xD	x		x	xD		3	2
calls for continuous attention	x		xD	xD		x, xD	xD	x	xD		5	3
child cannot be left alone, clingy			xD	xD		x, xD	xD	x	xD		**5**	2
nursery school before the child's 8th month	x, xD	x	xD				xD	x			3	3
nursery school after the child's 2nd year (or not at all)		xD		xD	x, x, xD			xD		x, xD	5	3
multiple illnesses in the child's first year		xD		xD	xD				xD		**4**	0
serious illness, multiple hospitalization before the child's 1st year		xD			xD	xD					3	0
strong relationship with the mother	xD	xD	xD	xD	x, xD	xD	xD	x, xD	xD	xD	**10**	2

need for dependency is more characteristic before the birth of the drug-using child than in the case of her other children. This could be the reason why a child who later becomes a drug addict is usually the first child or, in other cases, there is a very large age difference between the two children (2nd and 8th cases) and the second child arrives during the 'loss' of the first.

2nd Case – Gabi: "I felt I needed one more child"

Gabi's first child, a boy, was born from her second pregnancy. He was a relaxed, 'easy' baby; as Gabi said, "everything went smoothly." However, she became pregnant four more times and had an abortion in each case because of financial reasons and the rejecting attitude of her husband. He worked a lot and did not take part in family life. At the same time, the boy's relationship was also weak with his mother: "He was not so attached to me, and it was quite unbearable for me. I felt I needed one more child." She prepared herself well for the pregnancy and read books; she planned to be a better mother for the coming baby. She did not ask for or receive any help from her husband or from anyone else. Juli was born in the 42nd week, without any complications; however, she was born with pes varus. Juli became a dictatorial, self-assertive, demanding person, trying to compensate for her sickness. She always received what she wanted. Her mother was always supportive toward her: "When she didn't like her strict father, she always had a loving mother to go to." "I always wanted to be her girlfriend," says Gabi. She started to go out and stay away at age 15–16. Her mother always tried to defend her against the father's aggression. She has been addicted to opiates for 6 years.

In a third family (1st case), the child's temperament is responsible for the failure of the mother's attempt at a symbiotic relationship.

1st Case: Zsuzsa: "... I have the right to have a baby!"

Zsuzsa's family of origin can be characterized by continual quarreling and conflicts. She married late, and her husband was a soldier who already had two school-age children. Zsuzsa wanted to have a child with her husband, but he rejected the idea. He said, that two children were more than enough and he did not want to start childrearing again. Zsuzsa

finally decided alone: "I thought I had the right to have a child." She became pregnant, and even though her husband was quite mad at her, he finally accepted the situation. Nevertheless, he did not get involved in the pregnancy. The child, a girl, was born in the 41st week without complications. She was impulsive, alert, and self-assertive; she cried a lot and slept very little.

The second baby was born quite the same way. The father did not even want to hear about having another child, but the decision was made by Zsuzsa. Without asking for or receiving any help from her husband or anyone in her surroundings, she felt happy during the pregnancy. Agnes was born in the 43rd week. Labor had to be induced by oxytocin. Agnes was a relaxed, shy child, not really open to the outside world, although she had a very strong relationship with her mother.

When the children were 5 and 8 years old, Zsuzsa divorced. The first girl remained active in adolescence, went out often, and developed an independent life. Agnes liked to stay home alone or with her mother. She started to use drugs at age 16 and after 7 years of opiate addiction is now in a therapeutic community.

It is worthwhile mentioning the case of Anna (6th case), where it seems that, after a successful correction, a catastrophe – resulting in the loss of her husband and his completely accepting family – led to a strengthening of the symbiotic relationship between mother and child.

6th Case – Anna: "... I didn't have real maternal feelings; I felt more as if we were friends."

Anna was almost always alone during childhood. She did not have a good relationship with her mother: "she just didn't care about me." She had a better relationship with her father; however, he was an alcoholic and often beat her up. Anna wanted to escape the family and since she had been dating her later husband since the age of 14, they married after she left secondary school and she became pregnant. She had an excellent relationship with the husband's family, who they moved in with after the marriage. Nevertheless, she did not accept any help from others. Her husband enlisted in the army when she was 5 months pregnant. Istvan was born by cesarean section; the first months were very happy for Anna, and she had a satisfying relationship with the husband's parents. When the baby was 6 months old, they had a car accident, in which both her husband and his parents died. Anna was left totally alone with the baby after the tragedy. Istvan was five years old when Anna met her second husband, with whom she had another child. The husbands behavior was irregular; sometimes he helped, but most often he took no part in family life at all. He had an especially bad relationship with Istvan. The mother was left alone struggling with periodical depressive states. The fact hat Istvan started to use drugs increased the conflicts in the family. He is still addicted to opiates and relies on the help of his mother.

In summary, the study shows that, in this developmental trend, perinatal events have a fundamental importance and that the events surrounding pregnancy and labor contribute to the formation of the family history. It is also probable that the opportunities offered by intrauterine communication will have a later effect on development. In this regard, the questions concerning the psychopharmacological background of this phenomenon remain unanswered.

Essentially, two problems arise in this context. The first is the practical effects of the events of pregnancy, the perinatal period, and the early childhood relationship on the endogenous opiate system. In this regard, Kulcsár's hypothesis (1996), according to which the mother's overprotectiveness harms the autoreg-

ulative capacity of the opiate system to change over, is self-explanatory.[4] This theory, however, needs to be complemented by the fact that we find continuous separations in the mother-child relationship; these short periods of separation, as we find in Kulcsár's summary (1996), further strengthen the dependence of the opiate system on social stimuli and cause the blockage of the development of autoregulation. It is worth noting hypothetically that the absence of the formation of autoregulation may coincide with the inability to stop opiate secretion through negative feedback. If this were the case, we would be able to explain why opiate users are compelled to constantly search for social stimuli and, at the same time, due to constant dissatisfaction, to find exogenous sources. More questions arise concerning the interaction between the oxytocin system and the working of the endogenous opiate system. From this perspective, the mother's obviously insufficient oxytocin secretion is one possible cause, while the oxytocin used during labor may also changes in the functioning of the child's endogenous opiate system.

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[4] In terms of the interpretation, in the early stage of development, the functioning of the opiate system is governed by social relationships, primarily the interaction between the mother and child and the social context of breastfeeding. Known effects of opiates such as pain and stress relief are therefore tied to social stimuli in the early stages (Kulcsár et al. 1987). In normal development, the endogenous opiate system needs to change toward autoregulation during the stage of separation from the mother during ablactation. According to the hypothesis, though, if the mother behaves in an overprotective way and perpetuates the symbiotic relationship, the change toward autoregulation does not happen and the child's well-being will depend on outside social stimuli. In adult life, the lack of capacity for of auto-regulation and the insecurity of social regulation may lead to the search for exogenous opiate sources. On the basis of the pattern of family dynamics (see above, Stanton et al. 1978), it becomes understandable that, in the dual regulation of the opiate system, the family enables 'trade' with both the endogenous and exogenous opiates in the family's repetitive games to provide the pharmacological playing chip.

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