THE PSYCHOLOGICAL CHANGES OF NORMAL PARTURITION*

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REVIEW AND INTERPRETATION OF LITERATURE

It has been postulated, up to the present, that the parapartum period has some special psychological significance. Cleghorn and Lewis, however, have recently (1953) commented upon the absence of serious special investigation of pregnancy from a psychiatric point of view. Much has been written in an impressionistic way by the obstetricians themselves, and a few psychoanalysts have approached the problem as a side issue to the complaints for which they were treating their patients.

Klein, Potter and Dyke (1950) in the United States, in one of the few psychiatric studies made, had 27 "normal" women as subjects, but a brief analysis of their cases suggests that some bias, caused by the nature of the hospital, entered into the selection of these cases. Ten of the 27, for example, were designated as "unstable"; five were unmarried (whereas the American figure for illegitimacy is 2 to 3 per cent); two of the married women had already been deserted, one was separated, and another was later murdered by her husband. An analysis by this author of the case histories in the monograph, showed that 18 of the 27 had had some degree of deprivation in childhood by the desertion of one or the other parent, by the parents' divorce, their separation, or a death, before the patient reached the age of 10. Twelve of the patients were specifically reported as sexually maladjusted (dyspareunia, disgust, relative frigidity, etc.). These limitations must be borne in mind when the findings of the study are considered.

Only six of the 27 patients were said to have positively wanted their pregnancies. Two definitely rejected theirs and 19 were ambivalent. Of the latter, seven wanted more than rejected ("positive ambivalence") and 12 rejected more than wanted ("negative ambivalence"). In all except the two cases of definite rejection, however, there was an improvement in attitude toward acceptance, as the pregnancy progressed. The authors quote two other American sources showing respectively that only 17 per cent and 23 per cent of mothers studied had wished to become pregnant (Thom-

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son, 1942; Hall and Mohr, 1933). They found evidence for an exaggeration of previous neuroticism in pregnancy and an exaggeration of previous mood swings. They found no evidence of euphoria as reported by Blakely (1940) but some patients became "quieter and more genial." There was no marked change in sexual gratification; and possibly, as also reported by Kroger and Freed (1951), libido was diminished. A strong desire for a child of a particular sex was not common.

Anxiety was universal but was not always concerned with the pregnancy per se and might be related to housing, finance, and so on. Hall and Mohr (1933) said that 42 per cent of their mothers were anxious about finance. Hirst and Strousse (1938) found 75 per cent of their subjects subjectively more anxious when pregnant and only 3 per cent less anxious. Anxieties concerning the pregnancy included fears of a malformed or backward baby, of miscarriage, of carrying undiagnosed twins, of the fetus dying *in utero*. The last eventuality, say these authors, happens so rarely in practice, and is so often a source of worry as to suggest that in fact it represents a displacement of anxiety from something else. The mothers were also concerned with their own health, with fears of dying in labor, fears of pain, fears of being caught napping by passing into labor in the street or some other public place, fears of the hospital, fears of being evicted, and so forth. Family incidents and difficulties concerning childbirth tended to arouse personal fears.

Of 16 easy pregnancies in the Klein, Potter and Dyke report, 14 were in the "stable" group; of 11 difficult ones, only three were "stable" patients. Nineteen patients had good physiological deliveries; but, of these, five had bad psychological reactions in delivery. Eight patients had poor labors; but, of these, four had good psychological reactions. Thus, stability of personality goes along with easy pregnancy, but this does not imply easy labor, and easy labor does not necessarily imply a good psychological reaction.

A psychosomatic study showed 22 of Klein, Potter and Dyke's 27 patients had nausea and vomiting with no previous histories of alimentary upset. Cravings for special foods—usually difficult to obtain—were found in 12, cravings for sweets in 17. Blakely (1940) had previously reported that cravings were negatively correlated with parity. Rejection of foods was frequent. Appetite

was increased in 15 and diminished in six. Insomnia was present in the third trimester in 19, drowsiness and fatigue by day in 15. Six patients in the group were hypertensive—and all these were anxious subjects. Two developed toxemia, and 13 in all had some physical complication of pregnancy.

Another study of normals was conducted in this country (Great Britain) by the Parents' Group of the Association of Psychiatric Social Workers. In all, 12 members of the group provided information on themselves in 25 pregnancies. To quote from the report by Irvine (1948), "We get from this group a picture of a state of mind in which the expectant mother is radiantly absorbed in the pride and joy of creation, relieved from any chronic tendency to anxiety and magically protected against disturbances by the most urgent dangers." Nevertheless, it transpires from the report that two P.S.W. mothers only developed their "dream-like pregnancies" after three months of depression, fatigue and anxiety. Three were depressed later in pregnancy and two in the puerperium. Failure in breast feeding was given as a cause of depression in these last two, and conversely seven of the 12 subjects obtained definite satisfaction from their babies' suckling. One reported that she averted a threatened failure of milk "by relaxing in complete seclusion during feeds and concentrating her mind on the idea of a good flow."

Insecurity, feelings of dependency, restriction of social activity and altered sexual relationships post partum were also mentioned in this report. On the whole, these P.S.W. subjects thought that there was a danger of being too rigid and expecting too much in pregnancy and lactation. Failure to achieve targets or keep to routines upset them.

Steiner (1922) examined over 80 unmarried pregnant girls—mostly from the "working class" and from country and small towns, but with a few from higher social strata and from big cities. The majority were primigravida in the latter part of pregnancy. He reported hyperosmia as being more frequent in early pregnancy and being particularly directed against food, perfume and cigar smoke. Hypergeusesthesia was also present in early pregnancy. Cravings are more common in early pregnancy than late and in first pregnancies than later ones. They change rapidly but are frequently directed toward unusual foods: in the "working class" patients, raw meat, chalk, wheat grain, unripe fruit, sour

or sweet things; and to unobtainable foods in the "upper class" patients, cherries and strawberries out of season, for example. Steiner considered cravings to have an obsessional character. They are related to aversions, and both are said to have an emotional intensity without parallel in ordinary life. Steiner also reported emotional lability and "diversion of affect," with depression, hypomania or hypersensibility. In early pregnancy, there is heightened libido. Autonomic functions are frequently affected, with vasomotor disorders, hypertyalism, increased thirst or sneezing. No special examinations were carried out in Steiner's study—no controls or statistical considerations are mentioned.

Bremer (1951) reported on certain aspects of pregnancy in a small community (1,400 persons) in northern Norway, where he was the only accessible doctor during the war years (1939-44). During this period 123 women had 178 pregnancies and 44 women (35.8 per cent) in 51 (28.7 per cent) pregnancies asked for or attempted abortion. In 10 cases, abortion was performed for medical reasons; and in eight of these, the indication was psychiatric —all these women suffered from depression. Fourteen others induced criminal abortion, and eight of these were "psychic exceptionals." There were 10 cases of probable spontaneous abortion. The figures for those desiring abortion did not appear related to war conditions, to psychiatric status, to social class or to marital status (22 per cent of the entire group were unmarried).

"No married woman, however, expressed a wish for abortion where she did not have any children. But once the first child had been borne the desire for abortion rose rapidly. ... no less than 40 per cent apply to the doctors ... or themselves try to procure one..." Where there were two or more pregnancies within the five-year period reviewed, 50 per cent of the women wanted abortions. Fifteen of 30 children born out of wedlock were born to "psychically exceptional" mothers, whereas only 18 of 108 legitimate children were so born.

Helene Deutsch (1945), early in her study of "motherhood," pointed to a difference between "motherliness" and "sexuality." She, like Benedek and Rubenstein (1939), suggested that high estrogenic activity is associated with sexuality, and low estrogen activity with raised progesterone activity associated with motherliness. Deutsch felt that the universal anxiety in pregnancy, often unconscious, is fear of death—"death always lurks in the

mind during birth." Parturition was also said to excite aggressive feelings. "The woman in labor," Deutsch continues, "needs the presence of a helpful, loving circle of women in order to overcome the fear of death. ... Up until the last generation mothers were asked to be present at their daughters' deliveries. This custom concealed woman's deep psychological need of complete reconciliation with the mother, in order to become a motherly woman herself." Healthy pregnancy may not always be due to motherliness, however, but to the positive values of secondary motives, for example, stabilizing a shaky marriage, pride in achievement, or liberation from unwanted obligations. Deutsch divided pregnancy into two psychological stages: In the first the fetus is regarded as an endoparasite or as part of the mother, in the second, which begins with fetal movements, the fetus begins to assume an individual being. "The psychic hygiene of pregnancy," she says, "must aim at making the child more and more an object so that delivery does not have the effect of a painful separation from a part of the ego and a destructive psychic loss."

Pregnancy, Deutsch said, is accompanied by increased introversion and a narrowing of interests. This accounts for the occurrence of a sort of depersonalization—"the inner world is overcharged." Apart from the relationship with the mother, "the center of the psychological problems of pregnancy," masturbatory guilt may be re-activated, leading to a fear of childlessness or overcare and overconcern, in the prenatal period. Pregnancy and childbirth also reactivate "a high degree of psychic infantilism" from the earlier play with dolls under the aegis of the mother. The mother herself may enter actively into the situation. For example, a frustrated, widowed, or divorced mother may try to live through her daughter's situation and encourage the latter's dependent position. A further complication of the mother-daughter relationship arises when the patient identifies herself with an aggressive rejecting mother.

Previous miscarriages increase pregnancy anxieties, as does previous abortion.

Regarding labor, Deutsch said that the "emotional accompaniments . . . fall easily into amnesia or are unconsciously falsified" and that "objective data about the processes that take place during childbirth are also unreliable because the perceptions of the woman in labor are to some extent weakened and the area of her aware-

ness narrowed by her absorption in the progress of the birth" which she adds is "the greatest female pleasure-pain experience."

Freedman et al., in a recent study (1952), only partly confirmed this, and showed, in fact, a very good recollection of birth events. Only the quality and full intensity of the pain seemed to be repressed later.

Deutsch treated labor in the traditional physiological stages and said that the first stage calls for feminine passivity and the the second for masculine activity. In the second stage, she noted, there may be a period of sharpened senses; the patient is likened to a paranoiac who misinterprets and mishears things with particular vividness. This is followed by a stage of apathetic unreality, with concern only for the child. Sometimes, however, all external events are well retained, and only the emotional aspects of the birth are repressed.

Following the ecstasy of the birth, there may, Deutsch concluded, be a period of sadness with loss of feeling for the child for a variety of reasons, mainly concerned with the return of full reality testing and awareness of responsibility for the child in the social setting.

Menninger (1943) provided a different explanation of psychopathology. The anxieties are "attempts to give plausible justifications for negative feelings regarding pregnancy." Jones (1942), on the other hand, believed that the anxieties are based on the reactivation of castration fears and on guilt concerning sadistic impulses. He stressed, however, the importance of economic and social factors in producing a healthy attitude toward pregnancy. Alexander and French (1946) asserted that the anxieties of pregnancy arise from an unconscious association of pregnancy with wrong-doing and stress the importance of emotional maturity.

In addition to the list of anxieties already given, other authors (Yaskin, 1945; Bloss, 1950; Kroger and Freed, 1951 etc.) mentioned the patients' fears of losing their figures; fears of losing sexual attraction or sexual function through tearing or stretching; fears that their physical appearance in pregnancy might diminish their husband's affection; fears that nursing would spoil the breasts; fears that an unsuccessful attempted abortion would mark the child; that bad heredity would show; that a shock in pregnancy had affected the child; that having syphilis, tuberculosis, diabetes, heart disease, or "the latest bogeyman," a negative

Rh factor, might affect the pregnancy. Anxiety is also said to arise from being unmarried or unhappily married.

Way (1950) stressed the increase in dependency during pregnancy, which the woman must face alone. He also stressed the importance of the male partner's attitude, which may be negative because of jealousy of the child. He attributed postpartum depression to a return to the additional cares of reality.

Weiss and English (1949) stressed the hostility that pregnancy arouses especially in the emotionally immature. As factors in this, they mention loss of appearance, enforced seclusion and the necessity for effort which pregnancy entails. Woodward (1952) confirmed the effect of loneliness, which is most marked at the fourth month.

Haas (1952) mentioned the positive aspect—the prestige value of pregnancy. She also discussed the "complexity of the reactivated conflict between mother and daughter," which "is confirmed by the frequent occurrence of peculiar apprehension over the grandmother's first visit." She further said, "It is significant how much pregnant women talk about their mothers'... pregnancies and deliveries. Not only do they know their own birth weight but they claim to know all the particulars of their own delivery. It is striking how often this latter event is related to a danger situation in which mother or baby 'nearly died.' " Haas also mentioned impatience in the last weeks, owing to discomfort and enforced sexual abstinence.

Hare (1952) supported the view that the hospital situation is an important psychological factor in childbirth.

Tylden (1952) said from hospital experience, that anxieties in childbirth arise from conflicting explanations, previous unfortunate maternal experience, shyness, ignorance and previous unfortunate experience of hospitals or doctors. There is, she said, pressure to accept a passive role, and the consequent state of dependence may be upset by stripping authority from the person in whom faith has now been placed, for example, by the nurse correcting the midwife who is conducting the labor, the doctor correcting the nurse, etc. Anxieties in the maternity unit are exaggerated by hospital methods, such as mixing patients in the various stages of labor. Tylden noted that, "Patients in labour are acute of hearing, their suggestibility is artificially increased by all the drugs at present used to relieve pain, and their world

revolves round themselves and their functions ... the patient overhears the accounts of other women's mishaps and relates them incorrectly to herself."

In relation to increased suggestibility, the facts should be considered in two techniques of conducting childbirth:—"natural childbirth" and hypnosis.

Read (1951) declared in reference to the technique of teaching relaxation in "natural childbirth": "No girl should be left alone for so long a time that her faith is in jeopardy. She wants an intelligent and sympathetic person on whom she can rely..." Regarding the actual training, he says, "She lies completely still... eyes gently closed... mouth partially open. ... The weight of her arms may be appreciated if they lie loosely by her sides... all movements should be avoided... not infrequently she will go to sleep."

It must be agreed that this all sounds like a formula for light hypnosis. Kroger and Freed (1951) examined this question and concluded that Read was in fact using "waking hypnosis." Freedman et al. (1952) wrote a paper to refute this, and to maintain that the absence of amnesia is against it. Amnesia, however, is not a necessary part of hypnosis; and, indeed, the restoration of memories is part of some techniques of hypnotherapy. Mandy et al. (1952) wrote, after a long study of "natural childbirth": "Some of the conclusions we have reached from this study are not entirely in keeping with those reported by the more enthusiastic advocates of natural childbirth, since... the program may act not so much to develop a more mature expectant mother, as to encourage her dependence on an important, authoritative figure supported by complex ritualistic routines." They described a case as "one of the most successful candidates... [they] had ever conducted through natural childbirth," to the psychiatrist who later treated her; and he replied, " 'That's interesting, because she has always been my best hypnotic subject.' " Read (1947) himself wrote, "Those who have learned relaxation not infrequently lay as if in a trance." Deutsch (1945) commented, "Dr. Read underestimates the great importance of his personal influence."

The important point of this last discussion is, however, not just that "natural childbirth" is really light hypnosis but that it can be light hypnosis and yet be so widely applicable. Thoms (1949) reported that 89.5 per cent of volunteers and 80.7 per cent of non-

volunteers had excellent or good results, using the technique. Goodrich and Thoms (1948) gave the round figure of 80 per cent, and Soviet and French experience with similar methods gave an 80 per cent success rate (Ryle, 1954).

Using hypnosis, Michael (1952) had 76 per cent of successes at labor, but in pregnancy had hypnotized 30 of his group of 31 (97 per cent). The failures awoke in the second stage. Michael quoted Rhonhof Schultze (1922) as having had 89.5 per cent of successes in a series of 79 cases.

In the triadic hypothesis of Rosenzweig and Sarason (1942), "hypnotizability as a personality trait is to be found in positive association with repression as a preferred mechanism of defense. . . ," Rosenzweig and Sarason linked "repressionability" with hysteria, but Eysenck (1947) disputed this and felt it should be linked with "neuroticism." Eysenck went on to say, however, that, under Freud's classificatory system, many of his neurotics would be deemed cases of "anxiety hysteria." In relation to this, an interpretation of the literature reviewed may now be made.

In summary, the main reports have been that:

1. Previous personality determines behavior during pregnancy.
2. Many pregnancies are at first unwanted—especially in multiparas—the pregnancy is thus a source of conflict.
3. Phobias and anxieties are very common. Some are related to the changes pregnancy brings from a social point of view and some—the phobias—may be displacements of deeper anxieties.
4. Despite the phobias, the patients may paradoxically be generally more calm. Karnosh and Hope (1937) noted that it is true that there are peculiar whims, caprices and irritability, but "by and large the period was frequently recalled by the patients themselves and by relatives as one of remarkable complacence."
5. Mood swings are reported.
6. Increased egocentricity and, at the same time, increased dependency are seen.
7. The process of parturition is subject to a partially occlusive amnesia, but at some points a distorted hypersensitivity and hyperperceptivity is present.
8. Suggestibility is increased.

In practice, of course, no one would offer a diagnosis of these conditions, as they are well within the normal range, and probably the majority respond readily to simple reassurance. Nevertheless, a digression might be useful here to discuss the phobias from a diagnostic (or nosological) point of view.

Phobias can be regarded in two ways; they may be "real" or based on a false knowledge of reality (which for present purposes is the same thing), or they may be displacements. An example of the first class, the "real" anxiety, might be the case of a woman with mitral stenosis who expresses a worry about her capacity to stand up to labor—when she thinks about it. If the last proviso holds good, she is simply a sensible woman, considering a pertinent problem in advance. Likewise, if a girl with no previous maternal experience is told by an "old wife" that childbirth is a dreadfully painful experience, fraught with dangers of being torn, then again —when she thinks of it—she may well be worried about it.

It should also be noted that a very appropriate time to think about these problems is when seeing the doctor or someone from the clinic.

The "diagnosis" of this group might be that of "anxiety state" —the anxiety being predominantly reactive to a real problem.

In the second group, we are informed, the phobia does not correspond to reality—an example was given by Hirst and Strouse (1938)—the fear that the fetus would die *in utero*—and a variety of diagnostic possibilities offer themselves. The most likely, judging from the psychological mechanisms which are variously described as operating, would seem to be that of "anxiety hysteria" (Abse, 1950). The mood swings in this group correspond to emotional lability (Hobson, 1953) and "genial calm" to the state of "*belle indifference*," which is also met with in hysterical conditions. Amnesias, egocentricity and dependency support the diagnosis, and the relationship of suggestibility to it has already been indicated.

Examination of an Unselected Group in the Puerperium

A group of mothers was examined on the wards of two English provincial hospitals in an attempt to throw some light on the problems mentioned and to serve as a control group for parapartum reactions. The examination of this group immediately raised a host of minor practical problems, ranging from the attitude of the

general trained nurse toward the psychiatrist, to the best tactical time to approach the mothers, who while in hospital, are in a constant flurry of eating, feeding, bathing, washing, interviewing the parson, the priest, the registrar of births and deaths, and so on. Furthermore, as these mothers were not psychiatric patients, an approach had to be evolved which would produce the maximum amount of useful material without offending the patient or her attendants.

The routine practice was for the examiner to interview a mother on the eighth postpartum day, or the first available day after the eighth (so that she might be seen away from her bed). On the average, the patients were seen on the ninth day.* Each was told that the examiner was from the department of psychiatry at the hospital, but that his only interest in her was the assurance that had already been given to him that she was normal in every way. It was then explained that untoward psychological reaction sometimes occurred with childbirth and that while the psychiatrist saw these cases, he had little opportunity of seeing the normal reaction to childbirth. The patient was finally asked to answer a few questions and do a few tests. In only one case, was co-operation refused.

The group is composed of 25 women, all married, between 18 and 39 years of age, with a mean age of 26.0 years (s. d., 5.3 years). Thirteen were primiparas, 12 multiparas, (eight Para II, two Para III, and two Para IV). Average parity was 1.79 (s. d., .91). Sixteen of the 25 complained of emotional lability, saying they were "giggly," "excited," "oversensitive," "cried at nothing," "laughed at nothing," or were "up and down." One patient said, "I tend to be more upset by little things. My husband might say something about another baby, and I will feel annoyed that he is not talking about ours." Another said, "I feel like sobbing and sobbing at the least little thing. . . . I don't know what it is." Another explained, "When it's all over—all that time of waiting and then the climax . . . you're bound to be emotional." This lability was also evident objectively. The subjects did indeed "laugh at nothing," while a tear might be evoked equally accidentally. There was also a tendency to garrulousness. One patient recalled that,

*In Great Britain, women booked for hospital delivery are selected cases. Many normal multiparas have their children at home. At the time this study was made, the usual length of stay in the hospital for the selected patients sent there was from 10 to 14 days post partum.

after her first baby, this condition had lasted for six weeks. Another attributed this condition to being in the hospital—"the back-to-school atmosphere" evoked it, she thought.

Nineteen patients complained of short-lasting depression post partum, and the distribution of onset is shown in the table.

Onset of Depression

Postpartum Day	Number of Patients	
1	2)	
2	1)	5
3	2)	
4)	2)	
)	2)	
5)	2)	7
)	1)	
6	0)	
7	2)	
8	4)	7
9	1)	

Eleven patients mentioned possible causes: A visitor did not come, the baby was not feeding properly, there was a misunderstanding on the ward, and so on. Few of these explanations were firm or stated with any conviction. In the other eight cases, the depression was frankly inexplicable. Typical comments were, "It was the inside of me. The emotions wanted to cry, not myself." Another said, "I was fed up with everything. I just felt like crying." This depression usually lasted one day.

Haas (1952) says, "It is known to every clinician that at about the fifth or sixth day of the lying in period many women get nervous, irritable, depressed and demanding. This mood is somewhat similar to premenstrual tension. What the psychological implications of these manifestations are is unknown. Usually this mood subsides within a few days." Victoroff (1952) aptly calls this condition "maternity blues."

As far as pregnancy and labor are concerned, seven patients found labor more uncomfortable than they had anticipated; eight found it as expected, and 10 much better than expected. Six complained of depression or irritability late in pregnancy, and 11 described their pregnancies as times of well-being, some using phrases like, "I was better than ever," or, "It was the best time of my life." Of the latter, however, six were in the group who

complained about labor. Of the eight patients who did not have postpartum depressions, three had good pregnancies, and four complained of symptoms (mainly nausea and vomiting). Information on the pregnancy is lacking in the eighth case. None of the eight nondepressed patients complained of labor.

The following fears were mentioned by the patients as being present in pregnancy: that the child would be deformed (mentioned by four), that it would have a birthmark (1), be strangled by the cord (1), have chickenpox (1), be a mental defective (1), show effects of heredity (2); and that the patient herself might abort (3) or have excessive pain (2). The fears of abortion in two of the three cases, the fear of strangulation by the cord, the fear of excessive pain in one of the two cases, and the fear of mental defect arose from the direct experience of the patients concerned. The fear of chickenpox was related to a family experience. The patient who feared the child might have a birthmark did indeed bear a child with a birthmark, although she had no logical reason to anticipate this. Only in the case of fears of deformity was the link to experience not so apparent.

Six patients had no whims, cravings or fancies during pregnancy. Of the 19 others, 14 fancied fruit (apples in three cases, oranges in six); one fancied Edinburgh rock* two, chocolate; one, fizzy drinks; and the last patient oats as prepared to make porridge. The patient who fancied rock said she liked something chalky. One patient developed aversions to cigarettes and tea.

Eleven patients had nausea or vomiting during pregnancy, two complained of anorexia and one of overeating. Four had been warned to rest because of hypertension. Two complained of headaches and one of epistaxis.

The family histories were negative for significant illness in all except three cases. A sister of one patient had been treated for depression; a brother of another had a peptic ulcer; the third had a family history of asthma.

No significant personal illnesses in the past were described in five cases, but the group included 11 patients who had had dysmenorrhea, two with histories of menstrual irregularity, and three with premenstrual tension (one of whom said she was aware of the same tension monthly during pregnancy). Two patients had

*A candy or sweet that looks like chalk and might be fancied to taste chalky.

had enlarged thyroids, and one had had a thyroidectomy. One patient had had catarrh, and two had had migraine. Eight had histories of "nerves"; in all eight, these were mild, spontaneously recoverable bouts of depression, insomnia or irritability and were primarily reactive. One patient had had a psychotic episode, which was variously diagnosed, in adolescence, and ultimately treated with insulin coma therapy.

Seventeen patients described themselves in terms of extraverted personalities, and eight said that they were shy and quiet. One patient had positive difficulties in mixing with others; this was not the patient who had had the psychosis and who was, in fact, an extravert.

The proximity to the mother and relationship to her were assessed in an indirect way as follows:

Frequency With Which Patients Saw Mothers

Dead or not seen	8	(One patient had adoptive parents with whom she had quarreled; another had quarreled with her parents.)
Seen every day	7	
Once or twice a week	5	
Once a month	2	
Twice a year	1	(Mother at a distance)
Once a year	1	(Mother abroad)
Inadequate information	1	

The only negative relationships, therefore, were between the adopted girl and her adoptive parents, and in one other case.

As far as the husbands were concerned, they and their wives were in five cases of different religions. They were on an average* three years older than the patients (older in 20 cases, the same age in one, younger in four). The patients had been married on an average of five years (the primiparas, an average of two years, 10 months). They had courted on an average of two years, three months (range three months to 12 years). The average age at marriage was 21.0 years.

Attachment to the baby or, more properly, love for the baby, appears to develop at different times. The next tabulation shows the distribution in this series.

In two cases the feeling of affection followed initial disappointment that the baby was of the "wrong" sex.

The child was a boy in 11 cases and a girl in 14. It was wanted or planned for in 12 and not wanted in seven. Inadequate informa-

*Average=mean.

A.	"Immediately" at birth	9
B.	"Within a few moments"	2
C.	"In a few hours"	4
D.	When first seen on the next day after birth (owing to frailty on part of baby)	3
E.	"Few days"	1
F.	On the third day (when feeding was established)	1
G.	On fifth day	1
H.	An expectation based on previous experience that love would develop when patient got the baby home	1
I.	Inadequate information	3

tion on this point was obtained in six cases. Wantedness may correlate inversely with parity, as most of the wanted children were among the primiparas and most of the unwanted among the multiparas.

Psychological Tests

Twenty-four of these lying-in mothers were tested with the Shipley-Hartford Retreat Scale (1940); the twenty-fifth was a Belgian with English as a second language. She (at 35) scored nine correct of 12 tests in the short form of the Progressive Matrices (1947). The other patients gave an average Mental Age of 15.4 (s.d., 2.6), average Verbal Age of 16.2 (s.d., 2.3) and average Abstract Age of 14.1 (s.d., 2.9).*

The conceptual quotient (C.Q.) of the Shipley-Hartford Retreat Scale is an index of intellectual impairment based on the finding that, in states of mental deterioration, vocabulary is relatively unaffected while the capacity for abstract or conceptual thinking de-

Conceptual Quotients of Normal Subjects Compared with Shipley's (1940) Normal Series

C. Q.	Puerperal Subjects		Shipley's Series	Interpretation
	No.	Per cent	Per cent	
90+	11	45.9	73	Normal
85-90	2	8.3	10	Slightly suspicious
80-85	2	8.3	7	Moderately suspicious
75-80	3	12.5	5	Quite suspicious
70-75	3	12.5	3	Very suspicious
60-70	3	12.5	2	Probably pathological
Not tested	1	..	..	
	25	100.0	100	

Puerperal subjects, N=25; Shipley's series, N=1,046

*Average=mean.

clines rapidly. When the C.Q.'s are scored, the interpretation of the degree of impairment and expected percentage in each group, as described by Shipley from 1,046 controls, is given beside the score. Four C.Q.'s among the 24 mothers tested were of doubtful validity because of low verbal scores; two of these four gave normal C.Q.'s, one slightly suspicious and one probably pathological. Even excluding these doubtful cases, the frequency of impairment as compared with Shipley's series is highly significant (for $n=5$, $\chi^2=19.67$ and $p=<0.01$). This test, as later results confirm, is probably too "sensitive" and, thus, undiscriminating and these results are best treated as suggestive rather than absolute. Yates (1956) is highly critical of Shipley's claims for the test, but it is clear nevertheless that lower C.Q.'s are more frequent in impaired subjects whether the impairment is functional or organic.

Selected cards of the Thematic Apperception Test (Murray, 1943) were administered in every case, and the stories were compared with those of a group of controls previously tested (Valentine and Robin, 1950), and with the information on normals published by Rosenzweig and Fleming (1949).

These papers use a similar approach to the test—the "controlled comparisons of response material evaluated statistically" (Valentine and Robin) and where the same cards were examined the results compare closely in the two normal series. The hardest comparison is with Rosenzweig and Fleming's series, where semantic difficulties arise. There have been occasional slight differences in definition or wording, and an element of doubt as to classification has arisen. Rosenzweig and Fleming's series remains particularly valuable, however, as it is composed of females only whereas Valentine and Robin used a sexually heterogeneous group.

There are 16 items in the present series with statistically significantly different scores than in the previous controls; and in many cases, the differences are in the direction of those found in diagnostic groups tested (Valentine and Robin, 1950; Foulds, 1953). There are a few items which were not scored in previous series but which occurred too frequently on this occasion to be overlooked. The presumption is that these items are also significant in some cases.

Family relationships are seen less often than expectation in Cards 2 and 18 (and in Card 7, though here not significantly less often). On the other hand, the blank Card 16 produces many more

themes relating to family in the puerperal group than in the previously tested controls. Both these findings were reported by Valentine and Robin (1950) in "moderate depressions" (depressions without delusions, hallucinations or gross retardation, and including both reactive and endogenous cases); and while at first sight they may appear contradictory, it should be remembered that the task on Card 16 is different from that on the other cards. Here the patient is asked to imagine a picture or to describe a picture she would like to see, rather than make up a story about the activities of subjects already depicted. It may be of interest that in only one case did the "family" include the newly-born child —in all others, they were concerned with older children, husband, or mother, in that order. In the one case in which the baby was mentioned, the husband was also in the picture.

Card 2 usually produces a mother, father, daughter relationship. A typical story in this series was: "This group looks as if they are waiting for something or someone. The girl looks very sad. I do not know why two should be looking one way and one the other, or why she should be carrying books. It looks as if he is ploughing a field... etc."

Card 18 typically produces a mother-daughter relationship. A typical story here was: "It looks as if a girl is just fainting and someone is catching her. She's seen coming down [or had a fall down] the stairs."

Pregnancy is seen less frequently than usual in Card 2, but not significantly less often. Babies, on the other hand, figure more frequently in Card 7, described by Murray (1943) as portraying a girl "who holds a doll in her lap." Associated with this theme is the story that the girl is unhappy or jealous of the new arrival. A typical story was: "This is the elder sister with a new baby. She looks rather sad as though she doesn't like the idea. Mother is explaining something on those lines to her." Possibly related to these complexes about the family, is the finding on Card 4 where the background is passed over without comment, or as in two cases, with the words, "I don't understand the background." The background depicts a woman, possibly in negligee. Sometimes this is referred to as a picture, sometimes as a person. A fairly frequent nonpuerperal control response to the card is a story of the "eternal triangle" type. No case in this series produced such a story.

Grief on the part of the man figured in Card 13 more frequently than usual; and in Card 2, the girl in the foreground was commonly depressed or upset. In Card 18 the older character was comforting the other one more frequently than usual; and in Card 17, suicide was mentioned with unusual frequency.

Card 4 often produced the comment that it was a scene from a film. Card 12 was often dealt with by stories of an abstract type. Examples were: "That [the older unpleasant figure] is her conscience egging her [the younger figure in foreground] on. It's some hidden feeling in the background"; or again, "The character behind is an evil thought in her [the front figure's] mind"; or, "The foretaste of a dreadful future. She's imagining what she will be like."

As well as the two findings concerning family relationships, those of less background in Card 4, more babies in Card 7, abstract stories in Card 12, more grief and less remorse in Card 13, also occur in depression—and the last one in "dysthymias," that is, mixed depressive-anxiety states (Foulds, 1953).

Finally, two time periods were recorded—the response or reaction time for each card and the total time to administer the test. From the latter, the mean time taken on each card was calculated. As will be seen, the response times are shorter in the puerperal series than in the previous control group, and approach those of the depressives.

	Puerperals	Control	Depressed
Total time (min.)	27.5 ±2.6	35.2±16.0	30.6±8.4
Mean response-time (sec.)	11.35±2.59	19.0±12.1	16.3±7.2

There is no significant difference between the total time per card between the puerperal group and the Valentine and Robin series. Both of these groups are, however, quicker than Rosenzweig and Fleming's series. There is no significant difference between depressives and controls for this measure.

Psychopathological interpretations are always easy to offer and are speculative. Are the "jealousy of the baby" stories, for example, indicative of some reactivation of sibling rivalry in the subject, or are they merely related to a real anxiety, prompted by maternity literature and past experience in the family?

With whom is the identification in Cards 13 and 18? Is the solicitude expressed in these cards an expression of a desire for support, or is it an expression of motherliness? Does the unpopularity of

the triangle stories in Card 4 suggest complete marital harmony, or merely that the husband's possible behavior is too painful to think of at this time? Haas (1952) believes that one of the reasons for the popularity of "natural childbirth" is simply that the husband is allowed to be present; and one wonders if the basis for the statement that insecurity is a prominent feature in the parapartum period is related to the marital situation and the disturbance in it which pregnancy brings.

Throughout this discussion, it should be remembered that a number of differences might be expected to show by chance as significant and that this reduces the psychopathological specificity of any single finding. Nevertheless, it appears that the puerperal controls of the author's group resemble the moderate depressives in their T.A.T. records as far as a number of scores are concerned. This would not seem unreasonable in view of the clinical finding that many of the patients suffered from postpartum depression, although it is interesting to note that in only one case was the patient actually tested on the day of the depression.

Finally, some inquiry as to suggestibility was undertaken. As has been explained, this examination situation presented limitations. In the course of one interview, it was not advisable and probably not possible, to probe too deeply into many of the possibilities of psychopathology suggested in the literature. Likewise, the testing of suggestibility by attempted hypnotism was impracticable. To overcome this last problem, use was made of the finding by Rosenzweig and Sarason (1942) that stories on Card 12M of the Thematic Apperception Test can be correlated with hypnotizability. In all, 18 gave stories implying hypnotizability, and seven gave negative stories. This, in percentage form, is 72 per cent hypnotizable—which, as will be remembered, is in the order of the figures for successes in obstetric practice (Michael, 1952). On the other hand, in the group of 20 normal subjects examined by Rosenzweig and Sarason (1942), only eight, or 40 per cent, were hypnotized.

It seems possible to link all these findings etiologically by postulating an organic mental reaction.

Emotional lability, depression, increased suggestibility, conceptual impairment, would be consistent with this as would the activation or release of hysterical mechanisms.

Summary

A review of the literature shows that:

1. Previous personality determines behavior during pregnancy.
2. Many pregnancies, especially in multipara, are at first unwanted.
3. Phobias and anxieties are common in pregnancy.
4. Paradoxically, the subjects are generally more calm in pregnancy than usual.
5. Mood swings are not uncommon.
6. Increased egocentricity and increased dependency are both described.
7. Parturition is subject to amnesia, distorted perception, and even hypersensitivity.
8. Suggestibility is increased.

These items are interpreted for the purpose of a diagnostic analogy which concludes that the mental symptoms of the childbearing woman resemble those of anxiety hysteria. The increased suggestibility is related to this but is also related to the use of drugs and to organic factors arising from childbirth.

A group of 25 normal mothers in the lying-in period was examined, with the following findings:

1. A tendency to well-being in pregnancy appears confirmed.
2. Cravings are not uncommon.
3. Fears during pregnancy are by no means universal, and many are related to practical experience.
4. Emotional lability and postpartum depression are found to be common.
5. Maternal adjustment to the baby is not necessarily immediate.
6. The relationship of these subjects to their own mothers was a positive one.
7. Psychological investigations post partum suggested the occurrence of impairment of abstract or conceptual thought, and the TAT picture resembles that found in depressives.
8. Tests imply that about 72 per cent of the group may be suggestible enough to be hypnotized.
9. It is postulated that the puerperal changes represent an organically determined mental reaction leading to an exaggeration or release of hysteroid features.

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