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NATURAL FAMILY PLANNING

**NFP as an Appropriate Health Technology: Towards an
Agenda for Global Research and Development**

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Pathfinders 2: Wilhelm Hillebrand, First Teacher of the Sympto-Thermic Method

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WILHELM HILLEBRAND was born on January 27, 1892, in Titz, Kreis Juelich, Germany, the second of eleven children. His father was a physician, and one of his brothers became a physician, too. Wilhelm took holy orders in Cologne in 1915. He was chaplain in Eupen until 1922 and then in Aachen-Burscheid until 1929, when he became parish priest of Rott, near Aix-la-Chapelle. Harassed by the Nazis because of his uprightness, he was forced to leave his parish. In 1938 he took over the parish of Lohn. He wished to spend the last years of his life in a small country parish, where he could devote his time to those duties which were particularly close to his heart; he thus became incumbent of Schevenhuetten in 1953. He died on July 19, 1959. Eleven days before his death the Albertus Magnus University of Cologne conferred on him an honorary doctorate.

How did Father Hillebrand get involved with natural family planning? In a letter that he wrote me on November 30, 1949, he gave a partial answer to this question. The letter reads—in translation—as follows:

“First, let me introduce myself. I am a Catholic parish priest but (!) the son and brother of physicians. When I first heard, in 1933, that there was a so-called natural method of family planning, I studied the subject with the intention of getting an estimate of its reliability.

“At first I gained the impression that the method seemed to be effective; but I was shaken when I observed, almost simultaneously, as many as three failures even though these couples had faithfully followed the rules. That was in 1935. Of the three couples, two conceived in the first cycle and the

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other couple after a few cycles—after I had suggested to them that they might use the ‘infertile’ days of the postmenstrual phase, too.

“The first failure immediately enticed me to find the cause of this fiasco. I remembered that I had once read in van de Velde’s *Perfect Marriage* that woman’s temperature rises shortly after ovulation and that in the case of pregnancy the temperature remains elevated. I decided to test van de Velde’s observation. First of all I checked the accuracy of the common clinical thermometers and experimented with different techniques of taking the temperatures.

“The failure in the second case had not yet happened. Because of her intelligence and carefulness I considered this woman especially qualified to take her basal body temperature. Her menstrual cycles varied between 29 and 33 days. She had already successfully followed my instructions for several cycles with calculated periodic abstinence, restricting intercourse to the last eight days as determined by her longest cycle. I suggested to her that she might also have (infertile) intercourse for several days after the end of her menstrual period. In addition, I asked her to take her BBT. Her very first chart disturbed me, because the shift of the BBT occurred several days before the onset of the fertile days as calculated according to the Knaus-Ogino rules. I at first considered withdrawing my suggestion that the couple might add (infertile) intercourse during the first days after the period—they had not yet taken my advice. However, for several reasons, I did not do so.

“The next chart brought an exemplary demonstration. Intercourse took place on the seventh and eighth days. A typical shift of the BBT followed on the ninth day, and on the twelfth day an additional ‘pregnancy’ rise of the temperature could be observed.

“After the woman of case I had delivered and her menstrual cycles were re-established, each of her charts showed a temperature shift during the early days that according to Ogino are sometimes, though rarely, fertile.

“For the third case no temperatures were reported. However, two of this woman’s sisters kept temperature charts that showed ‘preovulations’ (early ovulations), suggesting that the same thing may have happened in case 3, too.

“To sum it up, from that time until this very day I have used the basal body temperature, more and more successfully, in the service of natural family planning.

“I learned about you through Dr. Doering, and I have read your publications. They have inspired me to write to you and to send you my compliments. I should like to hear from you. Now you know the motives that pushed me into this new and remarkable occupation. How did *you* get pinned?”

Nearly nine years later, on April 20, 1958, Father Hillebrand wrote a similar letter to Knaus:

"In short succession, I observed three pregnancies in couples who had received careful instructions from me in your teaching and rules on natural family planning. These pregnancies resulted from intercourse occurring *before* the fertile days according to your rules, but fitting exactly into the days of rare conceptions according to Ogino, viz., days 20 to 24 prior to menstruation. These cases shocked me and impelled me to study and to search for a simple but reliable means to identify the time of ovulation, first for these women and then for all other women.

"Then I suddenly remembered that I had read some time ago, in van de Velde's *Perfect Marriage*, a chapter entitled "Periodic Functions in the Female Organism" in which he stated that the hormone of the corpus luteum exerts, in addition to other effects, a characteristic influence on the body temperature of women. This statement prompted me to determine, with the aid of a clinical thermometer, the monthly temperature cycles of as many women as possible. In the short period from August to December 1935, I investigated 21 women, married and single, who had recorded BBT curves for 76 menstrual cycles.

"I soon found a woman who showed a deviation from your norm of ovulation on the fifteenth day before the onset of menstruation. She seemed to ovulate on the nineteenth day before menstruation. This finding greatly upset me, and I reproached her for not having kept sufficiently accurate measurements. However, the impression she made as a person and the way she put her case were overwhelming. A further case finally convinced me. . . .

"So far, I do not doubt that you have discovered the physiological and normal time of ovulation in women. However, I have found that deviations from your norm occur, both at the beginning and at the end. Therefore, one cannot accept your rules blindly. Fortunately, estimating the time of ovulation by the basal body temperature curve resolved the uncertainty and thus gave birth to natural family planning."

Through an instruction booklet published in 1931 by J. N. Smulders, a Dutch physician, Father Hillebrand had first learned about Ogino's and Knaus's calendar methods of calculating woman's fertile and infertile days. He immediately felt relieved of many worries that had plagued him in marriage counseling. He thought he had finally found a scientific instrument for advising infertile couples on the fertile days, as well as fertile couples on how to space or avoid pregnancy naturally.

Smulders described in detail both Ogino's and Knaus's methods. Ogino based his system on a large number of clinical observations of the ovaries, corpus luteum, and endometrium. He found that the day of ovulation stands

in a remarkable temporal association with the onset of the *next* menstrual period, not with the previous period. He stated that ovulation may occur on any one of five days, from the twelfth to the sixteenth day, inclusive, *before* menstruation. For reasons of safety Ogino added three days to the possible ovulation days and thus established woman's eight-day fertile phase, lasting from the twelfth to the nineteenth day, inclusive, before the next menstruation (fig. 1).

Knaus injected several women with a pituitary hormone and observed that during the postmenstrual phase the uterus contracted under this hormonal influence, while during the premenstrual phase the uterus did not respond, supposedly because of the activity of the corpus luteum. The first day on which the uterus did not react Knaus presumed to be the day of ovulation. He added four days for security, and thus his fertile phase lasts for five days, from the fourteenth to the eighteenth day, inclusive, before the next menstruation (fig. 1).

Smulders discussed the different lengths assigned to the fertile phase by Ogino and Knaus. He preferred Ogino's rule because it had been designed more carefully and because its fertile phase was three days longer than Knaus's and therefore safer.

Hillebrand, however, preferred Knaus's rule—maybe because it specified only five fertile days. From his letters (see *supra*) we know that he ran into trouble with Knaus's method from the very beginning.

However, as we have seen, Father Hillebrand did not give up. He remembered van de Velde's biphasic temperature curves and now viewed them in a different context. As he looked at those curves he immediately drew a consequential conclusion. If the rise of the BBT was due to the activity of the corpus luteum, ovulation must precede the shift of the temperature. Therefore, observation of the BBT shift allowed each woman to identify her personal infertile days in the premenstrual phase of each cycle. The identification of the infertile days during the premenstrual phase was no longer based on the application of a general blanket rule; instead, each woman could find the individual sterile days that applied to her own current menstrual cycle.

I have not been able to find out how Father Hillebrand defined the day of the shift of the temperature, how many days after the shift he considered to be potentially fertile, nor how he estimated the length of the postmenstrual infertile phase. He did not see that the length of the postmenstrual phase varies in close correlation with the length of the menstrual cycle.

Father Hillebrand believed that the BBT made it possible to pinpoint the day of ovulation. We now know that such precision is impossible.

The BBT, as well as all other clinical and biochemical tests, can only spot

a hot zone of several days during which ovulation may occur—the periovulatory phase. As Father Hillebrand's experience with natural family planning increased there were always new problems coming up. Nature simply is inexhaustible. He learned that the length of the premenstrual phase by BBT is not constant, either within the same woman over time or among different women of the same age. In 1935 he found a mother whose BBT curves regularly showed premenstrual phases of seventeen or more days. Twenty-one years later her daughter's temperature curves showed the same long premenstrual phases. I think it surely would have been comforting to Father Hillebrand to have read the 1913 paper in which Hansen demonstrated a variability of the premenstrual phase between five and sixteen days. In my study (Vollman 1977) I have observed premenstrual phases by BBT of seventeen to nineteen days in 163 out of a total of 14,852 cycles (1.1 percent).

How did Father Hillebrand operate as a family-planning adviser? "I have concentrated my efforts on the methodology of how to introduce couples to natural family planning in the best and safest way. Such an introduction is not possible through popular or scientific publications of any kind, though they may be helpful. It must be accomplished by a kind and competent person who takes the pains and the time to educate couples not in general terms but individually until they have mastered the method."

Father Hillebrand instructed each couple individually in three stages:

1. After he had recorded their ages and taken a family-health and reproductive history, under his supervision they began taking the woman's morning temperature rectally, reading the thermometer, learning about the auxiliary signs (intermenstrual pain, intermenstrual bleeding, and cervical mucorrhea), listing the daily temperatures numerically, and reporting complementary observations on a sheet of paper—continuing these activities for three to five successive cycles. He reviewed each cycle record with the couple.

2. When he was convinced that the couple had mastered the technique, he then instructed them how to chart and read a temperature curve.

3. Finally he gave them an "ovulation calendar," a series of charts that they had to return when completed. Father Hillebrand carefully studied each of these charts and discussed his findings with the couple. Moreover, he made himself always available to them to resolve any questions that might have arisen.

In summary Father Hillebrand wrote (1949):

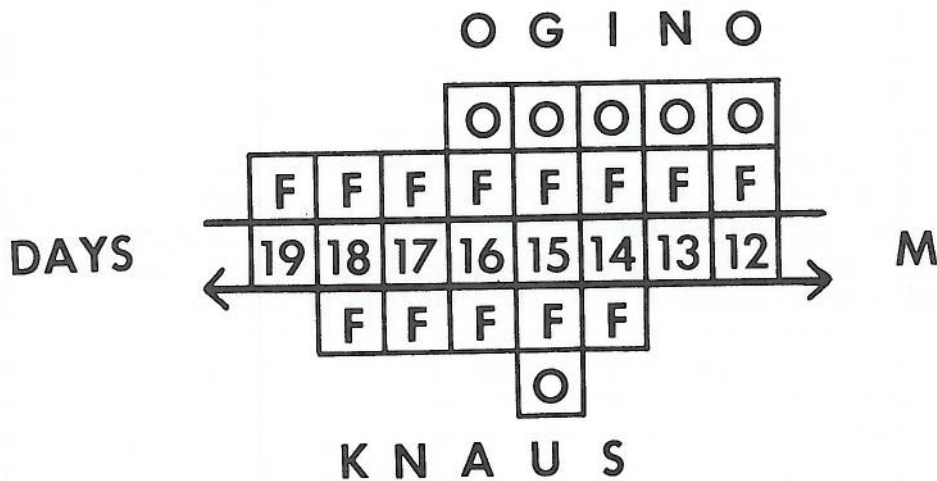
"[1.] First of all, the present status of natural family planning must be fully documented. Only then can a further discussion of physiologic, medical, psychologic, moral, and pastoral issues be fertile.

"[2.] To serve the cause and progress of natural family planning the available data must be collected and systematically analyzed. . . . The facts—not the so-called authority of a name—will then determine further plans.

"[3.] If natural family planning is to occupy its rightful position in human society, the political and clerical authorities must give it their full support."

Figure 1

THE FERTILE DAYS ACCORDING TO OGINO AND KNAUS



F, fertile days
O, ovulation
M, onset of the following menstruation

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